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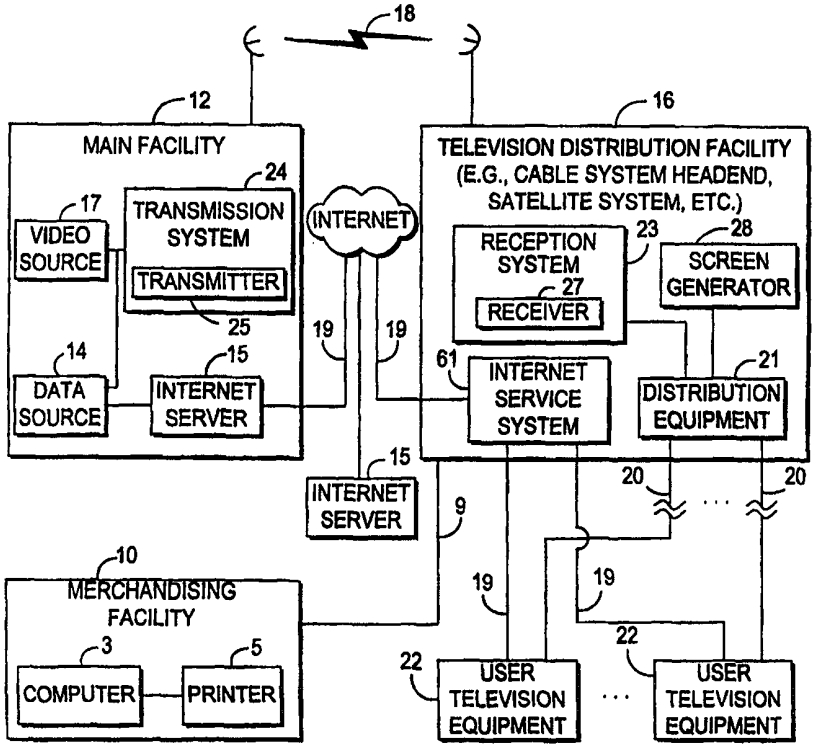
(57) Abstract

A system and method in which one or more television products are augmented by Internet-delivered television-related information is provided. The Internet-delivered television-related information may include markup language documents that define display screen content and functionality. The content of the markup documents may be maintained in a central database. Because the information and markup language documents may be centrally managed, additional interfaces for television products such as passive program guides, promotional video channels, and interactive guides may be presented consistently in all the products. In addition, the content that is provided over the Internet may be synchronized with the current video content displayed by the video products.



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A SYSTEM AND METHOD FOR SYNCHRONIZING TELEVISION-RELATED PRODUCT CONTENT AND INTERNET-DELIVERED INFORMATION

Background of the Invention

This invention relates to television programming and promotional information systems.

Cable, satellite, and broadcast television systems provide viewers with a large number of television channels. Users have traditionally consulted printed television program schedules to determine the programs being broadcast at a particular time. More recently, electronic television program guides have been developed that allow television program information to be displayed on a user's television. Promotional channels such as barker channels have also been developed that advertise various premium channel and pay-per-view promotions.

Passive electronic television program guides have been developed. Passive guides are provided on a dedicated television channel. Users tune to the channel and are presented with a scrolling or paging

list of program listings. The TV Guide Channel, is a passive program guide in which users are presented with promotional videos or trailers in one portion of the screen and program listings in the other.

Interactive television program guides, which are typically implemented on set-top boxes, allow the user to navigate through television program listings using a remote control. In a typical program guide, various groups of television program listings are displayed in predefined or user-selected categories. Program listings are typically displayed in a grid or table. Client-server based interactive guides and on-line interactive guides have also been developed. In client-server based guides, program guide data is typically provided to the set-top in response to requests from the guide that are processed by a server at a cable system head-end. In on-line guides, users may access a web site with their personal computer or Internet enabled set-top box to obtain program listings and other program related information. Another type of program guide is the hybrid passive/interactive television program guide. A hybrid guide may be based on a passive guide channel containing a listings portion over which an interactive guide portion has been overlaid.

Barker channels are promotional channels that display full screen promotions of pay-per-view programs. A barker channel can overlay price, ordering, event code, and time information over such promotions and can instruct the user on how to order the promoted pay-per-view program.

Each of these types of products provide users with access to program related information. However,

each product typically has its own distinct interface. In addition, the functionality of the products may be limited by the arrangement of the system on which a product is implemented. In passive guides, there is no way to provide a user with an opportunity to obtain additional program information without accessing an interactive or hybrid guide. The functionality of interactive guides is generally limited by the amount of memory and processing power associated with the user's set-top box. Barker channels typically do not allow the user to order a program directly. Users must order pay-per-view programs by telephone or by using an impulse ordering scheme in which they must first tune to the channel on which the pay-per-view program to be ordered is being broadcasted.

On-line guides may be inconvenient for some users. Generally, users must boot-up their computers, launch a web-browser, and access an appropriate web site to access television related information. Users with Internet-enabled set-top boxes must also perform the latter two steps while watching television. Many users are not computer owners or are not very computer savvy and may find it convenient to launch a web browser and surf the Internet to obtain program related information.

In addition, much of the television-related information displayed by each of these products is similar, yet the functionality of the products is very different. There is no way to coordinate the appearance and functionality of the products.

It is therefore an object of the present invention to augment the functionality and content of

one or more television products within a television programming and promotional information system.

It is a further object of the present invention to provide a television programming and promotional information system in which the appearance and functionality of a number of television related products is coordinated.

It is a further object of the present invention to provide a television programming and promotional information system in which changes in the sources of television product data are transparent to the user.

It is a further object of the present invention to provide a television programming and promotional information system in which information supplied over the Internet may be synchronized with real-time video of one or more video products.

Summary of the Invention

These and other objects of the present invention are accomplished in accordance with the principles of the present invention by providing a system in which a number of television related products are provided. One illustrative product is a passive television program guide product such as the TV Guide Channel in which users are presented with video promotions, trailers and informative segments in the top portion of a display screen, and are presented with program listings information in the bottom portion of the display screen. Another illustrative product is a modified barker type product or promotional video channel. The promotional video channel displays full screen video promotions, short videos (i.e., videos

that are less than three minutes in length), and trailers to provide users with information about television programming, related products, and other television-related subject matter. An additional illustrative product is an interactive television program guide that provides users with an opportunity to access program listings and other program-related information.

These and other television products may be augmented by Internet-delivered programming-related information. Such information may be formatted as, for example, one or more markup language documents. Control circuitry in a user's television equipment may detect when a user has accessed any of the products and may query a Internet server for any available markup language documents. The documents may define display screens that may be displayed instead of or in addition to other display screens presented by the television products. By drawing on the resources of the Internet, the functionality and content of these products may be augmented in ways that would otherwise not be possible due to the resources of standard user television equipment. A potentially large number of new display screens and functions may be provided, thereby providing users with an attractive source of television-related data and, for example, merchandising opportunities or other enhanced features.

If desired, the content and user interface for these products may be coordinated seamlessly by maintaining a single database of television-related information. Copies of the database may be maintained by multiple data sources at one or more facilities. Centrally-managed content may be distributed as, for

example, one or more markup language documents. Because the information and markup language documents may be centrally managed, interfaces for television products such as passive program guides, promotional video channels, and interactive guides may be presented consistently in all three products. In addition, the content that is provided over the Internet may be synchronized with the current video content displayed by the video products.

Further features of the invention, its nature and various advantages will be more apparent from the accompanying drawings and the following detailed description of the preferred embodiments.

Brief Description of the Drawings

FIG. 1 is a schematic block diagram of an illustrative system in accordance with the present invention.

FIGS. 2a and 2b show illustrative display screens for a passive interactive television program guide in accordance with the present invention.

FIG. 2c shows an illustrative display screen for a promotional video channel product.

FIG. 3 is a schematic block diagram of illustrative user television equipment in accordance with the present invention.

FIG. 4 is a generalized schematic block diagram of portions of the illustrative user television equipment of FIG. 3 in accordance with the present invention.

FIG. 5 shows an illustrative main menu screen for an interactive television program guide in accordance with the present invention.

FIGS. 6, 7, 8a, 8b, and 8c show illustrative program listings screens for an interactive television program guide in accordance with the present invention.

FIGS. 9a and 9b illustrate how different markup language documents may be used to define display screen content and functionality in accordance with the present invention.

FIGS. 10a and 10b are flow diagrams of illustrative paths between video products that may be provided by augmenting the content and functionality of the video products in accordance with the present invention.

FIG. 11 shows an illustrative display screen for a promotional video channel product augmented in accordance with the present invention.

FIG. 12 shows an illustrative more shows screen in accordance with the present invention.

FIG. 13 shows a program listings screen in accordance with the present invention.

FIG. 14 shows an illustrative program information screen in accordance with the present invention.

FIG. 15 shows an illustrative screening room screen in accordance with the present invention.

FIG. 16 shows an illustrative merchandise screen in accordance with the present invention.

FIG. 17 shows an illustrative order confirmation screen in accordance with the present invention.

FIGS. 18 and 19 show illustrative WOW indicators for indicating to a user a special merchandising opportunity is available.

FIG. 20 shows an illustrative order confirmation overlay in accordance with the present invention.

FIG. 21 shows an illustrative program information screen in accordance with the present invention.

FIG. 22 shows an illustrative WOW offer screen in accordance with the present invention.

FIG. 23 shows an illustrative modified merchandise screen in accordance with the present invention.

FIG. 24 shows an illustrative order confirmation screen in accordance with the present invention.

FIG. 25 shows an illustrative order thank you indicator in accordance with the present invention.

FIG. 26 shows an illustrative pay-per-view order overlay in accordance with the present invention.

FIG. 27 shows an illustrative reminder window in accordance with the present invention.

FIG. 28 shows an illustrative reminder in accordance with the present invention.

FIG. 29 shows an illustrative order denied window in accordance with the present invention.

FIG. 30 shows an illustrative video product display screen augmented in accordance with the present invention.

FIGS. 31a and 31b show the illustrative passive guide display screens of FIGS. 2a and 2b augmented in accordance with the present invention.

FIG. 32 shows an illustrative augmented program listings screen for an interactive television program guide in accordance with the present invention.

FIG. 33 shows a flow chart of illustrative steps involved in providing users with an opportunity to purchase merchandise and in providing reminders in accordance with the principles of the present invention.

Detailed Description of the Preferred Embodiments

An illustrative system 10 in accordance with the principles of the present invention is shown in FIG. 1. Main facility 12 may be any facility or facilities suitable for providing television-programming-related data (e.g., program identifiers, times, channels, titles, descriptions, categories, merchandise information, or any other suitable television-programming-related information) from data source 14 to one or more television distribution facilities 16. Typically, main facility 12 distributes data to numerous television distribution facilities in parallel. However, only one television distribution facility 16 has been shown in FIG. 1 to avoid overcomplicating the drawing. Data source 14 may be any suitable computer or computer based system for obtaining data (e.g., manually from an operator, electronically via a computer network or other connection, or via storage media) and placing the data into electronic form for distribution by main facility 12.

Main facility 12 may also provide one or more video products to television distribution facility 16. Videos for the video products may be transmitted in real-time by main facility 12 to television distribution facility 16 for real-time distribution to the user television equipment 22 of a number of users.

Alternatively, main facility 12 may transmit videos to television distribution facility 16 where they are stored. Television distribution facility 16 may later distribute the videos to the user television equipment 22 of a number of users in real-time. This approach may be referred to as a "store-and-forward" video distribution scheme. If desired, a combination of the two approaches may be used. Systems in which videos are both distributed in real-time and stored-and-forwarded are described, for example, in Kern et al. U.S. patent application Serial No. 09/332,448, filed June 11, 1999 (Attorney Docket No. UV-102), which is hereby incorporated by reference herein in its entirety.

Video products may include for example, passive television program guide channels such as the TV Guide Channel, promotional video channels such as a barker type channel, or any other suitable video product whereby television-related information is provided to users in the form of promotional videos such as short videos (i.e., videos less than three minutes in length), video trailers promoting a television program, or the like. The short videos and trailers may be supplied by video source 17. Video source 17 may be based, for example, on a library of video clips stored on a video juke box (a multiple-compact disc or digital video disc storage system) or any other suitable combination of hardware and software for storing such videos. Videos may be provided in any suitable format. For example, video signals may be provided in an analog signal format using the National Television Standards Committee (NTSC) television video

or in a digital signal format such as a Moving Picture Experts Group (MPEG) format.

One or more of the video products supplied by main facility 12 may include data that is supplied by data source 14. A passive program guide channel, for example, may display television program listings provided by data source 14. A promotional video channel, for example, may display tagging information (e.g., price, ordering, time, and event code information) provided by data source 14. Television product data and video for the video products may be transmitted by transmission system 24 to television distribution facility 16 via link 18. Link 18 may be a satellite link, a telephone network link, a cable or fiber optic link, a microwave link, an Internet link, a combination of such links, or any other suitable communications link. Video signals (e.g., television programs) may also be transmitted over link 18 if desired.

Transmission system 24 may encode the television product data and video for the video products and provide the encoded data and video to transmitter 25. Transmitter 25 is preferably a digital satellite uplink transmitter, but may be any suitable analog, digital, radio frequency, optical, microwave, terrestrial, or other type of transmitter. Transmission system 24 may encode the data as, for example, component object model (COM) objects that are transmitted using an Internet based addressing scheme and Internet based transport and network protocols such as the user datagram protocol (UDP) and the Internet protocol (IP). Electronic program guide systems that transfer UDP packets and COM objects using a UDP/IP

protocol stack are described in Gollahon et al. U.S. patent application Serial No. 09/332,624, filed June 11, 1999, which is hereby incorporated by reference herein in its entirety.

Television distribution facility 16 may be any suitable distribution facility (e.g., a cable system headend, a broadcast distribution facility, a satellite television distribution facility, or any other suitable type of television distribution facility). Television distribution facility 16 may have reception system 23 for receiving the videos and data from transmitter 25 using receiver 27. Receiver 27 is preferably a digital satellite downlink receiver, but may be any suitable analog, digital, radio-frequency, optical, microwave, terrestrial, or other type of receiver.

Television distribution facility 16 may have screen generator 28 for generating video product display screens containing the videos and data. Screen generator 28 may be implemented using any suitable hardware, software, or combination thereof. Screen generator 28, may be, for example, a Windows NT process running on a personal computer with a Pentium II microprocessor. Screen generator 28 may use an object-oriented approach to generate video product display screens. The use of COM objects, for example, may allow changes to be made to the format and functionality of some of the features of the system without requiring changes to other system components. Such an approach may allow one main facility 12 to provide and manage a number of different video products from a central location. Screen generators that may be used to create video product display screens for

multiple video products are described in Kern et al. U.S. patent application Serial No. 09/332,539, filed June 11, 1999, which is hereby incorporated by reference herein in its entirety.

Television distribution facility 16 may also have television distribution equipment 21 for distributing video product display screens and, if desired, television programming to multiple users via communications paths 20. Each user has user television equipment 22 for viewing the video products and television programming. Distribution equipment 21 may include, for example, a cable headend modulator, and may include any other or additional equipment suitable for transmitting television programming and video product display screens over communications paths 20. Alternatively, distribution equipment 21 may include suitable hardware and software for delivering videos in real-time or substantially real-time via the Internet (e.g., using the M-bone). Communications paths 20 preferably have sufficient bandwidth to allow television distribution facility 16 to distribute television programming to user television equipment 22 and to transmit at least some video display screens using a single dedicated television channel. If desired, television programming and video products may be provided over separate communications paths.

For purposes of illustration, three types of television products will be described - a passive program television program guide channel product, a video promotional channel product, and an interactive television program guide product. Main facility 12 may supply one or more of these products or any other suitable television product. Illustrative display

screens are first described in which the products have not had their user interfaces and functionality augmented by Internet-delivered television-related information. Illustrative display screens in which the products have had their interfaces and functionality augmented by Internet-delivered television-related information are then described in detail.

Three suitable illustrative video product display screens are shown in FIGS. 2a-2c. Video product display screens may be divided into display areas. The display areas may, for example, include video display areas, graphic display areas, text display areas, and program listings areas, or any suitable combination thereof. Video display areas may display video promotional material. They may, for example, provide a video clip of a pay-per-view selection being promoted, such as a video clip of the movie Terminator. Text display areas may display text describing the promotional video ("tagging" information). Program listings areas may display television program listings in any suitable format, such as any suitable list, table, or grid.

Display areas may be sized to occupy predefined portions of the screen. They may, for example, be sized to fit in the right or left quarter of the screen, in the top or bottom half of the screen, in the top or bottom one-third of the screen, in the top or bottom two-thirds of the screen, as a full screen, etc. Display areas may display promotional events that correspond to the display area type (e.g., text, video program listings, etc.).

FIG. 2a shows one suitable combination of display areas for a passive television program guide.

Illustrative video product display screen 80 may include, for example, video promotion area 82, text display area 84, and program listings area 85. Video display area 82 may be sized, for example, to fit in the top left quarter of the display screen. Video display area 82 may display video clips, such as a video clip of the movie Terminator. Text promotion area 84 may be sized, for example, to fit in the top right quarter of the screen may be used to display tagging information about when Terminator airs and on what channel it airs. Video promotion area 84 and text promotion area 82 may be switched if desired.

FIG. 2a also illustrates the display of program listings grid 88 in program listings area 85. Program listings area 85 has been sized, for example, to fit in the bottom half of the screen. Program listings grid 88 may be divided into a number of columns 90 which correspond to program broadcast times and which may be equally spaced apart (e.g., in thirty-minute steps), and a number of rows 92 where each row 92 corresponds to a different channel. Program listings grid 88 may be scrolled continuously or have its pages changed periodically to display program listings for additional channels. Program listings may be displayed in the grid in sub-sets according to one or more organization criteria and sorted in various ways. The current time may be displayed by clock 101.

Another suitable illustrative video product display screen for a passive guide is shown in FIG. 2b. Passive guide display screen 81 of FIG. 2b may include, for example, video display area 91 and program listings area 86. Video display area may, for example, be sized

to fit in the top-half portion of passive guide display screen 81.

FIG. 2c shows illustrative video product display screen 83 for a promotional video channel product. Promotional video channel display screen 83 may include, for example, video display 87 area and text display area 89. Video display area 87 may be sized to fit the full screen, with overlaid text display area 89 displayed when appropriate. Video display area 87 may display promotions, short form videos, and trailers to provide users with information about television programming, related products, and other television-related subject matter.

Text display area 89 may be displayed when it is desired to use textual information to supplement or explain a displayed video. An example of such information may include ordering information for pay-per-view programs. There may be times, however, when there is no textual information available for a video, or when the display of textual information is unnecessary for a video. Such videos may include, for example, movie review segments, mini-infomercials, or other similar short-form videos.

Promotional material display screens 80, 81, and 83 of FIGS. 2a-2c are only illustrative, and any suitable combination and arrangement of display areas may be used by system 10 to provide a number of different video products with different video product display screens that differ in appearance.

Another television product that main facility 12 may supply is an interactive television program guide. For clarity, an interactive television program guide is described in connection with a system

arrangement in which program guide data is distributed from a main facility to an interactive television program guide implemented on user television equipment 22 via television distribution facility 16. Other suitable systems involve arrangements in which data is distributed to a program guide implemented on user television equipment 22 using other suitable distribution schemes. If desired, the interactive television program guide application may be implemented using a client-server architecture in which the primary processing power for the application is provided by a server located at, for example, television distribution facility 16 or main facility 12 (not shown), and user television equipment 22 acts as a client processor. In two-way environments, distribution equipment 21 may be provided with the capability to process requests from user television equipment 22 (e.g., for pay-per-view ordering, and the like). In another approach, program guide display pages may be generated at television distribution facility 16 using high-end graphics engine or video production equipment. The display pages are then encoded into an MPEG or other suitable digital format for distribution. The program guide display pages may be decoded by user television equipment 22 to produce program guide display screens seen by the user. Client-server based program guides of this type are described, for example, in Marshall et al. U.S. Patent application Serial No. 09/330,501, filed June 11, 1999, which is hereby incorporated by reference herein in its entirety.

The interactive television program guide may also obtain program guide data from the Internet via, for example, a cable modem and Internet link. In still

another suitable approach, an interactive television guide may create a hybrid passive-interactive television guide by, for example, overlaying program guide data over a passive guide channel. Various architectures for interactive television program guide systems are described in Knudson et al. U.S. patent application Serial No. 09/357,941, filed July 16, 1999 (Attorney Docket No. UV-114), which is hereby incorporated by reference herein in its entirety.

The television-programming-related data provided by data source 14 may include program guide data. Program guide data may include television programming data (e.g., program identifiers, times, channels, titles, and descriptions) and data for services other than television program listings (e.g., help text, pay-per-view information, weather information, sports information, music channel information, associated Internet web links, associated software, etc.). Program guide data may be distributed by main facility 12 to television distribution facility 16 via link 18. Television distribution facility 16 may distribute the program guide data with distribution equipment 21.

Distribution equipment 21 of FIG. 1 may include any equipment suitable for providing program guide data to user television equipment 22 over communications path 20. Distribution equipment 21 may include, for example, suitable transmission hardware for distributing program guide data on a television channel sideband, in the vertical blanking interval of a television channel, using an in-band digital signal, using an out-of-band digital signal, or by any other suitable data transmission technique. Analog or

digital video signals (e.g., for television programs) may also be distributed by distribution equipment 21 to user television equipment 22 over communications paths 20 on, for example, multiple television channels.

Communications paths 20 may be any communications paths suitable for distributing program guide data. Communications paths 20 may include, for example, a satellite link, a telephone network link, a cable or fiber optic link, a microwave link, an Internet link, a cable modem link such as a data-over-cable service interface specification (DOCSIS) link, a combination of such links, or any other suitable communications link. Communications paths 20 preferably allow television distribution facility 16 to distribute television programming to user television equipment 22. There are typically multiple user television equipment devices 22 and multiple associated communications paths 20. If desired, television programming may be provided over separate communications paths.

Communications paths 20 and the portion of Internet links 19 that connect user television equipment 22 to Internet service system 61 have been shown in FIG. 1 as separate links. These links may be provided over the same physical path if desired. For example, television programming channels, video products, and interactive program guide data may be provided over a single coaxial cable or fiber that has the capability to support both video and data. An Internet or DOCSIS link may be provided on such a coaxial cable or fiber to support data and/or video.

Data may be transmitted by main facility 12 to television distribution facility 16 using any

suitable approach. Data files may, for example, be encapsulated as objects and transmitted using a suitable Internet based addressing scheme and protocol stack (e.g., a stack which uses the user datagram protocol (UDP) and Internet protocol (IP)). Systems in which data is transmitted from a main facility to television distribution facilities are described in the above-mentioned Gollahon et al. U.S. patent application Serial No. 09/332,624, filed June 11, 1999.

Before describing illustrative program guide display screens, a description of an illustrative arrangement for user television equipment 22 follows for purposes of understanding how program guide display screens and other display screens may be generated. An illustrative arrangement for user television equipment 22 is shown in FIG. 3. User television equipment 22 of FIG. 3 receives video and data from television distribution facility 16 of FIG. 1 at input 26. During normal television viewing, a user tunes set-top box 28 to a desired television channel. The signal for that television channel is provided at video output 30. The signal supplied at output 30 is typically either a radio-frequency (RF) signal on a predefined channel (e.g., channel 3 or 4), or an analog demodulated video signal, but may also be a digital signal provided to television 36 on an appropriate digital bus (e.g., a bus using the Institute of Electrical and Electronics Engineers (IEEE) 1394 standard). The video signal at output 30 may be received by optional secondary storage device 32.

The interactive television program guide and other applications (whether separate or integrated into an operating system) may run on set-top box 28, on

television 36 (if television 36 has suitable processing circuitry and memory), on a suitable analog or digital receiver connected to television 36, or on digital storage device 31 if digital storage device 31 has suitable processing circuitry and memory. The interactive television program guide and other applications may also run cooperatively on a suitable combination of these devices. Interactive television application systems in which a cooperative interactive television program guide application runs on multiple devices are described in Ellis U.S. patent application Serial No. 09/186,598, filed November 5, 1998, which is hereby incorporated by reference herein in its entirety.

Secondary storage device 32 can be any suitable type of analog or digital program storage device or player (e.g., a videocassette recorder, a digital versatile disc (DVD) player, etc.). Program recording and other features may be controlled by set-top box 28 using control path 34. If secondary storage device 32 is a videocassette recorder, for example, a typical control path 34 may involve the use of an infrared transmitter coupled to the infrared receiver in the videocassette recorder that normally accepts commands from a remote control such as remote control 40. Remote control 40 may be used to control set-top box 28, secondary storage device 32, and television 36.

If desired, a user may record programs, program guide data, or a combination thereof in digital form on optional digital storage device 31. Digital storage device 31 may be a writeable optical storage device (such as a DVD player capable of handling

recordable DVD discs), a magnetic storage device (such as a disk drive or digital tape), or any other digital storage device. Interactive television program guide systems that have digital storage devices are described, for example, in Hassell et al. U.S. patent application Serial No. 09/157,256, filed September 17, 1998, which is hereby incorporated by reference herein in its entirety.

Digital storage device 31 may be contained in set-top box 28 or it may be an external device connected to set-top box 28 via an output port and appropriate interface. Digital storage device 31 may, for example, be contained in local media server 29. If necessary, processing circuitry in set-top box 28 formats the received video, audio and data signals into a digital file format. Preferably, the file format is an open file format such as the Moving Picture Experts Group (MPEG) MPEG-2 standard or the Moving Joint Photographic Experts Group (MJPEG) standard. The resulting data is streamed to digital storage device 31 via an appropriate bus (e.g., a bus using the Institute Electrical and Electronics Engineers (IEEE) 1394 standard), and is stored on digital storage device 31. In another suitable approach, an MPEG-2 data stream or series of files may be received from distribution equipment 21 and stored.

Television 36 receives video signals from secondary storage device 32 via communications path 38. The video signals on communications path 38 may either be generated by secondary storage device 32 when playing back a prerecorded storage medium (e.g., a videocassette or a recordable digital video disc), by digital storage device 31 when playing back a pre-

recorded digital medium, may be passed through from set-top box 28, may be provided directly to television 36 from set-top box 28 if secondary storage device 32 is not included in user television equipment 22, or may be received directly by television 36. During normal television viewing, the video signals provided to television 36 correspond to the desired channel to which a user has tuned with set-top box 28. Video signals may also be provided to television 36 by set-top box 28 when set-top box 28 is used to play back information stored on digital storage device 31.

Set-top box 28 may have memory 44. Memory 44 may be any memory or other storage device, such as a random access memory (RAM), read only memory (ROM), flash memory, a hard disk drive, a combination of such devices, etc., that is suitable for storing program guide application instructions or instructions for other applications and program guide data or other data for use by control circuitry 44. Set-top box 28 may also have communications device 37 for communicating with Internet server 15 via Internet service system 61 and Internet link 19. Communications device 37 may be a modem (e.g., any suitable analog or digital standard, cellular, or cable modem), network interface card (e.g., an Ethernet card, Token ring card, etc.), or other suitable communications device. In an alternative arrangement, television 36 may have suitable communications device 37.

A more generalized embodiment of user television equipment 22 of FIG. 3 is shown in FIG. 4. As shown in FIG. 4, program guide data from television distribution facility 16 (FIG. 1) is received by control circuitry 42 of user television equipment 22.

The functions of control circuitry 42 may be provided using the set-top box arrangement of FIGS. 2a and 2b. Alternatively, these functions may be integrated into an advanced television receiver, personal computer television (PC/TV), or any other suitable arrangement. If desired, a combination of such arrangements may be used.

User television equipment 22 may also have secondary storage device 47 and digital storage device 49 for recording programming. Secondary storage device 47 can be any suitable type of analog or digital program storage device (e.g., a videocassette recorder, a digital versatile disc (DVD), etc.). Program recording and other features may be controlled by control circuitry 42. Digital storage device 49 may be, for example, a writeable optical storage device (such as a DVD player capable of handling recordable DVD discs), a magnetic storage device (such as a disk drive or digital tape), or any other digital storage device.

User television equipment 22 may also have memory 63. Memory 63 may be any memory or other storage device, such as a random access memory (RAM), read only memory (ROM), flash memory, a hard disk drive, a combination of such devices, etc., that is suitable for storing program guide application instructions and program guide data for use by control circuitry 42.

User television equipment 22 of FIG. 4 may also have communications device 51 for supporting communications between the program guide or other application and Internet server 15 via Internet service system 61 and Internet link 19. Communications

device 51 may be a modem (e.g., any suitable analog or digital standard, cellular, or cable modem), network interface card (e.g., an Ethernet card, Token ring card, etc.), or other suitable communications device.

A user controls the operation of user television equipment 22 with user input device 46. User input device 46 may be a pointing device, wireless remote control, keyboard, touch-pad, voice recognition system, or any other suitable user input device. To watch television, a user instructs control circuitry 42 to display a desired television channel on display device 45. To access the functions of an interactive television program guide, an enhanced video product, or other television-related product, a user may enter suitable commands using user input device 46. To access the features of an interactive television program guide, for example, a user may instruct the program guide to generate a main menu or other desired program guide display screen for display on display device 45.

The program guide may provide users with an opportunity to access program guide features through a main menu. A main menu screen, such as illustrative main menu screen 100 of FIG. 5, may include menu 102 of selectable program guide features 106. If desired, program guide features 106 may be organized according to feature type. In menu 102, for example, program guide features 106 have been organized into three columns. The column labeled "TV GUIDE" is for features related to listings, the column labeled "MSO SHOWCASE" is for features related to multiple system operator (MSO) services, and the column labeled "VIEWER SERVICES" is for features related to viewer services.

The interactive television program guide may generate a display screen for a particular program guide feature when a user selects that feature from menu 102.

Main menu screen 100 may also include other screen elements, such as active display element 112. Active display element 112 may be any graphic, animation, interactive graphic or animation, video clip or other suitable display element. Active display element 12 may display, for example, a brand logo, the video currently distributed as part of a video product, or any other suitable television-related graphic or video. The current time may be displayed in clock display region 116. In addition, a suitable indicator such as indicator graphic 118 may be used to indicate to a user that mail from a cable operator is waiting for a user if the program guide supports messaging functions.

The interactive television program guide may provide users with access to any number of functions, as indicated by selectable features 106. For brevity, only an illustrative subset of such possible features is described to illustrate the principles of the present invention. The interactive television program guide may, for example, provide a user with an opportunity to view television program listings. A user may indicate a desire to view program listings by, for example, positioning highlight region 151 over a desired program guide feature 106. Alternatively, the program guide may present program listings when a user presses a suitable key (e.g., a "list" key) on remote control 40. When a user indicates a desire to view television program listings, the program guide generates an appropriate program listings screen for

display on display device 45 (FIG. 4). Program listings screens may be overlaid on a program being viewed by a user or overlaid on a portion of the program in a "browse" mode.

A program listings screen may contain one or more groups or lists of program listings organized according to one or more organization criteria (e.g., by time, by channel, by program category, etc.). The program guide may, for example, provide a user with an opportunity to view listings by time, by channel, according to a number of categories (e.g., movies, sports, children, etc.), or may allow a user to search for a listing by title. Program listings may be displayed using any suitable list, table, grid, or other suitable display arrangement. If desired, program listings screens may include selectable advertisements, product brand logo graphics, service provider brand graphics, clocks, or any other suitable indicator or graphic.

A user may indicate a desire to view program listings by time, channel, or category by, for example, selecting a selectable feature 106 from menu 102. The program guide may display program listings in a suitable program listings screen on user television equipment 22. FIG. 6 illustrates the display of program listings by time. Program listings screen 130 of FIG. 6 may include highlight region 151, which highlights the current program listing 150. A user may position highlight region 151 by entering appropriate commands with user input device 46. For example, if user input device 46 has a keypad, a user can position highlight region 151 using "up" and "down" arrow keys, or other suitable keys. A user may select a listing

by, for example, pressing an "OK" or "info" key, or by pulling a trigger. Alternatively, a touch sensitive screen, trackball, voice recognition device, or other suitable device may be used to move highlight region 151 or to select program listings without the use of highlight region 151. In still another approach, a user may speak into a voice request recognition system to input a television program listing. These methods of selecting program listings are merely illustrative, and may also be used in an enhanced video product. Any other suitable approach for selecting program listings or interacting with television-related applications using user television equipment 22 may be used if desired.

A user may view additional listings for the time slot indicated in timebar 111 by, for example, pressing an "up" or "down" arrow, or a "page up" or "page down" key on remote control 40. The user may also see listings for the next 24 hour period, or the last 24 hour period, by pressing a "day forward" or "day backward" key on remote control 40, respectively. If there are no listings starting exactly 24 hours in the indicated direction, the program guide may pick programs starting at either closer or further than 24 hours away. A user may view program listings for other time slots by, for example, pressing "right" and "left" arrows on remote control 40.

FIG. 7 illustrates the display of program listings by channel. A user may scroll up and down to view program listings for additional time slots, and may scroll left and right to view program listings for other channels. If desired, the day for which program

listings are displayed may be included in display area 147 with the channel number as shown.

The program guide may provide users with an opportunity to view program listings sorted by category. A user may, for example, press a special category key on remote control 40 (e.g., "movies", "sports", "children", etc.), select a selectable category feature from main menu screen 100 (FIG. 5), or may indicate a desire to view program listings by category using any other suitable approach. FIG. 8a is an illustrative program listings screen in which program listings for movies are displayed. FIG. 8b is an illustrative program listings screen in which program listings for sports-related programming are displayed. FIG. 8c is an illustrative program listings screen in which program listings for children's programs are displayed.

Program listings within lists such as lists 129 or FIGS. 8a-8c may be divided into predefined time slots such as 30 minute time slots. Between each time slot, a separator 128 may be displayed to indicate to a user that a user has scrolled or paged program listings from one time slot to the next. In FIG. 7 for example, a user is scrolling from program listings in the 11:30 PM to the 12:00 AM time slot. The name of the next week day may be displayed if desired. In FIGS. 8a-8c, for example, a user is scrolling from program listings in the 12:30 PM time slot to program listings in the 1:00 PM time slot. When the user scrolls within listings, highlight region 151 may skip separator 128. Interactive guide systems that display separators within lists of listings are described, for example, in above-mentioned Knudson et al. U.S. patent application

Serial No. 09/357,941, filed July 16, 1999 (Attorney Docket No. UV-114).

The program listings display screens such as the screens of FIGS. 6, 7, 8a, 8b, and 8c have may include various other screen elements. Program listings display screens may include, for example, graphics, clocks, message indicators, or any other suitable screen element.

What has thus far been described is a system in which a number of separate television-related products are provided to a number of users for display on their user television equipment. Three illustrative products have been described -- a passive television program guide product, a promotional video channel product, and an interactive television program guide product. Each product has one or more display screens containing television-related information (e.g., television programming related data, program guide data, etc.).

The content and functionality of each of these products may be augmented by Internet-delivered television-related information. The content and user interface for these products may be coordinated by maintaining a single database of television-related information, copies of which may be maintained by multiple data sources at one or more facilities (e.g., main facility 12). If desired, the display screens of each of these products may have a similar appearance, so that the user may not be made aware of the particular source of television-related information being presented.

Main facility 12 of FIG. 1 may distribute television-related data from data source 14 to user

television equipment 22 via a Internet server 15 located at main facility 12 and Internet link 19. If desired, multiple Internet servers 15 may be used. Internet servers 15 may be located at main facility 12, may be remote from main facility 12, or a combination thereof. Remote Internet servers 15 may communicate with main facility 12 via the Internet or any other suitable communications path. Internet server 15 may be any combination of hardware and software suitable for providing television-programming-related data from an Internet site, such as a web site. Internet server 15 may, for example, provide data in files transferred using the file transfer protocol (FTP). Preferably, Internet server 15 formulates web pages (e.g., using the HyperText Markup Language (HTML)) that include the television programming related data, and provides the web pages to users via a suitable Internet based protocol or combination of protocols (e.g., using the HyperText Transfer Protocol (HTTP) over a Transfer Control Protocol/Internet Control Protocol (TCP/IP) link).

User television equipment 22 may access Internet server 15 via Internet service system 61 and Internet link 19. Internet service system 16 may use any suitable combination of hardware and software capable of providing Internet access to user television equipment 22. If desired, Internet service system 61 may be located at a facility that is separate from television distribution facility 16.

Control circuitry 42 (FIG. 4) of user television equipment 22 may be programmed to augment the display screens and functionality of the various products using any approach suitable to each type of

product. For video products such as a passive program guide with video or a promotional video channel, control circuitry 42 may overlay interactive web pages over the display screen of the products to create a form of hybrid passive/interactive product.

Television distribution facility 16 may distribute an identifier to user television equipment 22 identifying a given television channel (analog or digital) as being associated with a particular product. Identifiers may be distributed by distribution equipment 21 using any suitable approach (in-band, out-of-band, continuously, periodically, in response to requests, etc.). When a user tunes to a particular video product, for example, control circuitry 42 may detect the identifier and query Internet servers 15 for one or more markup language documents. The query may identify the current channel, the user, the address of user television equipment 22 within system 10, the time of day, or any other suitable information.

In an alternative approach, video products may be augmented by suitable hardware and software at television distribution facility 16. Screen generator 28 may, for example, obtain Internet delivered information via Internet service system 61 or reception system 23 and may generate video product display screens having the Internet-delivered information. The augmented display screens may be distributed by distribution equipment 21 to user television equipment 21. While this approach may not add interactive functionality to the video products, it may tend to lessen the memory and processing requirements of control circuitry 42.

For an interactive television program guide product, control circuitry 42 may store Internet-delivered markup language documents in memory 63. Each document may, for example, include a screen identifier in its header and may be indexed in memory 63 according to its screen identifier. The interactive television program guide may be configured, for example, to examine memory 63 each time a user accesses a different display screen. The program guide determines whether there is a substitute markup language document corresponding to the screen accessed by the user and if there is such a document, may display the screen defined by that document. Control circuitry 42 may query Internet servers 15 for markup language documents each time the user indicates a desire to access a display screen. If no markup language document is available, the interactive guide may display its default style screen and appropriate content. If desired, many multiple markup language documents may be preloaded and stored in memory 63 simultaneously. Alternatively, fewer markup language documents may be stored in memory 63, but more may be retrieved as needed using their universal resource locators (URLs). How many markup language documents are preloaded may depend, for example, on the amount of free memory in memory 63.

Initiating and maintaining an Internet session between control circuitry 42 and a Internet server 15 is preferably transparent to the user. Control circuitry 42 may be programmed, for example, with a web browser that has had its "chrome" removed -- that is, a web browser that has been permanently configured or temporarily instructed not to display a

customary web navigation interface for the user. This allows the user television equipment to display passive guide display screens, promotional video channel display screens, interactive television program guide display screens and the like that contain information and interactive features based on a markup language document, without the user knowing that such augmented functions are being provided in a different way than the normal display screens are provided. Control circuitry 42 may detect a video product identifier (e.g., from an in-band signal), initiate an Internet connection via suitable cable modem circuitry, launch the web browser without chrome, and download one or more markup language documents from a Internet server 15. In addition, because the markup language documents are centrally managed, functions based on the documents that are added to the video products and functions that are added to the interactive guide based on the documents may be presented in a manner consistent between the products.

Any suitable markup language may be used. The markup language document may be defined, for example, using markup languages such as the HyperText Markup Language (HTML), Dynamic HyperText Markup Language (DHTML), or Extensible Markup Language (XML). Electronic program guide systems in which program guide display screen layout and functionality are updated using markup language documents are described, for example, in Lemmons et al. U.S. patent application Serial No. 09/227,358, filed January 8, 1999, which is hereby incorporated by reference herein in its entirety.

FIG. 9a illustrates how a markup language document may define a display screen for a television product such as the passive program guide shown in FIG. 2a. In practice, the markup language documents may be continuous, from top to bottom, and the attributes of display items may immediately follow below a display item tag. Markup language document 300 has been illustrated, however, as having left and right portions 302 and 304 to more clearly illustrate the principles of the present invention. Portion 302 of markup language document 300 illustrates how display element identifier 330 may be tagged by tags 306. Portion 304 of markup language document 300 illustrates how display element attributes may be organized into sets using markup language documents and assigned using the tags.

As shown in FIG. 9a, display element attributes 310 and 312 may be organized into sets 313, 315, and 317. Each display element may be assigned a set of attributes. Markup language document 300 may tag display element identifiers 330 using tags 306. Tags 306 are generically labeled T1, T2, and T3 to indicate which display element is being tagged (display element 1, display element 2, and display element 3, respectively). Tags 306 have associated attributes 310 (e.g., A1, A2, A4, A5, A7, and A8) from the sets that may indicate, for example, where on the display screen the display elements will be placed, their size, and how they will be styled (e.g., color, font special effects, etc.). To generate a display screen such as screen 308, the interactive program guide may parse the markup language document, extract the style and layout information, and generate a display screen accordingly.

FIG. 9a also illustrates how the functionality of a television product may be defined using markup language document 300. The program guide (or other product) may have been preprogrammed with a large number of actions. Portion 304 of markup language document 300 may be used to select from those actions the actions that are suitable for a particular display element. Associated actions may include, for example, the actions of displaying information in a particular display screen when a user selects a display element, tuning to a particular video product when a user selects a display element, performing a video product function (e.g. ordering merchandise, ordering a pay-per-view program, setting a reminder, etc.), or any other suitable action. Attributes 312 may be included in the sets of attributes 313, 315, and 317 to indicate the selected actions. While a display item may have multiple associated actions (e.g., a menu), only one attribute 312 has been shown for each set to avoid overcomplicating the drawing. The actions may be assigned to display elements 314 as indicated in FIG. 9a using tags 306.

FIG. 9b illustrates how the display characteristics of display screen 308 may be changed or modified by rearranging and restyling display elements 314 using a different markup language document, such as markup language document 340. As shown, markup language document 340 may use tags 306 to assign sets of attributes to the display items. When control circuitry 42 (or software running on control circuitry 42) interprets markup language document 340, it obtains the new or changed attributes 310' from the sets and uses tags 306 to generate, for example,

display screen 308' with display elements 314'. As illustrated when display screen 308' is compared with display screen 308 of FIG. 9a, display elements 314 may be deleted, resized, repositioned. Display elements may also be restyled or added (not shown). Thus, a first markup language document (300) may be used by control circuitry 42 to generate a first display screen 308, and a second markup language document (340) may be used to modify the display screen (308') (e.g., reposition, resize, and restyle display elements 314) or define an entirely new display screen.

FIG. 9b also illustrates how different actions for the display elements may be assigned using markup language documents. Different actions may be included in the sets as illustrated when comparing sets 313 and 317 of FIG. 9a with sets 313' and 317' of FIG. 9b. New actions may be indicated and previously indicated actions dropped, as illustrated by set 317' and 315'. In addition, the actions may be selected for different display elements as shown in set 313' (e.g., A7 was moved from set 317 of FIG. 9a to set 313' of FIG. 9b).

New actions may be added through the use of Internet-delivered applets, such as ActiveX components, Java applets, executable files, or any other suitable interpretable or executable module. Markup language documents, for example, may be supplemented with Java applets that are stored and run by a Java virtual machine running on control circuitry 42. Using Internet technologies and drawing on Internet resources may potentially provide a large amount of information and functions previously unavailable to the video products. The products may be provided with a

consistent user interface, thereby making the transition between products seamless and the source of video product information transparent to the user.

As an overview, users may be provided with the enhanced content and functionality of video products by first accessing a product. Control circuitry 42 (or suitable software running on control circuitry 42) may determine which product the user has accessed by, for example, detecting a product identifier in a data stream, obtaining the identifier from an interactive guide, or using any other suitable approach. Control circuitry 42 may in turn launch a web browser to initiate an Internet session with one or more Internet server 15 via Internet link 19 (FIG. 1). For purposes of illustration references to a Internet server 15 are intended to refer to one or more Internet servers 15.

The Internet session may last while the user access the video product, for a predefined period of time, until a display screen has been displayed, or for any other suitable duration. Control circuitry 42 may query Internet server 15 for any additional television-related information for the product. Internet server 15 may provide such information in the form of, for example, markup language documents, which may indicate additional video product content functionality. The information that is provided may be synchronized with the current display of the video product. For example, if a promotional video channel product is showing a video clip of an actor interview, the additional information may include an information screen that provides a user with the actor's biography and cinematography.

Synchronizing the content of Internet-delivered television-related information with the display of a video product may be accomplished using any suitable scheme. Markup language documents may, for example, be stored by Internet server 15 and indexed by time, date, and video product. Control circuitry 42 may provide the current time, date, and an identifier of the accessed video product to Internet server 15 when querying Internet server 15 for television-related information. Alternatively, each video product display screen may be uniquely identified. When a user performs an activity that requires the display of an additional screen or additional information, control circuitry 42 may provide a display screen identifier associated with that activity to Internet server 15. In either approach, Internet server 15 may use the information that is provided to construct a relational database query, such as a Standard Query Language (SQL) query, retrieve the desired information, format the information into a markup language document, and provide the markup language document back to user television equipment 22 for display by control circuitry 42.

FIGS. 10a and 10b show a flow diagram of illustrative paths between video products that may be provided by augmenting the content and functionality of video products in accordance with the principles of the present invention. For purposes of illustration, the discussion of FIGS. 10a and 10b will begin from the reference point of a user having accessed a promotional video channel product (step 1000). In response, control circuitry 42 may query Internet server 15 for

any additional television-related information for the promotional video channel product (step 1010). If there is no additional information, control circuitry may provide the user with access to the promotional video channel product in its original form, as shown in FIG. 2c for example (step 1020).

If Internet server 15 has additional information, control circuitry 42 may obtain the information and augment the content and functionality of the promotional video channel product as shown, for example, in FIG. 11 (step 1030). Instead of the non-interactive text display area shown in FIG. 2c, the augmented promotional video channel product may have interactive overlay 500. In the example of FIG. 11, the promotional video channel product is currently playing a video preview of the movie Stargate. Accordingly, the television-related information provided by Internet server 15 may include program listings information for the movie Stargate displayed in overlay 500. Overlay 500 may be, for example, a markup language document that displays the title of a movie being previewed, the channel on which it is available, and its air time. Overlay 500 may also display the current time.

Overlay 500 may be displayed on a screen for a predefined period of time after the user tunes to the promotional video channel and may then be removed from the screen using any suitable approach. Overlay 500 may, for example, "slide" off of the screen from right to left. Overlay 500 may reappear when, for example, the user presses an arrow key on remote control 40, or when some other real-time event occurs related to the promotional video channel product channel. The

promotional video channel product may, for example, cut into a movie review to present a commercial or other advertisement. Overlay 500 may be redisplayed by control circuitry 42 after the promotional video channel product returns to the movie review. Coordinating the display of overlay 500 with such a real-time event may be accomplished using any suitable approach. For example, an indicator may be distributed in-band on the promotional video channel product channel that indicates to control circuitry 42 that a commercial is being played.

The functionality of the promotional video channel product may be augmented by, for example, providing users with an opportunity to view program listings and other information for programs promoted by the promotional video channel product. When, for example, a user selects "More Shows" feature 510, control circuitry 15 may query Internet server 15 for additional information when, for example, the screens or overlays necessary to provide a user with an opportunity to view additional information have not already been downloaded and stored in memory 63 (not shown). Additional information may include a markup language document that defines a menu screen hereinafter referred to as a "more shows" screen, that is displayed by control circuitry 42 on user television equipment 22 (step 1040).

An illustrative more shows screen 1201 is shown in FIG. 12. More shows screen 1201 may include an active display element that displays, for example, a still graphic of the last frame shown by the promotional video channel product, or the current video carried on the channel. Control circuitry 42 may also

play the audio from the promotional video channel product.

More shows screen 1201 may display a number of selectable features 106 that a user may select to access the augmented content and functions of the video channel product. The user may, for example, access program listings for all promoted programs or for promoted programs of a particular genre (e.g., movies, actions, comedies, sports, game shows, etc.) by selecting its selectable feature 106. The user may also access another video product from more shows screen 1201, such as a passive program guide. The user may return to the promotional video channel product by selecting a suitable selectable feature. More shows screen 1201 may be designed to look similar to main menu screen 102 (FIG. 5) of an interactive television program guide to better facilitate the seamless transmission from one video product to another.

A user may select a particular selectable feature 106 by, for example, using arrow keys on remote control 40 to position highlight region 151 over the desired selectable feature and pressing an "Ok" key on remote control 40. When a user selects a selectable feature 106, such as a selectable "Drama" feature, control circuitry 42 may query Internet server 15 for additional information when, for example, the screens or overlays necessary to provide a user with an opportunity to view additional information have not already been downloaded and stored in memory 63 (not shown). The additional information may, in this example, include program listings for drama programs. Control circuitry 42 may display the program listings of the selected genre in a program listings screen,

such as illustrative program listings screen 1301 of FIG. 13 (step 1050).

Program listings screens for video products, such as program listings screen 1301 of FIG. 13, may be designed to look similar to the program listings screens of FIGS. 6-8c to make the transition from an interactive program guide to a video product seamless to the user. Program listings screens for video products, however, may be slightly different than those of interactive guides when, for example, slightly different looks or features are desired. Designing multiple television products within a system to supplement each other may provide a viewing and interactive television experience that increases user interest and loyalty to the product line.

Listings for promoted programs may be displayed according to any suitable organization criteria. FIG. 13 shows the display of listings by time, but listings may be resorted and displayed by circuitry 42 when, for example, the user arrows right or left with remote control 40. Text display area 1303 may display a brief description of the currently highlighted listing. In this example, the user has positioned highlight region 151 over the listing for The Rainmaker. If desired, the next air time and the rating of programs may be displayed. FIG. 13 shows an illustrative program listings screen for drama pay-per-view programs, but the listings screen may be used to display listings using for any suitable category, and may also display listings for all categories. If desired, the listings may be associated with program videos in a video-on-demand (VOD) library. Users may select the listings to view the programs on-demand.

Another illustrative additional function that may be provided by augmenting a television product with Internet-delivered television-related information is providing additional program information when, for example, a user indicates a desire to do so. Users may indicate a desire to view additional program information by, for example, selecting a program listing from within a program listings screen of an interactive program guide (e.g., FIGS. 6-8c), or from within a program listings screen that augments a video product (e.g., screen 1301 of FIG. 13). When a user indicates a desire to view program information, control circuitry 42 may query Internet server 15 for additional information when, for example, the screens or overlays necessary to provide a user with an opportunity to view additional information have not already been downloaded and stored in memory 63 (not shown). The additional information may, in this example, include program information that control circuitry 42 displays in a program information screen (step 1060). An illustrative program information screen 1401 is shown in FIG. 14.

Program information screen 1401 of FIG. 14 shows an illustrative navigator 1403 that may be displayed within television product display screens to provide users with a consistent looking navigational tool for navigating among the video products and the additional screens that are provided via Internet server 15. Navigator 1403 may provide users with an opportunity to, for example, view program information, access a screening room, purchase merchandise, access a passive program guide, access a promotional video channel product, or perform any other suitable action.

Users may perform such functions by, for example, selecting selectable features 106 with highlight region 151. Program information screen 1401 may include, for example, a graphic still of the program associated with the selected listing and may play the audio of the video product from which the user entered program information screen 1401. Program information screen 1401 may also include, for example, a brief description of the program associated with the listing, the program's title, rating, air times and any other suitable information. The user may view additional, undisplayed air times for a program by, for example, moving right or left using arrow keys on remote control 40.

A user may also access a screening room from program information screen 1401. Screening rooms are display screens in which video clips of programs are displayed. When a user indicates a desire to access a screening room by, for example, selecting an on-screen selectable Screening Room feature 106, control circuitry 42 may query Internet server 15 for additional information (e.g., when the screens or overlays necessary to provide a user with an opportunity to view the screening room and corresponding clip have not already been downloaded and stored in memory 63). The additional information may, in this example, include a video clip for the screening room. Video clips may be downloaded in any suitable digital video format, such as the Moving Picture Experts Group (MPEG) MPEG-2 format. Control circuitry 42 may display the video clip on user television equipment 22 in a screening room display screen (step 1070 of FIG. 10b).

An illustrative screening room display screen 1501 is displayed in FIG. 15. A user may play a video preview by, for example, arrowing right or left and selecting a listed video clip. If there are multiple video clips available for a program, there may be multiple listings, but only one has been shown to avoid overcomplicating the drawing. Control circuitry 42 may have suitable hardware, software, or a suitable combination thereof for decoding the clip and displaying the clip on user television equipment 22.

Another illustrative feature is providing a user with an opportunity to purchase programming related merchandise. Programming related merchandise may be related to, for example, the program displayed by a video product when a user indicated a desire to view available merchandise. A user may indicate a desire to view available merchandise by, for example, selecting a selectable Merchandise feature 106 from navigator 1403.

After a user indicates a desire to view available merchandise, control circuitry 42 may query Internet server 15 for additional information when, for example, the screens or overlays necessary to provide a user with an opportunity to view available merchandise have not already been downloaded and stored in memory 63 (not shown). The additional information may, in this example, include merchandise information (e.g., a description of the merchandise, available sizes, colors, price, etc.), that control circuitry 42 displays in a merchandise screen (step 1080 of FIG. 10b). An illustrative merchandise display screen 1601 is shown in FIG. 16.

Merchandise display screen 1601 may provide a user with an opportunity to order the promoted merchandise. In illustrative merchandise display screen 1601, for example, a user may specify the color, size, and quantity of a Stargate t-shirt by positioning highlight region 151 over a desired field and arrowing right or left. When a user selects an on-screen order feature, control circuitry 42 may order the merchandise using any suitable approach. Control circuitry 42 may, for example, provide the ordering information to Internet server 15. Internet server 15 may, in turn, send a merchandise request to merchandising facility 10 (FIG. 1). Alternatively, control circuitry 42 may provide the ordering information to television distribution facility 16 via communications path 20. Television distribution facility 16 may, in turn, provide a merchandise request to merchandising facility 10. In still another suitable approach, control circuitry 42 may issue a merchandise request to merchandising facility 10 directly via the Internet. Merchandising facility 10 may include any computer hardware or software suitable for receiving merchandise requests, ordering the merchandise, shipping the merchandise to the user, and billing the user.

A merchandise request includes information necessary for ordering the merchandise based on the type of ordering scheme used. The request may include, for example, a merchandise identifier, a user identifier or account number, or other suitable information. The merchandising requests may include, for example, user information that merchandising facility 16 can use to generate an invoice for the merchandise. Alternatively, television distribution

facility 16 may bill the user for the merchandise on the user's next statement and merchandising facility 10 may only ship the merchandise.

Communications path 9 may be any communications path suitable for carrying merchandise requests from Internet server 15, user television equipment 22 or television distribution facility 16 to merchandising facility 10. Communications path 9 may include, for example, a satellite link, a telephone network link, a cable or fiber optic link, a microwave link, an Internet link, a combination of such links, or any other suitable communications link. Communications path 9 has only been shown as being connected to television distribution facility 16 to avoid over-complicating the drawing.

Returning to the discussion of FIG. 16, active display element 1603 may initially display, for example, a graphic of the merchandise that is being offered (e.g., a t-shirt). If desired, active display element 16 may be selectable. In response to a user selecting active display element 16, control circuitry 42 may provide the user with an additional perspective or view of the ordered merchandise. The additional perspective or view may be still, animated, or video. In this example, control circuitry 42 may in respond to a user selecting a graphic of a Stargate t-shirt by displaying a rotating graphic of the t-shirt so that a user may see both sides of the t-shirt.

Prior to registering the order, control circuitry 42 may prompt the user to confirm the order, if desired. Control circuitry 42 may, for example, display an order confirmation screen (step 1090 of FIG. 10b), in which the user is presented with an order

summary and provided with an opportunity to cancel, confirm, or change the order. An illustrative order confirmation screen 1701 is shown in FIG. 17.

Another feature that may be provided as part of augmenting a television application is providing a user with an opportunity to order pay-per-view programs. Users may indicate a desire to order pay-per-view programs promoted by, for example, pressing an "order" key or other suitable key on remote control 40 when a pay-per-view program is being promoted by a video product. FIG. 10a shows illustrative flow paths for providing users with an opportunity to order pay-per-view programs from within a video product, in this example a promotional video channel product. When a user indicates a desire to order a pay-per-view program, control circuitry 42 may query Internet server 15 for additional information when, for example, the screens or overlays necessary to provide a user with an opportunity to view additional information have not already been downloaded and stored in memory 63 (not shown). The additional information may, in this example, include pay-per-view ordering information (e.g., price, title, and air times) that control circuitry 42 displays in a pay-per-view ordering screen.

For the purposes of illustration, a video product, such as a promotional video channel product, may be currently promoting Tomorrow Never Dies as shown in FIG. 18. As illustrated, a user may indicate a desire to order the pay-per-view program Tomorrow Never Dies by, for example, pressing an "Ok" key on remote control 40. When the user indicates a desire to order a pay-per-view program, control circuitry 42 may query

Internet server 15 for additional information such as pay-per-view ordering information.

FIGS. 18 and 19 show an illustrative WOW indicator 1405 that may be displayed in overlay 500 when a special offer is being made, such as a special merchandising opportunity dependent upon the user ordering a pay-per-view program. A WOW indicator may be selectable, as shown in FIG. 19. Because additional information is delivered via the Internet, special merchandising opportunities may be created at any time and with any suitable frequency and may be presented to the user as soon as the user accesses a display screen from which a user may view available merchandise or make a pay-per-view order.

Control circuitry 42 may determine that a WOW offer is available using any suitable approach. Control circuitry 42 may, for example, detect a WOW indicator in an in-band signal transmitted on the channel carrying the video product. Another suitable approach may include Internet server 15 indicating a WOW offer is available in the information provided to control circuitry 42. After control circuitry 42 detects that a WOW offer is available, control circuitry 42 may display a modified WOW overlay 500 as shown in FIG. 18 (step 1995), that indicates to the user a WOW offer is available.

When a user indicates a desire to order a pay-per-view program from within overlay 500 of FIG. 18, control circuitry 42 may display overlay 500 of FIG. 19 (step 2000). A user may order a pay-per-view program and a corresponding WOW offer by, for example, selecting an air time of the promoted pay-per-view program from overlay 500 of FIG. 19. In response,

control circuitry 42 may prompt the user to confirm ordering the WOW offer as shown in FIG. 20.

Alternatively, a user may indicate a desire to review a WOW offer without ordering the WOW offer or a promoted pay-per-view program. A user may, for example, select selectable WOW indicator 1405 of FIG. 19. In still another approach, a user may indicate a desire to view additional information for the promoted pay-per-view program by, for example, selecting selectable more info feature 1903. In response, control circuitry 42 may download additional information (if needed), and display the additional information in program information screen 2101 of FIG. 21 (step 1060). The user may then indicate a desire to review a WOW offer by, for example, selecting selectable merchandise feature 106.

When a user indicates a desire to order a pay-per-view program and WOW offer, or when a user indicates a desire to review a WOW offer, control circuitry 42 may obtain additional information (if necessary) and display a WOW offer screen (step 2010 FIG. 10b). An illustrative WOW offer screen 2201 is shown in FIG. 22. WOW offer screen 2201 may describe the WOW offer indicating, for example, the price, whether the offer is dependent on a pay-per-view program purchase, and a brief description of the merchandise offered. After reading the offer, the user may indicate a desire to continue (e.g., by selecting continue), and control circuitry 42 may respond by obtaining additional information (if necessary) and displaying a merchandise screen (step 1080 FIG. 10b).

FIG. 23 shows an illustrative modified merchandise screen 2301 in which the user is notified

that an offer is a WOW offer and in which the user is provided an opportunity to create or cancel the order. Once the user creates the order, control circuitry 42 may obtain additional information (if necessary), and may display a modified order confirmation screen such as order confirmation screen 2401 of FIG. 24 (step 1090 of FIG. 10b).

Once the user has ordered the pay-per-view program and, if desired although not required, a WOW offer, control circuitry 42 may tune the user to the channel on which the pay-per-view program is carried (if currently broadcasted), or return the user to the video product from which the pay-per-view program was ordered, and display thank you indicator 2503 as shown in FIG. 25 (step 2025). Thank you indicator 2503 may be displayed for a predefined period of time and then may be removed from display by control circuitry 42.

FIG. 26 shows an illustrative overlay 500 that control circuitry 42 may display to provide a user with an opportunity to order a pay-per-view program when there is no available WOW offer. For the purposes of illustration, assume that the currently promoted program is Starship Troopers. After the user indicates a desire to order the promoted pay-per-view program by, for example, pressing an "order" or other suitable key on remote control 40, control circuitry 42 may display overlay 520 of FIG. 26 (step 2020). Overlay 520 may provide a user with an opportunity to obtain more information on the pay-per-view, to order the pay-per-view, or to return to the video product, in this example the promotional video channel product. If the user orders the pay-per-view program by, for example, selecting order feature 106, control circuitry 42 may

tune the user to the channel on which the pay-per-view program is carried (if currently broadcasted), or return the user to the video product from which the pay-per-view program was ordered, and display thank you indicator 2503 (FIG. 25; step 2025). Thank you indicator 2503 may be displayed for a predefined period of time and then may be removed from display by control circuitry 42.

Users may also be provided with an opportunity to set reminders for their pay-per-view orders. In response to a user making or confirming a pay-per-view order, for example, control circuitry 42 may obtain additional information (if necessary) from Internet server 15. The additional information may include, for example, a unique identifier for the program and its air time. The additional information may also include a set reminder window that is displayed by control circuitry 42 on user television equipment 22 (step 2030).

An illustrative reminder window 2701 is shown in FIG. 27. Reminder window 2701 may provide a user with an opportunity to review his or her order, obtain more information on the ordered pay-per-view program, and to set a reminder for the pay-per-view program. A user may indicate a desire to set a reminder by, for example, selecting Yes feature 106. Reminders may be set using any suitable approach. For example, control circuitry 42 may provide Internet server 15 with a unique identifier of the ordered pay-per-view program and a unique address for user television equipment 22. At a suitable time before the airing of the pay-per-view program, Internet server 15 may send a message to user television equipment 22 using any suitable

protocol, such as the Simple Mail Transfer Protocol (SMTP). Control circuitry 42 may receive the message, determine that it is a reminder (e.g., from header information in the message), and display a reminder on user television equipment 22 (step 2040).

In an alternative approach, Internet server 15 may provide the reminder information to an interactive television program guide implemented at least in part on set-top box 28. When control circuitry 42 obtains additional information from Internet server 15 for the guide, Internet server 15 may retrieve the reminder information and provide it to control circuitry 42 based, for example, on the unique address of user television equipment 22. At a suitable time, the program guide may display a reminder on user television equipment 22 (step 2040).

An illustrative reminder is shown in FIG. 28. Reminder 2801 may indicate to the user that the ordered pay-per-view program is starting, and prompt the user to tune to the channel on which the pay-per-view program is being carried. In response to the user selecting Yes feature 106, for example, control circuitry 42 may tune to the channel. A thank you indicator, such as thank you indicator 2503 of FIG. 23, may be displayed if desired.

An order may be denied. A user may, for example, have parental control settings set with a television product that prevent an order. Alternatively, a parental control code may not be set and the order may be denied because the pay-per-view program does not meet default parental control settings. Another reason for an order being denied may be that there is an order conflict.

Control circuitry 42 may determine that an order should be denied using any suitable approach. Control circuitry 42 may store a list of ordered pay-per-view programs and their air times and look-up the air time for the program that is being ordered. Control circuitry 42 may also store a list of parental control settings that control circuitry 42 may compare against the program that a user wishes to order. Alternatively, an interactive television program guide may monitor pay-per-view ordering and issue a suitable command to control circuitry 42 to display an order denied window. If there is a conflict or other situation that requires an order be denied, control circuitry 42 may display an order denied window, such as order denied window 2901 shown in FIG. 29 (step 2050).

Another example of synchronizing Internet-delivered television-related information with video product videos is shown in FIG. 30. A promotional video channel may, for example, periodically display program listings, such as pay-per-view program listings. Control circuitry 42 may obtain (or have obtained) program listings information for the pay-per-view programs listed, and display the information in overlay 500. In this example, As Good As It Gets is listed first and overlay 500 displays its program listings information. Control circuitry 42 may display program listings information for Tomorrow Never Dies or Starship Troopers in response to, for example, a user arrowing down.

The discussion of FIGS. 11-30 thus far has described illustrative ways that a promotional video channel type video product may be augmented by

Internet-delivered television-associated information. A passive guide video product may also be augmented in similar ways. For purposes of illustration, a passive guide product will be described that is augmented using some of the same screens and overlays such as those shown in FIGS. 11-30.

In response to a user tuning to a passive guide channel, control circuitry 42 may detect that the user has tuned to the passive guide channel, and may query Internet server 15 for additional television-related information for the passive guide video product (step 3000). If there is no additional information, control circuitry 42 may provide the user with access to the passive guide product in its original form, as shown, for example, in FIGS. 2a and 2b (step 3010).

If Internet server 15 has additional information, control circuitry 42 may obtain the information and augment the content and functionality of the passive guide product as shown, for example, in FIGS. 31a and 31b (step 3020). The additional information may include, for example, an interactive program listings grid defined by one or more markup language documents. Control circuitry 42 may overlay the passive program listings grid of FIGS. 2a and 2b, with interactive grid 3201. Users may navigate within grid 3201 by, for example, arrowing up, down, left, or right to position highlight region 151 over a program listing. Users may access additional information for a highlighted listings by, for example, pressing an "info" key on remote control 40. When a user indicates a desire to access additional information, control circuitry 42 may obtain additional information from Internet server 15 (if necessary), and may display a

program information screen for the selected program, such as program information screen 1401 of FIG. 14 (e.g., step 1060 of FIG. 10a).

Users may also view previews of programs associated with listings. The augmented passive guide may, for example, indicate that a program has an available preview by tagging a program listing with an icon, such as camera icon 3103. A user may indicate a desire to access a preview by, for example, pressing an "Ok" key on remote control 40 when a listing having camera icon 3103 is highlighted by highlight region 151. In response, control circuitry 43 may obtain additional information from Internet server 15 (if necessary), and display a screening room, such as that shown in FIG. 15 (e.g., step 1070). From the screening room control circuitry 42 may provide a user with an opportunity to, for example, view the preview, access a merchandise screen and order merchandise (e.g., steps 1080 and 1090), or access a promotional video channel. If a program listing is for a pay-per-view program, control circuitry 42 may provide the user with an opportunity to order the pay-per-view program (e.g., steps 1995 and 2020), and set a reminder if desired (e.g., steps 2030).

An interactive television program guide may also be augmented by Internet-delivered television-related information. For clarity, the following discussion will be based on a system in which control circuitry in user television equipment 22 augments interactive program guide display screen content in functionality. Other approaches may also be used. In client-server based guides such as the system described in above-mentioned Marshall et al. U.S. patent

application Serial No. 09/330,501, filed June 11, 1999, guide display screens may be changed by suitable hardware at television distribution facility 16.

Control circuitry 42 may, for example, overlay guide screens with screens defined by Internet-delivered markup language documents, or may obtain additional information and provide the information to the guide for display in program guide display screens. Control circuitry 42 may detect that a user has accessed an interactive guide and query Internet server 15 for additional information (step 4000). If there is no additional information, control circuitry may provide the user with access to an interactive guide screen in its original form, such as main menu screen 100 of FIG. 5 (step 4010).

If Internet server 15 has additional information, control circuitry 42 may obtain the information and augment the content and functionality of the interactive guide product. For example, main menu 102 of FIG. 5 provides interactive guide users with an opportunity to access listings of pay-per-view programs by time and by title. In response to a user indicating a desire to view pay-per-view program listings, control circuitry 42 may obtain additional information such as program listings data (if necessary), and may display a listings screen, such as program listings screen 1301 of FIG. 13. From a program listings screen, a user may access other augmented features, such as view additional program information (e.g., step 1060), order pay-per-view programs (e.g., steps 1995 and 2020), purchase merchandise (e.g., steps 1080, 1090, and 2010), preview

programs (e.g., step 1070), or any other suitable feature.

Additional features may also be accessed from program guide display screens that provide users with access to similar features. Interactive guides may, for example, provide users with an opportunity to order pay-per-view programs by pressing an "order" key on remote control 40 after highlighting a pay-per-view program listing. In response, control circuitry 42 may, for example, display an order overlay such as those shown in FIGS. 18 and 26 (e.g., Steps 1995 and 2020), and provide a user with an opportunity to order a pay-per-view program. Interactive guides may also provide users with an opportunity to order program related merchandise by pressing a "merchandise" feature from an additional program information screen. In response, control circuitry 42 may, for example, display a merchandise screen and provide users with an opportunity to confirm their orders (e.g., steps 1080 and 1090). These functions are only illustrative, as by drawing on the resources of the Internet any number of program guide features may be augmented or, if desired, added.

Preferably, display screens that augment an interactive guide are designed with a look similar to that of the guide to make the Internet-delivery of data and augmentation of the guide transparent to the user. For example, a program listings screen in which pay-per-view program listings are displayed may be downloaded as a markup language document that looks like a program guide listings screen. The downloaded screen may include camera icon 3103 to indicate to a user that a video preview is available. FIG. 32, for

example, shows how the listings screen of FIG. 8a may be augmented in this way. In response to a user selecting a listing with a camera icon 3103, for example, control circuitry 42 may provide the user with an opportunity to view the preview from a screening room (e.g., step 1070).

Another feature of the present invention is delivering programming related reminders with merchandise that was ordered by a user using a television-related product. This feature of the present invention may be used, for example, in interactive television program guide systems that provide users with an opportunity to order merchandise, such as the guide described in connection with FIGS. 5-8c and 32. Such systems may include set-top-box-based, client-server, and Internet based program guides. This feature may also be used in connection with other television-related products that provide users with an opportunity to order merchandise, such as the enhanced video products described in connection with FIGS. 9a-31b.

Merchandising facility 10 of FIG. 1 may have computer 3 and printer 5 for printing programming related reminders for delivery with merchandise that is delivered to users. In one suitable approach, merchandise requests that are provided to merchandising facility 12 may include identifiers of programs that are associated with the ordered merchandise. A merchandise request for the order shown in FIG. 16, for example, may identify Stargate SG-1 as a related program. A merchandise request for the order shown in FIG. 23, for example, may identify Tomorrow Never Dies as a related program. Computer 3 may, if desired, have

a copy of the database stored by data source 14, and may query the database for programming information related to the indicated program. Computer 3 may direct printer 5 to print a reminder that indicates, for example, air times of the related program (e.g., Stargate SG-1 or Tomorrow Never Dies) for the current month. The reminder may be delivered with the ordered merchandise.

Another suitable example may be reminders enclosed with food ordered by a user using a television-related product. A WOW offer, for example, may include a free pizza with the order of a pay-per-view. When a user orders the pay-per-view, a merchandise request may be provided by Internet server 15, television distribution facility 16, or user television equipment 22, to merchandising facility 10. The merchandise request may indicate the ordered pay-per-view program. In this example, merchandising facility 10 may include a computer system for a pizza franchise that forwards the order to a local member of the franchise. The local member may print a suitable reminder, and may deliver the reminder with the pizza.

FIG. 33 shows a flowchart of illustrative steps involved in providing users with an opportunity to purchase merchandise and in providing reminders in accordance with the principles of the present invention. The steps shown in FIG. 33 are only illustrative and may be performed in any suitable order. A user is provided with an opportunity to order merchandise using a television-related product at step 3301. The television-related product may be an interactive television program guide, enhanced video product, or other suitable product. After a user

orders the merchandise, the television-related product may generate a merchandise request (step 3310).

The merchandise request may be delivered to merchandising facility 10 using any suitable approach (step 3320). Control circuitry 42 may, for example, provide the request to merchandising facility 10 via a suitable link, such as a telephone dial-up, Ethernet, Internet, or DOCSIS link. Alternatively, television distribution facility may deliver the request to merchandising facility 10. In still another approach, Internet server 15 may receive a merchandise request from user television equipment 22 or television distribution facility 16 and provide the request to merchandising facility 10. Merchandising facility 10 may print the reminder (step 3330), and deliver the reminder to the user (step 3340).

The reminder may be delivered with ordered merchandise or at some other suitable time. The reminder may be delivered before the ordered merchandise when, for example, the merchandise is out of stock. The reminder may be delivered after the merchandise when, for example, the merchandise is delivered much earlier than when a program associated with the merchandise airs.

The foregoing is merely illustrative of the principles of this invention and various modifications can be made by those skilled in the art without departing from the scope and spirit of the invention.

What is claimed is:

1. A system in which a television-related product that is provided to a user is augmented by Internet-delivered television-related information comprising:

a main facility configured to provide the Internet-delivered television-related information and information for the television-related product;

an Internet server configured to receive the Internet-delivered television-related information and to distribute the Internet-delivered television-related information;

a television distribution facility configured to receive the information for the television-related product and to distribute the information for the television-related product; and

user television equipment configured to obtain the Internet-delivered television-related information from the Internet server, receive the information for the television-related product from the television distribution facility, and to display a display screen including the Internet-delivered television-related information with the information for the television-related product as if the Internet-delivered television-related information were part of the television-related product so that the display screen does not alert the user to the fact that the Internet-delivered television-related information is being delivered over the Internet separately from the information for the television-related product.

2. The system defined in claim 1 wherein:

the television-related product is a promotional video channel;

the Internet-delivered television-related information includes program listings information; and

the user television equipment is further configured to display an overlay on the display screen wherein the overlay contains the program listings information.

3. The system defined in claim 1 wherein:

the television-related product is a passive guide product;

the Internet-delivered television-related information includes program listings information; and

the user television equipment is further configured to display an interactive program listings grid on the display screen wherein the program listings grid contains the program listings information.

4. The system defined in claim 1 wherein:

the television-related product is an interactive television program guide;

the Internet-delivered television-related information includes additional program information; and

the user television equipment is further configured to display a program information screen in response to the user indicating a desire to access additional information for a program, wherein the program information screen contains the additional program information.

5. The system defined in claim 1 wherein:

the Internet-delivered television-related information includes a video clip; and

the user television equipment is further configured to display the video clip in a screening room display screen when a user indicates a desire to view the video clip.

6. The system defined in claim 1 wherein:

the Internet-delivered television-related information includes merchandise information; and

the user television equipment is further configured to display the merchandise information in a merchandise display screen.

7. The system defined in claim 1 wherein:

the Internet-delivered television-related information includes information related to a special merchandising opportunity; and

the user television equipment is further configured to indicate to a user that the information related to a special merchandising opportunity is available and to display the information related to a special merchandising opportunity in response to a user indicating a desire to review the special merchandising opportunity.

8. The system defined in claim 1 wherein:

the Internet-delivered television-related information includes pay-per-view ordering information; and

the user television equipment is further configured to display the pay-per-view ordering information and provide a user with an opportunity to order the pay-per-view program.

9. The system defined in claim 1 wherein:

the Internet-delivered television-related information includes reminder information; and

the user television equipment is further configured to display a reminder based on the reminder information.

10. A system in which the appearances of a plurality of television-related products are coordinated, wherein each television-related product has at least one display screen, comprising:

a main facility configured to provide information for the plurality of television-related products;

an Internet server configured to distribute television-related information defining the appearances of the display screens of the television-related products;

a television distribution facility configured to receive the information for the plurality of television-related products and to distribute the information for the television-related products; and

user television equipment configured to obtain the television-related information from the Internet server, to receive the information for the plurality of television-related products from the television distribution facility, and to display the display screens for each of the television-related

products with appearances as defined by the television-related information.

11. The system defined in claim 10 wherein the television-related information includes at least one markup language document that defines the appearances of each of the television-related products.

12. A system in which the display of Internet-delivered television-related information is synchronized with the display of videos in a video product, comprising:

a main facility configured to provide at least one video for a video product;

an Internet server configured to distribute television-related information related to the video;

a television distribution facility configured to receive the video and to distribute the video in real time; and

user television equipment configured to obtain the television-related information related to the video from the Internet server, receive the video from the television distribution facility, and to display the video simultaneously with the television-related information related to the video.

13. The system defined in claim 12 wherein:

the video includes pay-per-view program listings;

the television-related information includes pay-per-view program listings information for the pay-per-view program listings; and

the user television equipment is further configured to display the pay-per-view program listings information simultaneously with the pay-per-view program listings.

14. The system defined in claim 12 wherein:

the video product is a promotional video channel that displays the video; and

the user television equipment is further configured to display the promotional video channel with the information related to the video.

15. The system defined in claim 12 wherein:

the video product is a passive guide that displays the video; and

the user television equipment is further configured to display the passive guide with the information related to the video.

16. A system in which a video product is augmented by Internet-delivered television-related information, comprising:

an Internet server configured to deliver information related to the video product;

a chromeless Internet browser configured to obtain the information related to the video product; and

user television equipment configured to run the chromeless Internet browser and to display the video product with the information related to the video product obtained by the chromeless Internet browser.

17. The system defined in claim 16 wherein:

the video product is a promotional video channel that displays one or more promotional videos;

the information related to the video product is information related to the promotional videos; and

the user television equipment is further configured to display the promotional videos with the information related to the promotional videos.

18. The system defined in claim 16 wherein:

the video product is a passive guide that displays one or more promotional videos;

the information related to the video product is information related to the promotional videos; and

the user television equipment is further configured to display the passive guide with the information related to the promotional videos.

19. A system in which users are provided with an opportunity to order television-related merchandise using a television-related product having at least one display screen, comprising:

user television equipment configured to display the display screens and to provide a user with an opportunity to order merchandise using at least one of the display screens; and

a merchandising facility configured to provide merchandise that the user ordered to the user and to provide a reminder to the user indicating a program associated with the merchandise that the user ordered.

20. The system defined in claim 19 wherein the merchandising facility is further configured to provide a reminder to the user with the merchandise that the user ordered.

21. The system defined in claim 19 wherein the merchandising facility is further configured to provide a reminder to the user before providing the merchandise that the user ordered to the user.

22. The system defined in claim 19 wherein the merchandising facility is further configured to provide a reminder to the user after providing the merchandise that the user ordered to the user.

23. A system in which a client-server based interactive television program guide is augmented by Internet-delivered television-related information, comprising:

a main facility configured to provide the Internet-delivered television-related information and program guide data;

an Internet server configured to receive the Internet-delivered television-related information and to distribute the Internet-delivered television-related information;

a television distribution facility comprising:

a reception system configured to receive the program guide data and Internet-delivered television-related information;

a screen generator configured to generate an interactive television program guide

display screen in response to requests by an interactive television program guide client implemented on user television equipment, wherein the interactive television program guide display screen includes the Internet-delivered television-related information with the program guide data as if the Internet-delivered television-related information were part of the interactive television program guide so that the display screen does not alert the user to the fact that the Internet-delivered television-related information is being delivered over the Internet separately from the information for the interactive television program guide; and

distribution equipment configured to distribute the program guide display screens to the user television equipment for display by the interactive television program guide client.

24. A system in which the appearances of a plurality of video products are coordinated, wherein each video product has at least one display screen, comprising:

a main facility configured to provide information for the plurality of video products;

an Internet server configured to distribute television-related information defining the appearances of the display screens of the video products;

a television distribution facility comprising:

a reception system configured to receive the information for the plurality of video products and the television-related information;

a screen generator configured to generate the display screens for each of the video products with appearances as defined by the television-related information; and

a distribution system configured and to distribute the display screens; and

user television equipment configured to display the display screens.

25. A method for use in a system in which a television-related product that is provided to a user is augmented by Internet-delivered television-related information comprising:

providing the television-related information and information for the television-related product;

distributing the television-related information over a first link that includes an Internet link;

distributing the information for the television-related product over a second link; and

displaying a display screen on user television equipment that displays the television-related information with the information for the television-related product as if the television-related information were part of the television-related product so that the display screen does not alert the user to the fact that the television-related information distributed over the first link is being delivered over the Internet separately from the information for the television-related product.

26. The method defined in claim 25 wherein:

the television-related product is a promotional video channel;

distributing the television-related information over a first link that includes an Internet link comprises distributing program listings information; and

displaying a display screen on user television equipment that displays the television-related information with the information for the television-related product comprises displaying an overlay on the display screen wherein the overlay contains the program listings information.

27. The method defined in claim 25 wherein:

the television-related product is a passive guide product;

distributing the television-related information over a first link that includes an Internet link comprises distributing program listings information; and

displaying a display screen on user television equipment that displays the television-related information with the information for the television-related product comprises displaying an interactive program listings grid on the display screen wherein the program listings grid contains the program listings information.

28. The method defined in claim 25 wherein:

the television-related product is an interactive television program guide;

distributing the television-related information over a first link that includes an Internet

link comprises distributing additional program information; and

displaying a display screen on user television equipment that displays the television-related information with the information for the television-related product comprises displaying a program information screen in response to the user indicating a desire to access additional information for a program, wherein the program information screen contains the additional program information.

29. The method defined in claim 25 wherein:

the Internet-delivered television-related information includes a video clip;

distributing the television-related information over a first link that includes an Internet link comprises distributing the video clip; and

displaying a display screen on user television equipment that displays the television-related information with the information for the television-related product comprises displaying the video clip in a screening room display screen in response to a user indicating a desire to view the video clip.

30. The method defined in claim 25 wherein:

the Internet-delivered television-related information includes merchandise information;

distributing the television-related information over a first link that includes an Internet link comprises distributing the merchandise information; and

displaying a display screen on user television equipment that displays the television-related information with the information for the television-related product comprises displaying the merchandise information in a merchandise display screen.

31. The method defined in claim 25 wherein:

the Internet-delivered television-related information includes information related to a special merchandising opportunity;

distributing the television-related information over a first link that includes an Internet link comprises distributing the information related to a special merchandising opportunity;

the method further comprises indicating to a user that the information related to a special merchandising opportunity is available; and

displaying a display screen on user television equipment that displays the television-related information with the information for the television-related product comprises displaying the information related to a special merchandising opportunity in response to a user indicating a desire to review the special merchandising opportunity.

32. The method defined in claim 25 wherein:

the Internet-delivered television-related information includes pay-per-view ordering information;

distributing the television-related information over a first link that includes an Internet

link comprises distributing the pay-per-view ordering information;

displaying a display screen on user television equipment that displays the television-related information with the information for the television-related product comprises displaying the pay-per-view ordering information; and

the method further comprises providing a user with an opportunity to order the pay-per-view program.

33. The method defined in claim 25 wherein:

the Internet-delivered television-related information includes reminder information;

distributing the television-related information over a first link that includes an Internet link comprises distributing the reminder information; and

displaying a display screen on user television equipment that displays the television-related information with the information for the television-related product comprises displaying a reminder based on the reminder information.

34. A method in which the appearances of a plurality of television-related products are coordinated, wherein each television-related product has at least one display screen, comprising:

providing information for the plurality of television-related products;

distributing television-related information defining the appearances of the display

screens of the television-related products over a first link, wherein the first link includes an Internet link;

distributing the information for the television-related products over a second link; and

displaying on user television equipment the display screens for each of the television-related products with appearances as defined by the television-related information.

35. The method defined in claim 34 wherein:

the television-related information includes at least one markup language document that defines the appearances of each of the television-related products;

distributing the television-related information defining the appearances of the display screens of the television-related products over a first link comprises distributing the markup language documents; and

displaying on user television equipment the display screens for each of the television-related products with appearances as defined by the television-related information comprises displaying on user television equipment the display screens for each of the television-related products with appearances as defined by the markup language document.

36. A method for use in a system in which the display of Internet-delivered television-related information is synchronized with the display of videos in a video product, comprising:

providing at least one video for a video product;

distributing television-related information related to the video over a first link, wherein the first link comprises an Internet link;

distributing the video in real time over a second link; and

displaying on user television equipment the video simultaneously with the television-related information related to the video.

37. The method defined in claim 36 wherein:

the video includes pay-per-view program listings;

the television-related information includes pay-per-view program listings information for the pay-per-view program listings;

distributing the television-related information comprises distributing the pay-per-view program listings information; and

displaying on the user television equipment the video simultaneously with the television-related information related to the video comprises displaying the pay-per-view program listings information simultaneously with the pay-per-view program listings.

38. The method defined in claim 36 wherein:

the video product is a promotional video channel that displays the video; and

displaying on the user television equipment the video simultaneously with the television-related information related to the video comprises displaying the promotional video channel with the information related to the video.

39. The method defined in claim 36 wherein:

the video product is a passive guide that displays the video; and

displaying on the user television equipment the video simultaneously with the television-related information related to the video comprises displaying the passive guide with the information related to the video.

40. A method for use in a system in which a video product is augmented by Internet-delivered television-related information, comprising:

delivering information related to the video product over an Internet link;

obtaining the information related to the video product using a chromeless Internet browser running on user television equipment; and

displaying the video product with the information related to the video product obtained by the chromeless Internet browser on the user television equipment.

41. The method defined in claim 40 wherein:

the video product is a promotional video channel that displays one or more promotional videos;

delivering information related to the video product over an Internet link comprises delivering information related to the promotional videos; and

displaying the video product with the information related to the video product obtained by the chromeless Internet browser on the user television

equipment comprises displaying the promotional videos with the information related to the promotional videos.

42. The method defined in claim 40 wherein:

the video product is a passive guide that displays one or more promotional videos;

delivering information related to the video product over an Internet link comprises delivering information related to the promotional videos; and

displaying the video product with the information related to the video product obtained by the chromeless Internet browser on the user television equipment comprises displaying the passive guide with the information related to the promotional videos.

43. A method for use in a system in which users are provided with an opportunity to order television-related merchandise using a television-related product having at least one display screen, comprising:

providing a user with an opportunity to order merchandise using at least one of the display screens;

providing merchandise that the user ordered to the user;

providing a reminder to the user indicating a program associated with the merchandise that the user ordered.

44. The method defined in claim 43 wherein providing a reminder to the user indicating a program associated with the merchandise that the user ordered

comprises providing a reminder to the user with the merchandise that the user ordered.

45. The method defined in claim 43 wherein providing a reminder to the user indicating a program associated with the merchandise that the user ordered comprises providing a reminder to the user before providing the merchandise that the user ordered to the user.

46. The method defined in claim 43 wherein providing a reminder to the user indicating a program associated with the merchandise that the user ordered comprises providing a reminder to the user after providing the merchandise that the user ordered to the user.

47. A method for use in a system in which a client-server based interactive television program guide is augmented by Internet-delivered television-related information, comprising:

providing the Internet-delivered television-related information and program guide data;

generating an interactive television program guide display screen in response to requests by an interactive television program guide client implemented on user television equipment, wherein the interactive television program guide display screen includes the Internet-delivered television-related information with the program guide data as if the Internet-delivered television-related information were part of the interactive television program guide so that the display screen does not alert the user to the

fact that the Internet-delivered television-related information is being delivered over the Internet separately from the information for the interactive television program guide; and

distributing the program guide display screens to the user television equipment for display by the interactive television program guide client.

48. A method for use in a system in which the appearances of a plurality of video products are coordinated, wherein each video product has at least one display screen, comprising:

providing information for the plurality of video products;

distributing television-related information defining the appearances of the display screens of the video products via the Internet;

generating the display screens for each of the video products with appearances as defined by the television-related information; and

distributing the display screens to a plurality of users.

49. A system in which a television-related product that is provided to a user is augmented by Internet-delivered television-related information comprising:

means for providing the television-related information and information for the television-related product;

means for distributing the television-related information over an Internet link;

means for distributing the information for the television-related product; and

means for displaying a display screen including the television-related information and the information for the television-related product as if the television-related information were part of the television-related product so that the display screen does not alert the user to the fact that the television-related information is being delivered over the Internet in addition to the information for the television-related product.

50. The system defined in claim 49 wherein:

the television-related product is a promotional video channel;

the means for distributing the television-related information over a first link that includes an Internet link comprises means for distributing program listings information; and

the means for displaying a display screen that displays the television-related information with the information for the television-related product comprises means for displaying an overlay on the display screen wherein the overlay contains the program listings information.

51. The system defined in claim 49 wherein:

the television-related product is a passive guide product;

the means for distributing the television-related information over an Internet link comprises means for distributing program listings information; and

the means for displaying a display screen including the television-related information and the information for the television-related product comprises means for displaying an interactive program listings grid on the display screen wherein the program listings grid contains the program listings information.

52. The system defined in claim 49 wherein:

the television-related product is an interactive television program guide;

the means for distributing the television-related information over an Internet link comprises distributing additional program information; and

the means for displaying a display screen including the television-related information and the information for the television-related product comprises means for displaying a program information screen in response to the user indicating a desire to access additional information for a program, wherein the program information screen contains the additional program information.

53. The system defined in claim 49 wherein:

the Internet-delivered television-related information includes a video clip;

the means for distributing the television-related information over an Internet link comprises distributing the video clip; and

the means for displaying a display screen including the television-related information and the information for the television-related product

comprises means for displaying the video clip in a screening room display screen in response to a user indicating a desire to view the video clip.

54. The system defined in claim 49 wherein:

the Internet-delivered television-related information includes merchandise information;

the means for distributing the television-related information over an Internet link comprises means for distributing the merchandise information; and

the means for displaying a display screen including the television-related information and the information for the television-related product comprises means for displaying the merchandise information in a merchandise display screen.

55. The system defined in claim 49 wherein:

the Internet-delivered television-related information includes information related to a special merchandising opportunity;

the means for distributing the television-related information over an Internet link comprises means for distributing the information related to a special merchandising opportunity;

the system further comprises means for indicating to a user that the information related to a special merchandising opportunity is available; and

the means for displaying a display screen including the television-related information and the information for the television-related product comprises means for displaying the information related to a special merchandising opportunity in response to a

user indicating a desire to review the special merchandising opportunity.

56. The system defined in claim 49 wherein:

the Internet-delivered television-related information includes pay-per-view ordering information;

the means for distributing the television-related information over an Internet link comprises means for distributing the pay-per-view ordering information;

the means for displaying a display screen including the television-related information and the information for the television-related product comprises means for displaying the pay-per-view ordering information; and

the system further comprises means for providing a user with an opportunity to order the pay-per-view program.

57. The system defined in claim 49 wherein:

the Internet-delivered television-related information includes reminder information;

the means for distributing the television-related information over an Internet link comprises means for distributing the reminder information; and

the means for displaying a display screen including the television-related information and the information for the television-related product comprises means for displaying a reminder based on the reminder information.

58. A system in which the appearances of a plurality of television-related products are coordinated, wherein each television-related product has at least one display screen, comprising:

means for providing information for the plurality of television-related products;

means for distributing television-related information defining the appearances of the display screens of the television-related products over an Internet link;

means for distributing the information for the television-related products; and

means for displaying the display screens for each of the television-related products with appearances as defined by the television-related information.

59. The system defined in claim 58 wherein:

the television-related information includes at least one markup language document that defines the appearances of each of the television-related products;

the means for distributing the television-related information defining the appearances of the display screens of the television-related products comprises means for distributing the markup language documents; and

the means for displaying the display screens for each of the television-related products with appearances as defined by the television-related information comprises means for displaying the display screens for each of the television-related products

with appearances as defined by the markup language document.

60. A system in which the display of Internet-delivered television-related information is synchronized with the display of videos in a video product, comprising:

means for providing at least one video for a video product;

means for distributing television-related information related to the video over an Internet link;

means for distributing the video in real time; and

means for displaying the video simultaneously with the television-related information related to the video.

61. The system defined in claim 60 wherein:

the video includes pay-per-view program listings;

the television-related information includes pay-per-view program listings information for the pay-per-view program listings;

the means for distributing the television-related information comprises means for distributing the pay-per-view program listings information; and

the means for displaying the video simultaneously with the television-related information related to the video comprises means for displaying the pay-per-view program listings information simultaneously with the pay-per-view program listings.

62. The system defined in claim 60 wherein:

the video product is a promotional video channel that displays the video; and

the means for displaying on the user television equipment the video simultaneously with the television-related information related to the video comprises means for displaying the promotional video channel with the information related to the video.

63. The system defined in claim 60 wherein:

the video product is a passive guide that displays the video; and

the means for displaying the video simultaneously with the television-related information related to the video comprises means for displaying the passive guide with the information related to the video.

64. A system in which a video product is augmented by Internet-delivered television-related information, comprising:

means for delivering information related to the video product over an Internet link;

means for obtaining the information related to the video product using a chromeless Internet browser; and

means for displaying the video product with the information related to the video product obtained by the chromeless Internet browser.

65. The system defined in claim 64 wherein:

the video product is a promotional video channel that displays one or more promotional videos;

the means for delivering information related to the video product over an Internet link comprises means for delivering information related to the promotional videos; and

the means for displaying the video product with the information related to the video product obtained by the chromeless Internet browser comprises displaying the promotional videos with the information related to the promotional videos.

66. The system defined in claim 64 wherein:

the video product is a passive guide that displays one or more promotional videos;

the means for delivering information related to the video product over an Internet link comprises means for delivering information related to the promotional videos; and

the means for displaying the video product with the information related to the video product obtained by the chromeless Internet browser comprises means for displaying the passive guide with the information related to the promotional videos.

67. A system in which users are provided with an opportunity to order television-related merchandise using a television-related product having at least one display screen, comprising:

means for providing a user with an opportunity to order merchandise using at least one of the display screens;

means for providing merchandise that the user ordered to the user;

means for providing a reminder to the user indicating a program associated with the merchandise that the user ordered.

68. The system defined in claim 67 wherein the means for providing a reminder to the user indicating a program associated with the merchandise that the user ordered comprises means for providing a reminder to the user with the merchandise that the user ordered.

69. The system defined in claim 68 wherein the means for providing a reminder to the user indicating a program associated with the merchandise that the user ordered comprises means for providing a reminder to the user before providing the merchandise that the user ordered to the user.

70. The system defined in claim 68 wherein the means for providing a reminder to the user indicating a program associated with the merchandise that the user ordered comprises means for providing a reminder to the user after providing the merchandise that the user ordered to the user.

71. A system in which a client-server based interactive television program guide is augmented by Internet-delivered television-related information, comprising:

means for providing the Internet-delivered television-related information and program guide data;

means for generating an interactive television program guide display screen in response to requests by an interactive television program guide client implemented on user television equipment, wherein the interactive television program guide display screen includes the Internet-delivered television-related information with the program guide data as if the Internet-delivered television-related information were part of the interactive television program guide so that the display screen does not alert the user to the fact that the Internet-delivered television-related information is being delivered over the Internet in addition to the information for the interactive television program guide; and

means for distributing the program guide display screens to the user television equipment for display by the interactive television program guide client.

72. A system in which the appearances of a plurality of video products are coordinated, wherein each video product has at least one display screen, comprising:

means for providing information for the plurality of video products;

means for distributing television-related information defining the appearances of the display screens of the video products via the Internet;

means for generating the display screens for each of the video products with appearances as defined by the television-related information; and

means for distributing the display screens to a plurality of users.

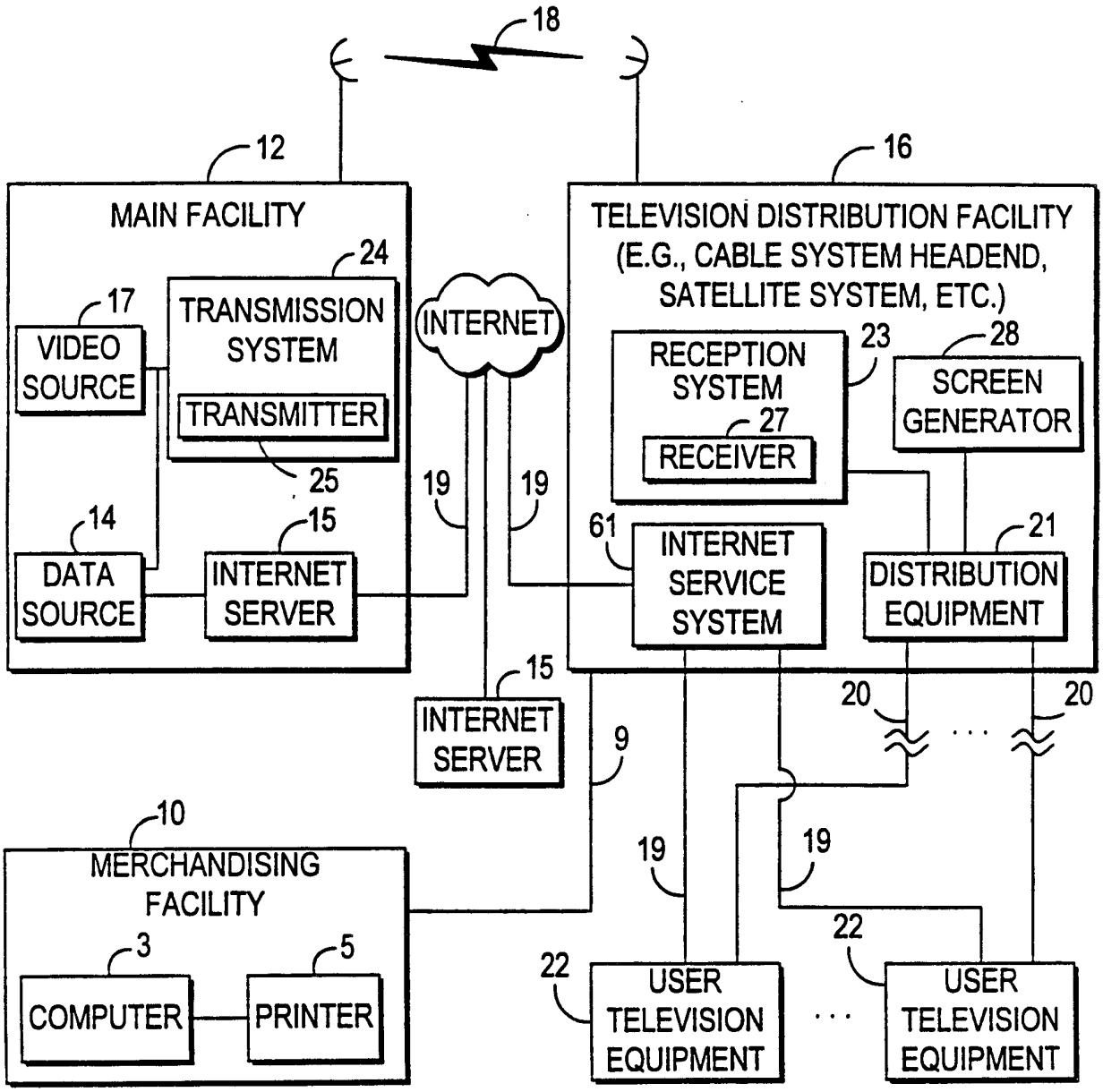
10
18
12
MAIN FACILITY
24
TRANSMISSION SYSTEM
17
VIDEO SOURCE
TRANSMITTER
25
14
DATA SOURCE
15
INTERNET SERVER
INTERNET
19
19
16
TELEVISION DISTRIBUTION FACILITY
(E.G., CABLE SYSTEM HEADEND, SATELLITE SYSTEM, ETC.)
RECEPTION SYSTEM
23
27
RECEIVER
28
SCREEN GENERATOR
61
INTERNET SERVICE SYSTEM
21
DISTRIBUTION EQUIPMENT
15
INTERNET SERVER
9
20
20
10
MERCHANDISING FACILITY
3
COMPUTER
5
PRINTER
19
19
22
22
USER TELEVISION EQUIPMENT
USER TELEVISION EQUIPMENT

FIG. 1

80

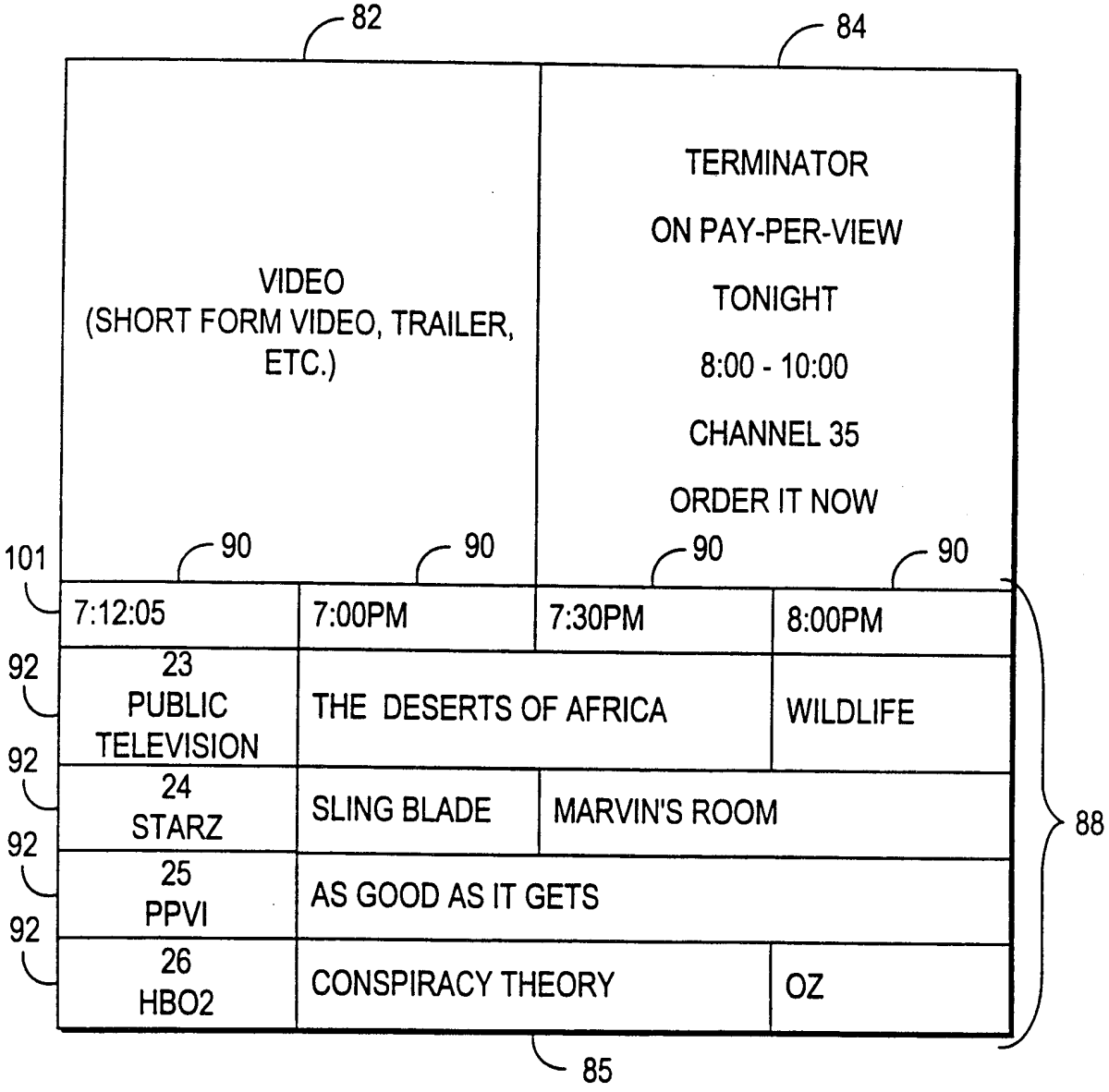
82
84
VIDEO
(SHORT FORM VIDEO, TRAILER, ETC.)
TERMINATOR
ON PAY-PER-VIEW
TONIGHT
8:00 - 10:00
CHANNEL 35
ORDER IT NOW
101
90
90
90
90
7:12:05
7:00PM
7:30PM
8:00PM
92
23
PUBLIC
TELEVISION
THE DESERTS OF AFRICA
WILDLIFE
92
24
STARZ
SLING BLADE
MARVIN'S ROOM
92
25
PPVI
AS GOOD AS IT GETS
92
26
HBO2
CONSPIRACY THEORY
OZ
88
85

FIG. 2a

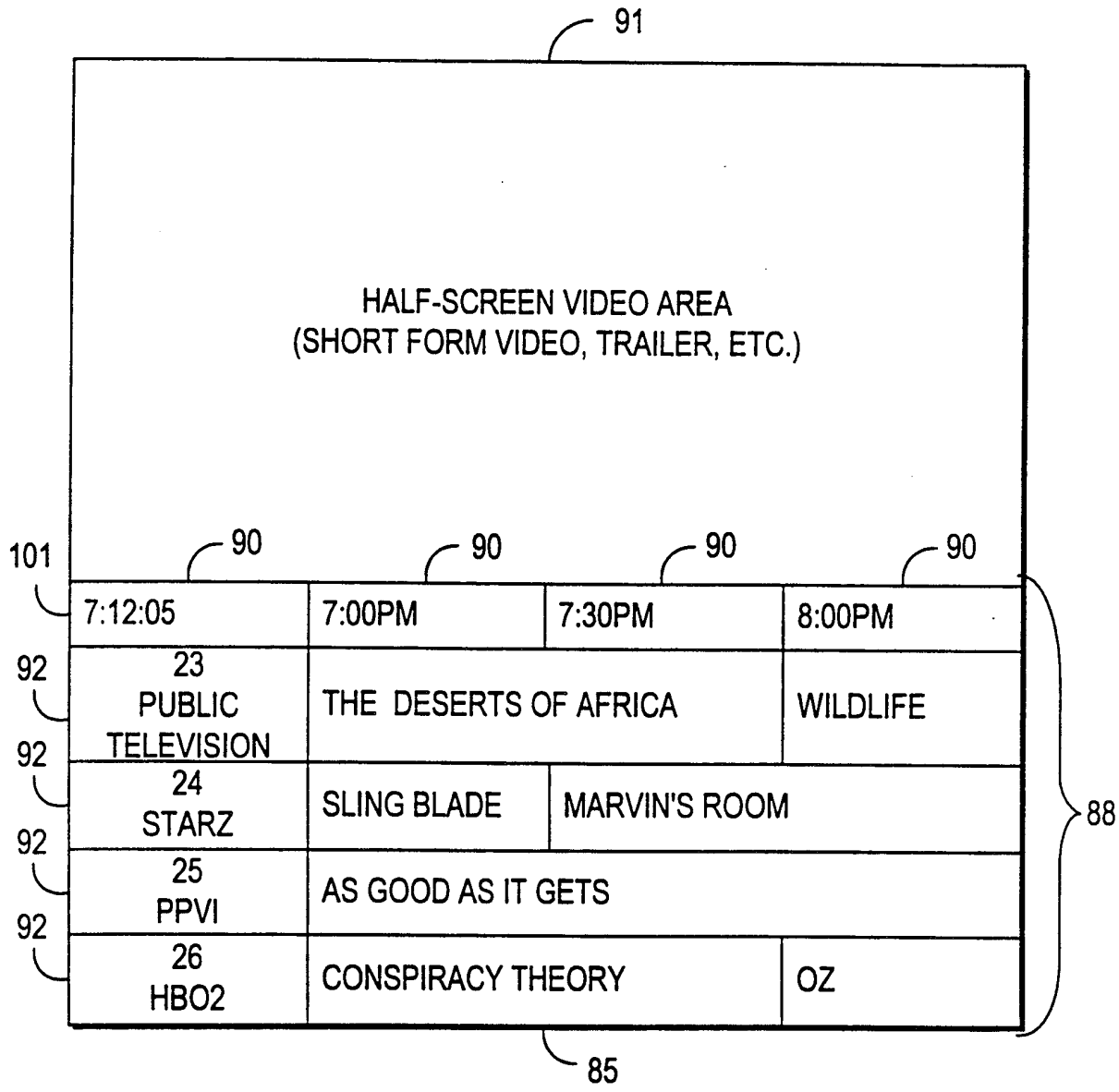
81
91
HALF-SCREEN VIDEO AREA
(SHORT FORM VIDEO, TRAILER, ETC.)
101
90
90
90
90
7:12:05
7:00PM
7:30PM
8:00PM
92
23
PUBLIC
TELEVISION
THE DESERTS OF AFRICA
WILDLIFE
92
24
STARZ
SLING BLADE
MARVIN'S ROOM
92
25
PPVI
AS GOOD AS IT GETS
92
26
HBO2
CONSPIRACY THEORY
OZ
88
85

FIG. 2b


83
87
VIDEO AREA
(SHORT FORM VIDEO,
TRAILER, ETC.)
TOMORROW NEVER DIES
ON PAY-PER-VIEW
TONIGHT
7:30–9PM
89

FIG. 2c

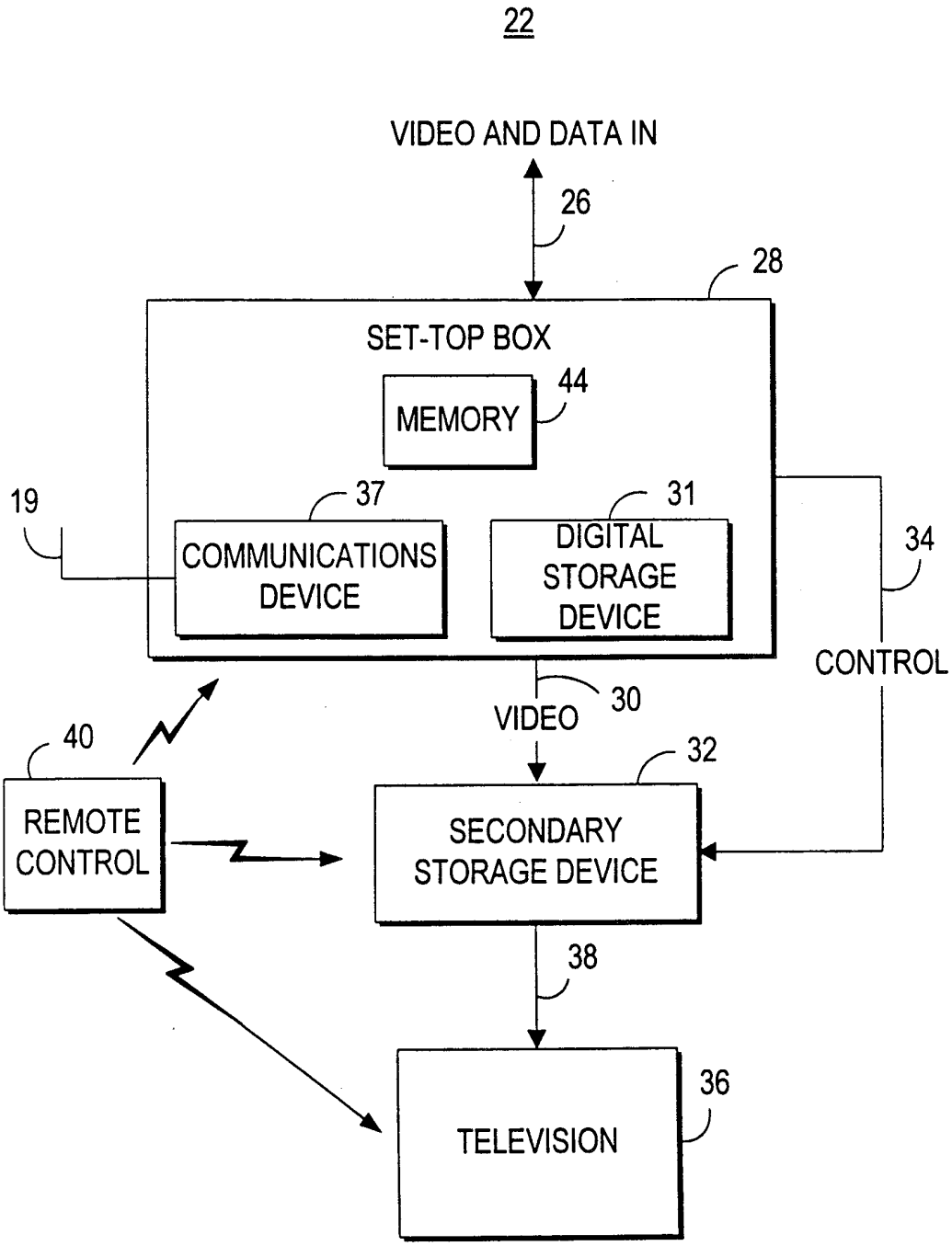
22
VIDEO AND DATA IN
26
28
SET-TOP BOX
44
MEMORY
19
37
31
COMMUNICATIONS DEVICE
DIGITAL STORAGE DEVICE
34
CONTROL
VIDEO
30
40
32
REMOTE CONTROL
SECONDARY STORAGE DEVICE
38
TELEVISION
36

FIG. 3

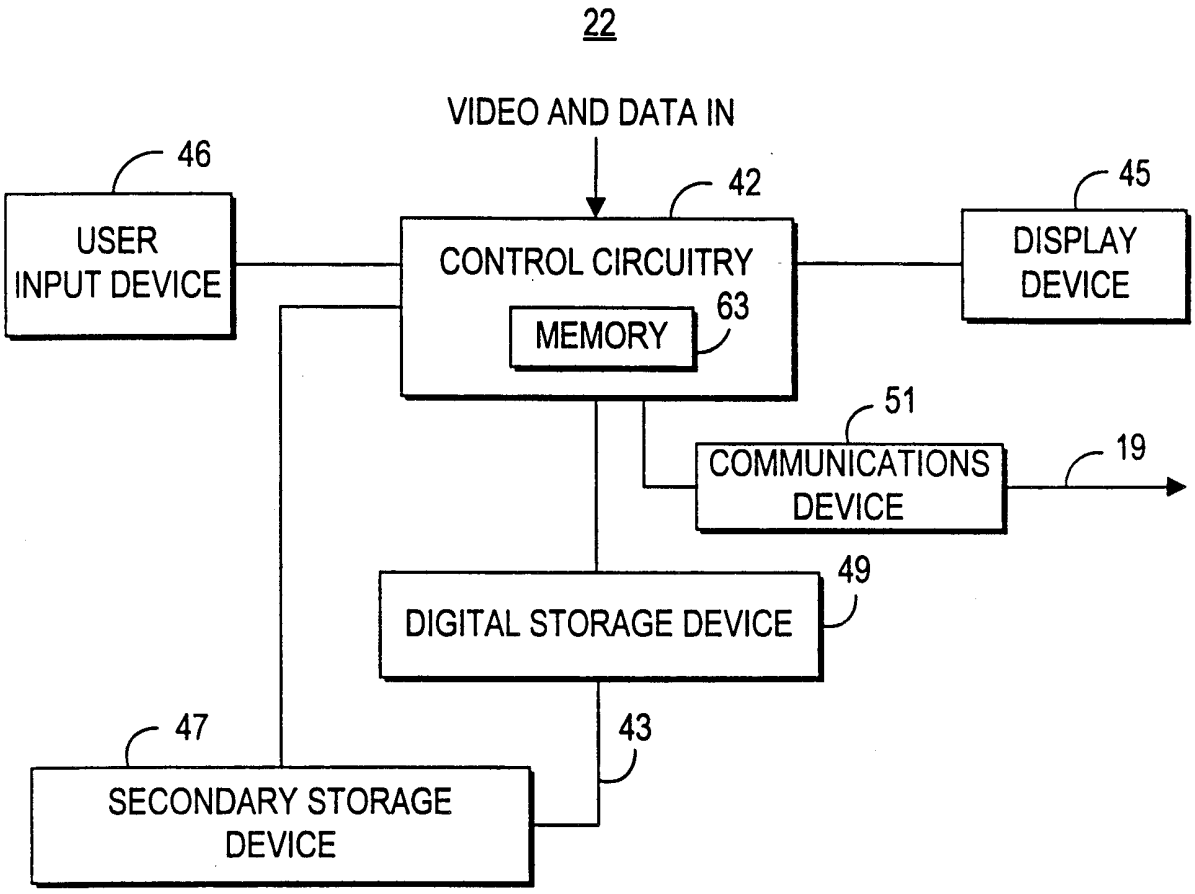
22
VIDEO AND DATA IN
46
USER INPUT DEVICE
42
CONTROL CIRCUITRY
MEMORY
63
45
DISPLAY DEVICE
51
COMMUNICATIONS DEVICE
19
49
DIGITAL STORAGE DEVICE
47
43
SECONDARY STORAGE DEVICE

FIG. 4

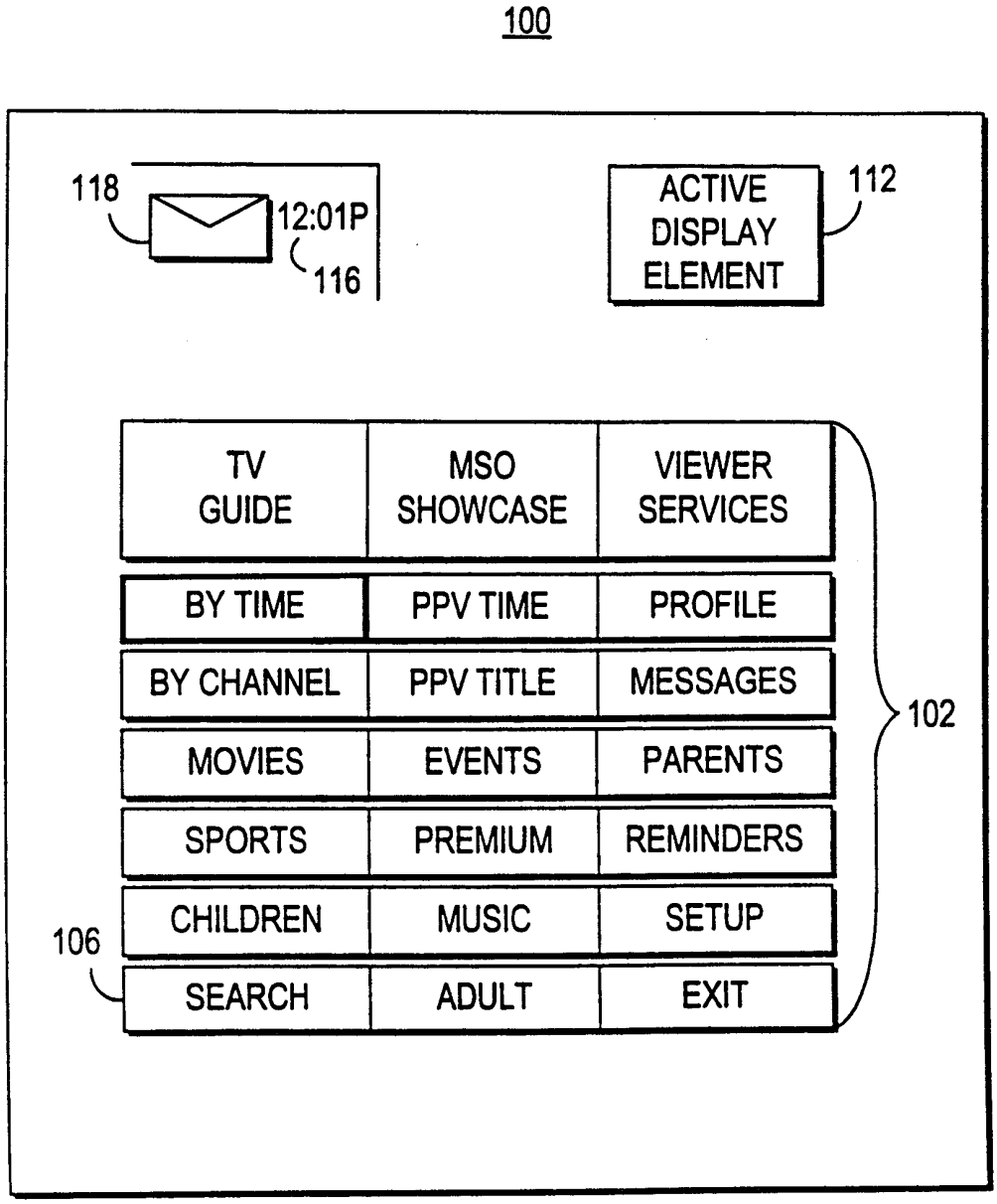
100
118
12:01P
116
ACTIVE DISPLAY ELEMENT
112
TV GUIDE
MSO SHOWCASE
VIEWER SERVICES
BY TIME
PPV TIME
PROFILE
BY CHANNEL
PPV TITLE
MESSAGES
MOVIES
EVENTS
PARENTS
SPORTS
PREMIUM
REMINDERS
CHILDREN
MUSIC
SETUP
SEARCH
ADULT
EXIT
102
106

FIG. 5

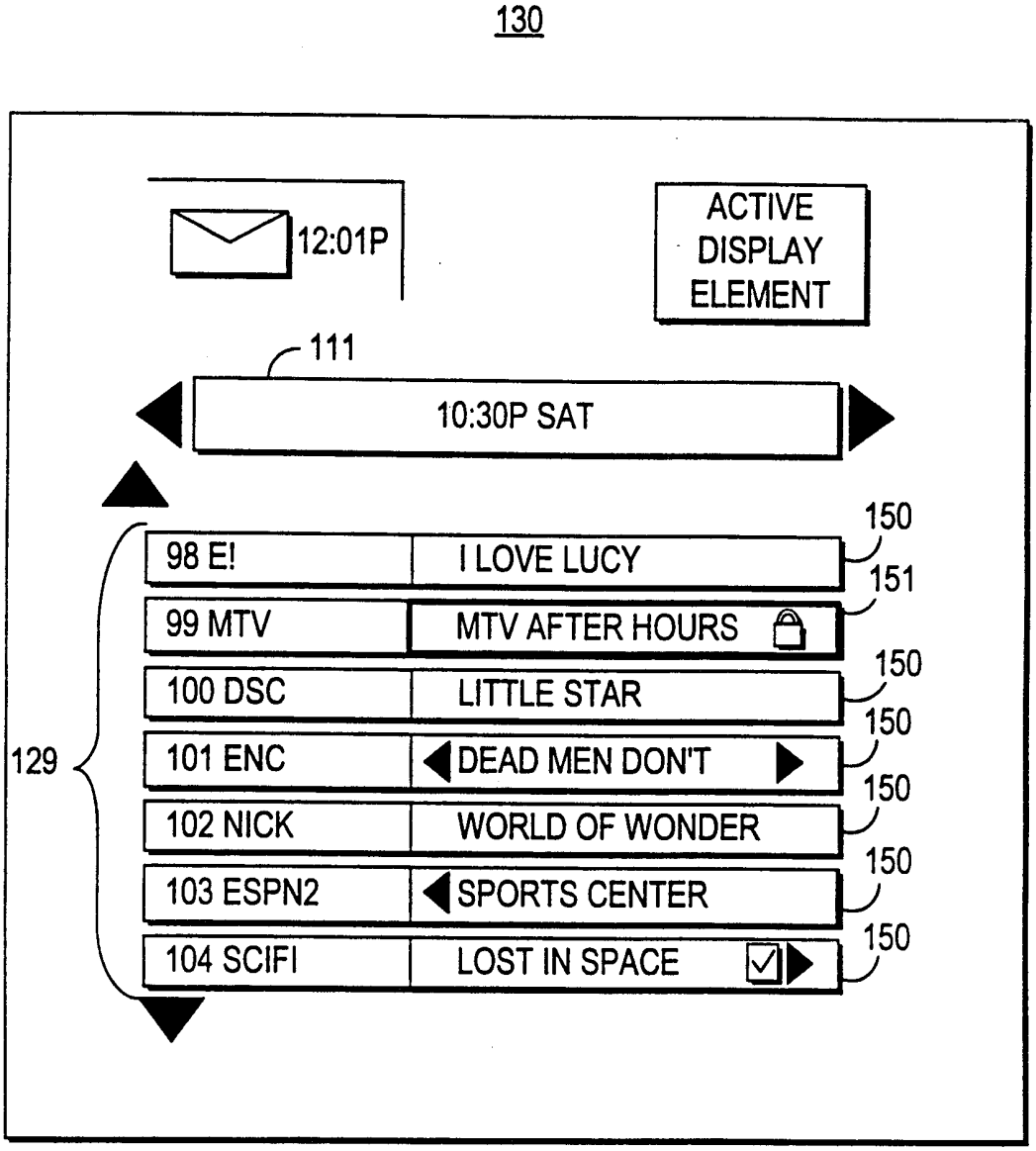
130
12:01P
ACTIVE DISPLAY ELEMENT
111
10:30P SAT
129
98 E!
I LOVE LUCY
150
99 MTV
MTV AFTER HOURS
151
100 DSC
LITTLE STAR
150
101 ENC
DEAD MEN DON'T
150
102 NICK
WORLD OF WONDER
150
103 ESPN2
SPORTS CENTER
150
104 SCIFI
LOST IN SPACE
150

FIG. 6

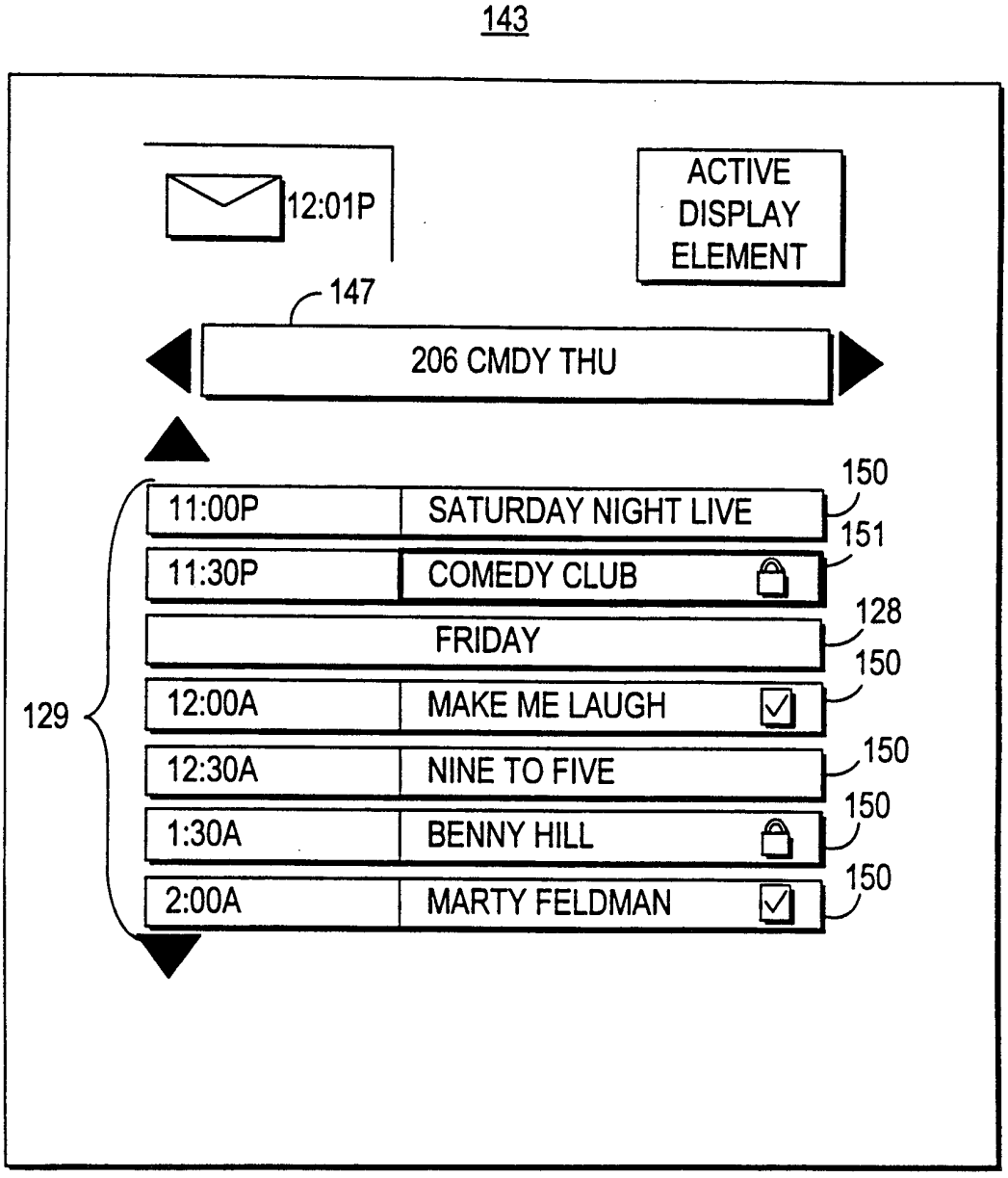
143
12:01P
ACTIVE DISPLAY ELEMENT
147
206 CMDY THU
150
11:00P
SATURDAY NIGHT LIVE
151
11:30P
COMEDY CLUB
128
FRIDAY
150
12:00A
MAKE ME LAUGH
150
12:30A
NINE TO FIVE
150
1:30A
BENNY HILL
150
2:00A
MARTY FELDMAN
129

FIG. 7

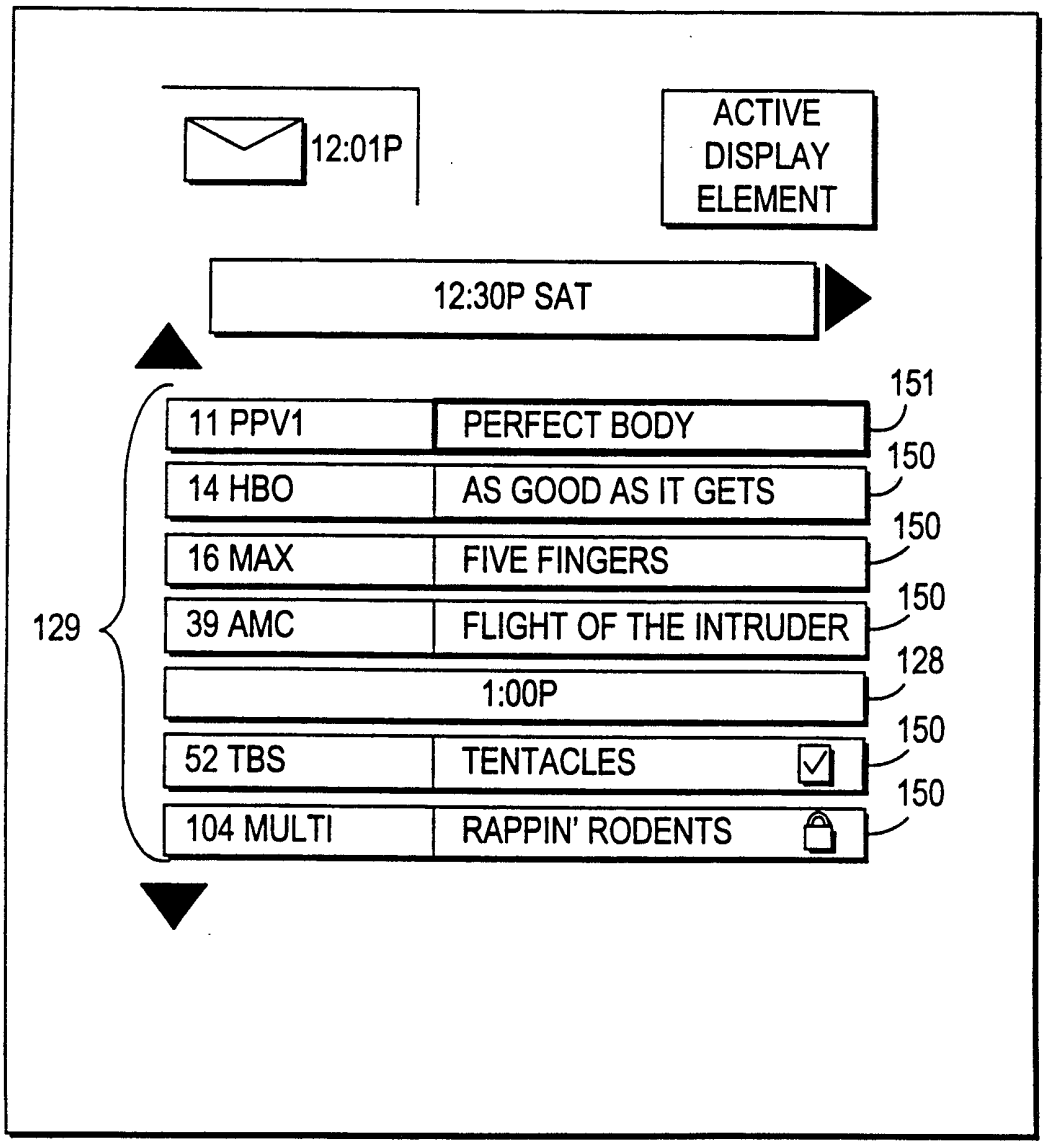
12:01P
ACTIVE DISPLAY ELEMENT
12:30P SAT
11 PPV1
PERFECT BODY
151
14 HBO
AS GOOD AS IT GETS
150
16 MAX
FIVE FINGERS
150
39 AMC
FLIGHT OF THE INTRUDER
150
129
1:00P
128
52 TBS
TENTACLES
150
104 MULTI
RAPPIN' RODENTS
150

FIG. 8a

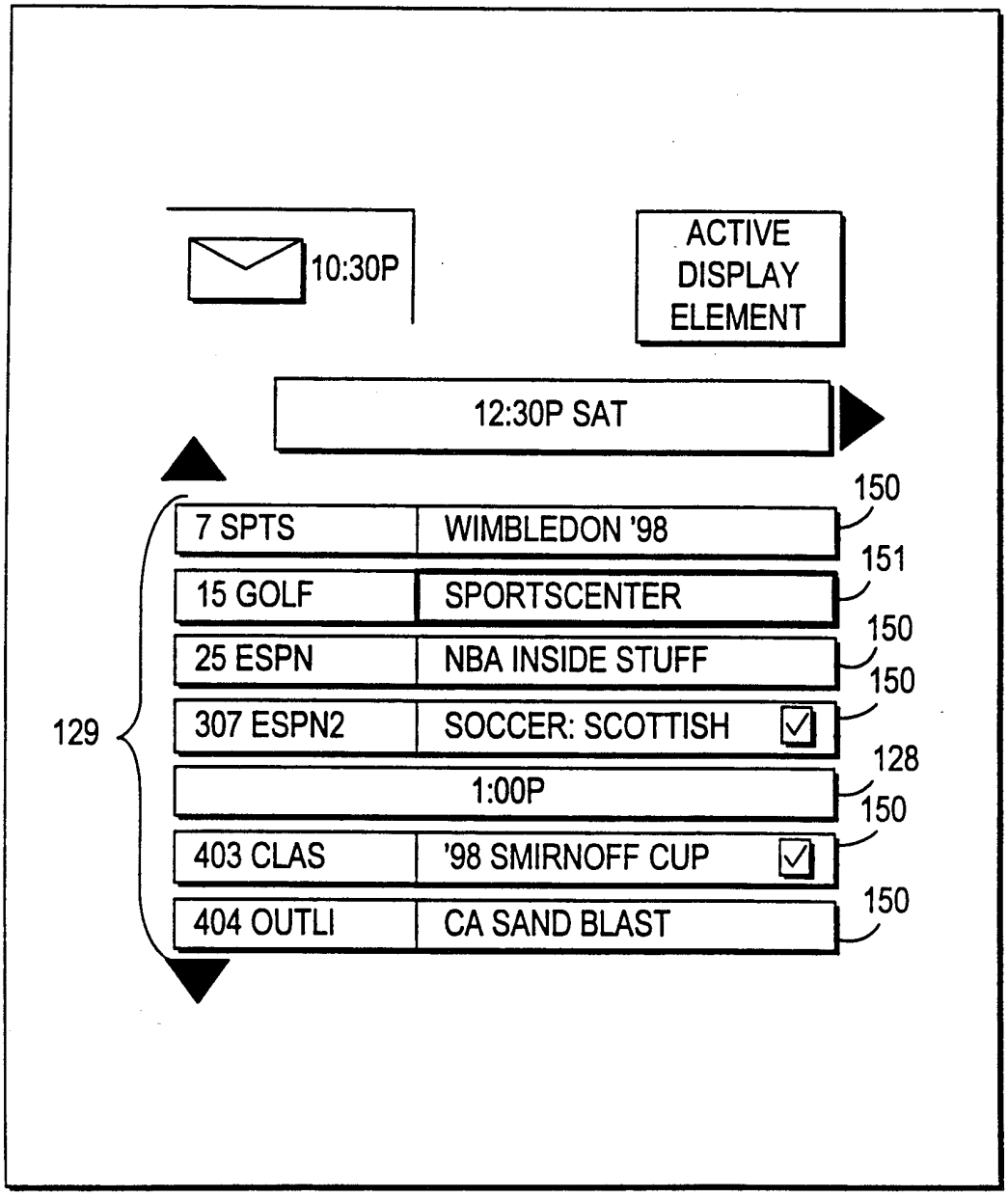
10:30P
ACTIVE DISPLAY ELEMENT
12:30P SAT
129
7 SPTS
WIMBLEDON '98
15 GOLF
SPORTSCENTER
25 ESPN
NBA INSIDE STUFF
307 ESPN2
SOCCER: SCOTTISH
1:00P
403 CLAS
'98 SMIRNOFF CUP
404 OUTLI
CA SAND BLAST
150
151
150
150
128
150
150

FIG. 8b

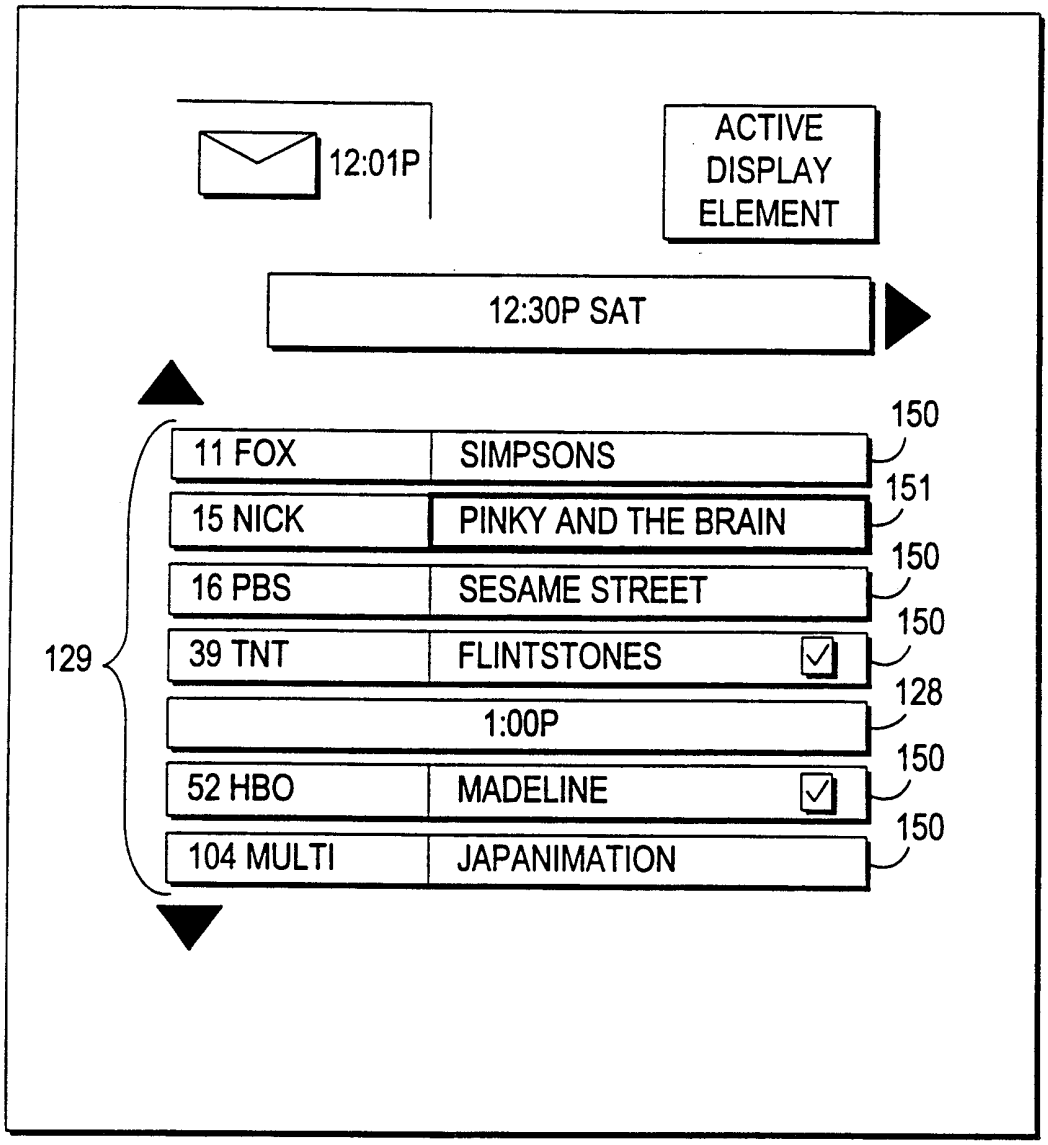
12:01P
ACTIVE DISPLAY ELEMENT
12:30P SAT
11 FOX
SIMPSONS
15 NICK
PINKY AND THE BRAIN
16 PBS
SESAME STREET
39 TNT
FLINTSTONES
1:00P
52 HBO
MADELINE
104 MULTI
JAPANIMATION
129
150
151
150
150
128
150
150

FIG. 8c

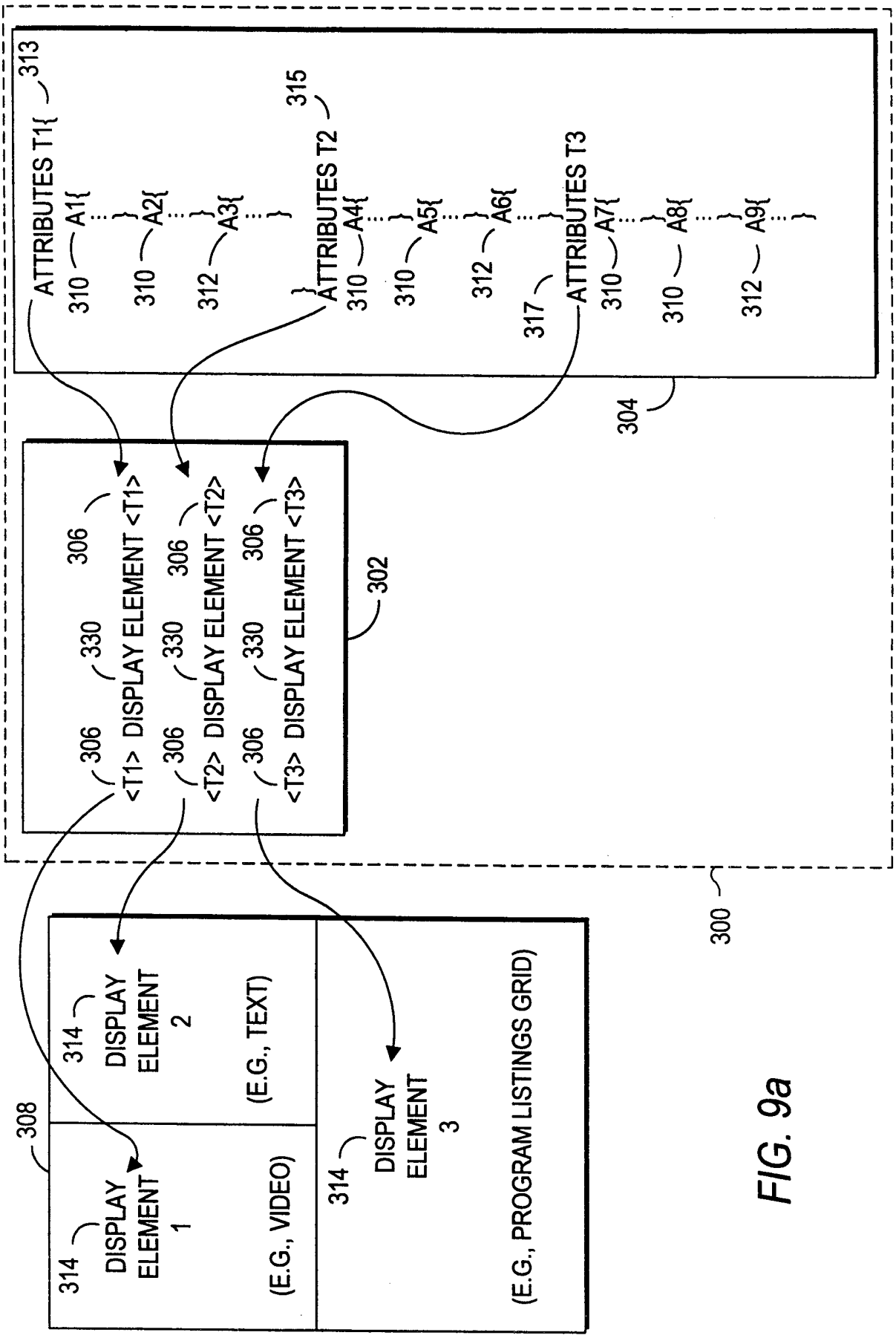
300
304
ATTRIBUTES T1
313
A1
A2
A3
315
ATTRIBUTES T2
A4
A5
A6
317
ATTRIBUTES T3
A7
A8
A9
310
312
302
306
330
<T1> DISPLAY ELEMENT <T1>
<T2> DISPLAY ELEMENT <T2>
<T3> DISPLAY ELEMENT <T3>
308
314
DISPLAY ELEMENT 1
(E.G., VIDEO)
DISPLAY ELEMENT 2
(E.G., TEXT)
DISPLAY ELEMENT 3
(E.G., PROGRAM LISTINGS GRID)

FIG. 9a

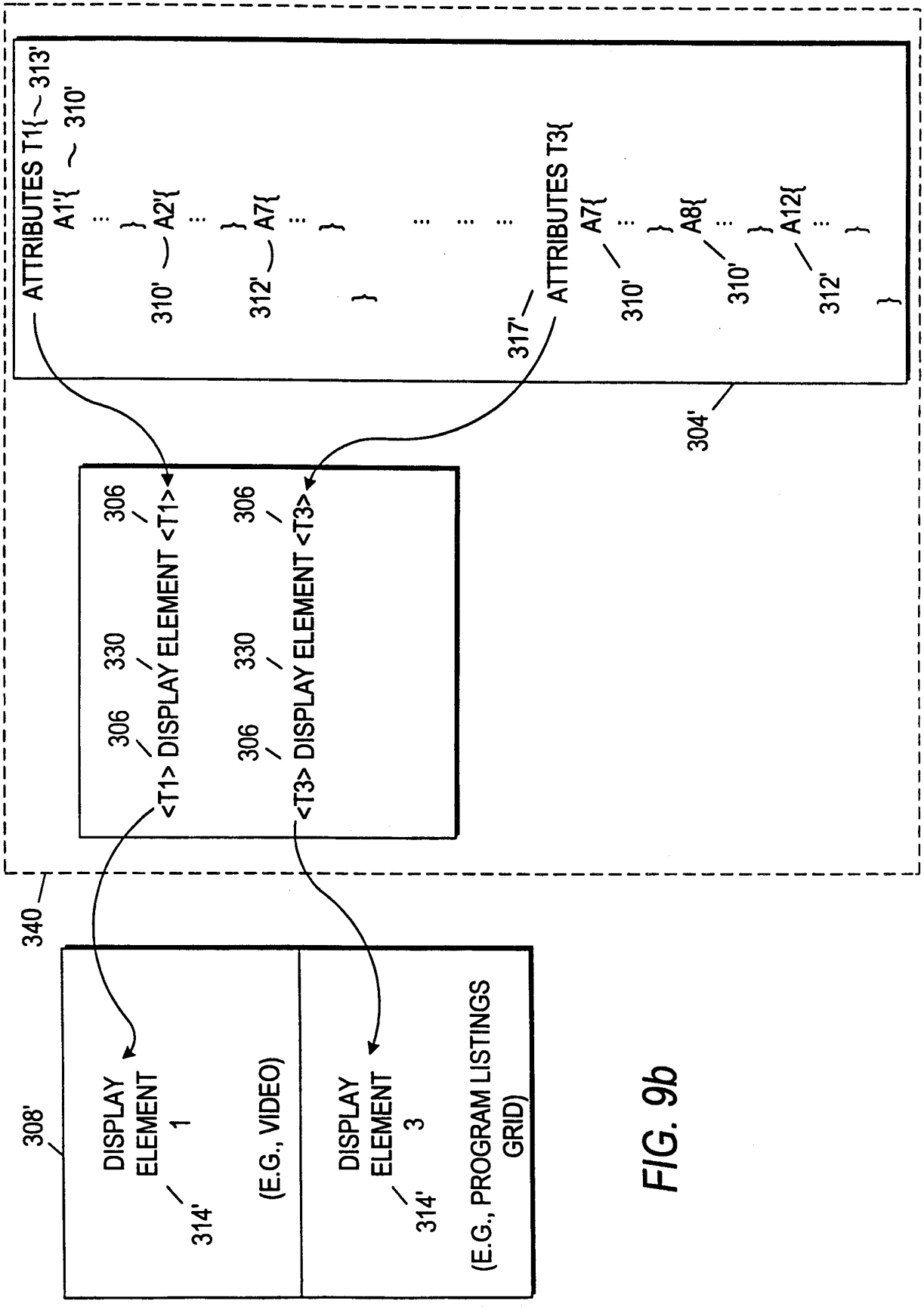
ATTRIBUTES T1{ 313'
A1'{ 310'
A2'{
A7{
ATTRIBUTES T3{
A7{
A8{
A12{
310'
312'
317'
304'
306
330
<T1> DISPLAY ELEMENT <T1>
<T3> DISPLAY ELEMENT <T3>
340
308'
DISPLAY ELEMENT 1
314'
(E.G., VIDEO)
DISPLAY ELEMENT 3
314'
(E.G., PROGRAM LISTINGS GRID)

FIG. 9b

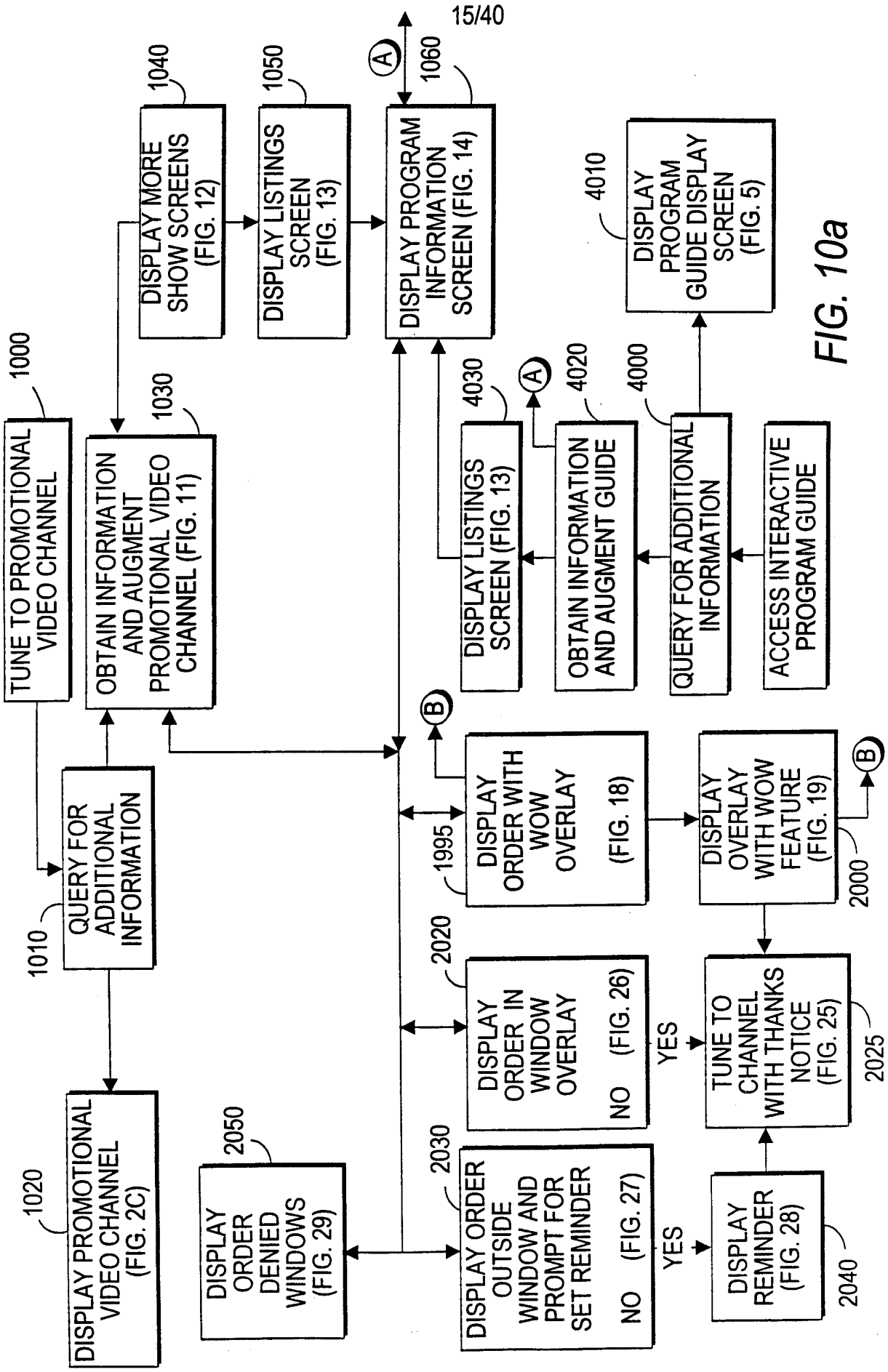
TUNE TO PROMOTIONAL VIDEO CHANNEL
1000
OBTAIN INFORMATION AND AUGMENT PROMOTIONAL VIDEO CHANNEL (FIG. 11)
1030
DISPLAY MORE SHOW SCREENS (FIG. 12)
1040
DISPLAY LISTINGS SCREEN (FIG. 13)
1050
DISPLAY PROGRAM INFORMATION SCREEN (FIG. 14)
1060
A
DISPLAY PROGRAM GUIDE DISPLAY SCREEN (FIG. 5)
4010
DISPLAY LISTINGS SCREEN (FIG. 13)
4030
OBTAIN INFORMATION AND AUGMENT GUIDE
4020
QUERY FOR ADDITIONAL INFORMATION
4000
ACCESS INTERACTIVE PROGRAM GUIDE
QUERY FOR ADDITIONAL INFORMATION
1010
DISPLAY PROMOTIONAL VIDEO CHANNEL (FIG. 2C)
1020
DISPLAY ORDER WITH WOW OVERLAY (FIG. 18)
1995
B
DISPLAY OVERLAY WITH WOW FEATURE (FIG. 19)
2000
DISPLAY ORDER IN WINDOW OVERLAY
2020
NO (FIG. 26)
YES
TUNE TO CHANNEL WITH THANKS NOTICE (FIG. 25)
2025
DISPLAY ORDER DENIED WINDOWS (FIG. 29)
2050
DISPLAY ORDER OUTSIDE WINDOW AND PROMPT FOR SET REMINDER
2030
NO (FIG. 27)
YES
DISPLAY REMINDER (FIG. 28)
2040

FIG. 10a

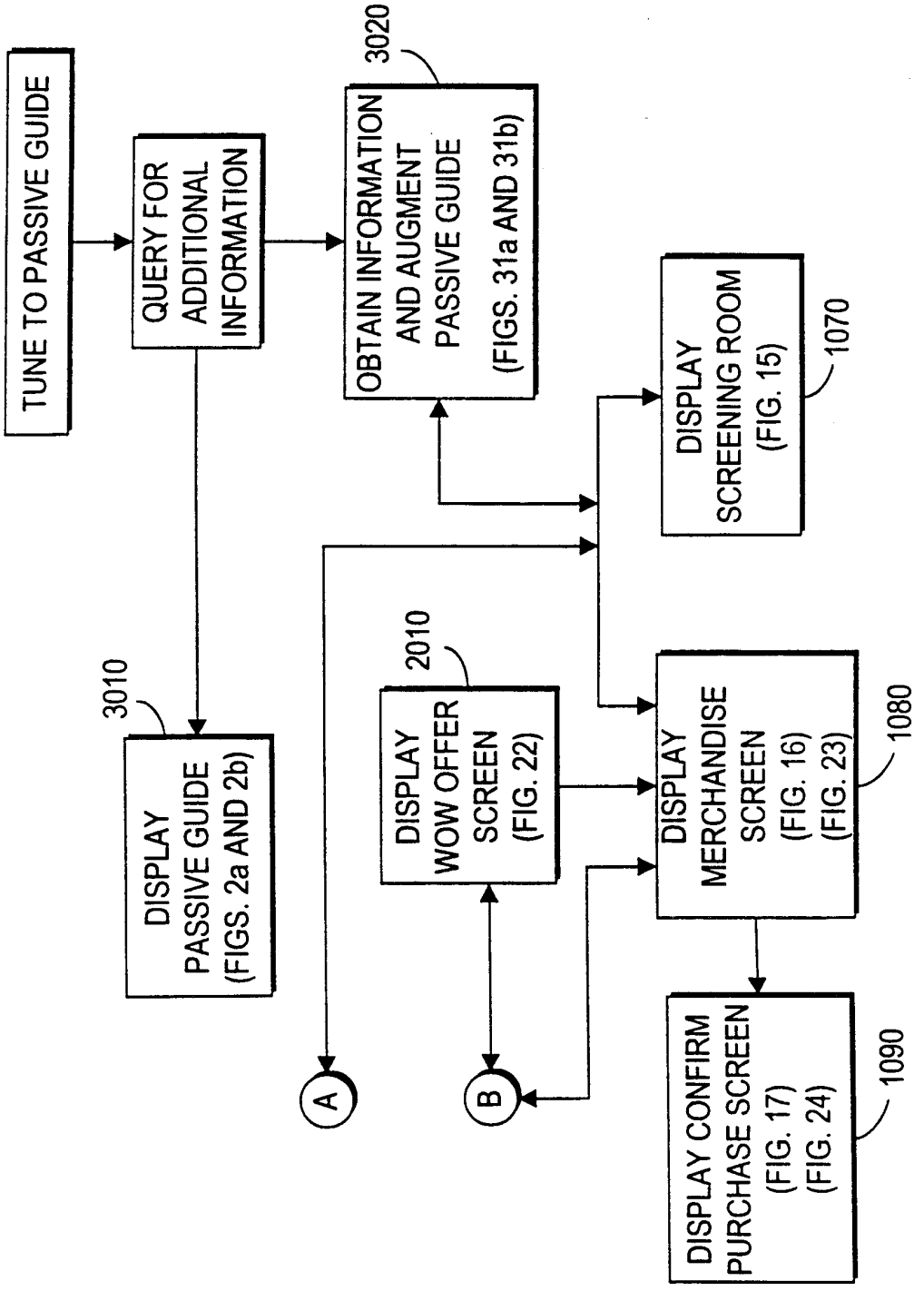
TUNE TO PASSIVE GUIDE
QUERY FOR ADDITIONAL INFORMATION
3020
OBTAIN INFORMATION AND AUGMENT PASSIVE GUIDE (FIGS. 31a AND 31b)
DISPLAY SCREENING ROOM (FIG. 15)
1070
3010
DISPLAY PASSIVE GUIDE (FIGS. 2a AND 2b)
2010
DISPLAY WOW OFFER SCREEN (FIG. 22)
DISPLAY MERCHANDISE SCREEN (FIG. 16) (FIG. 23)
1080
DISPLAY CONFIRM PURCHASE SCREEN (FIG. 17) (FIG. 24)
1090
A
B

FIG. 10b

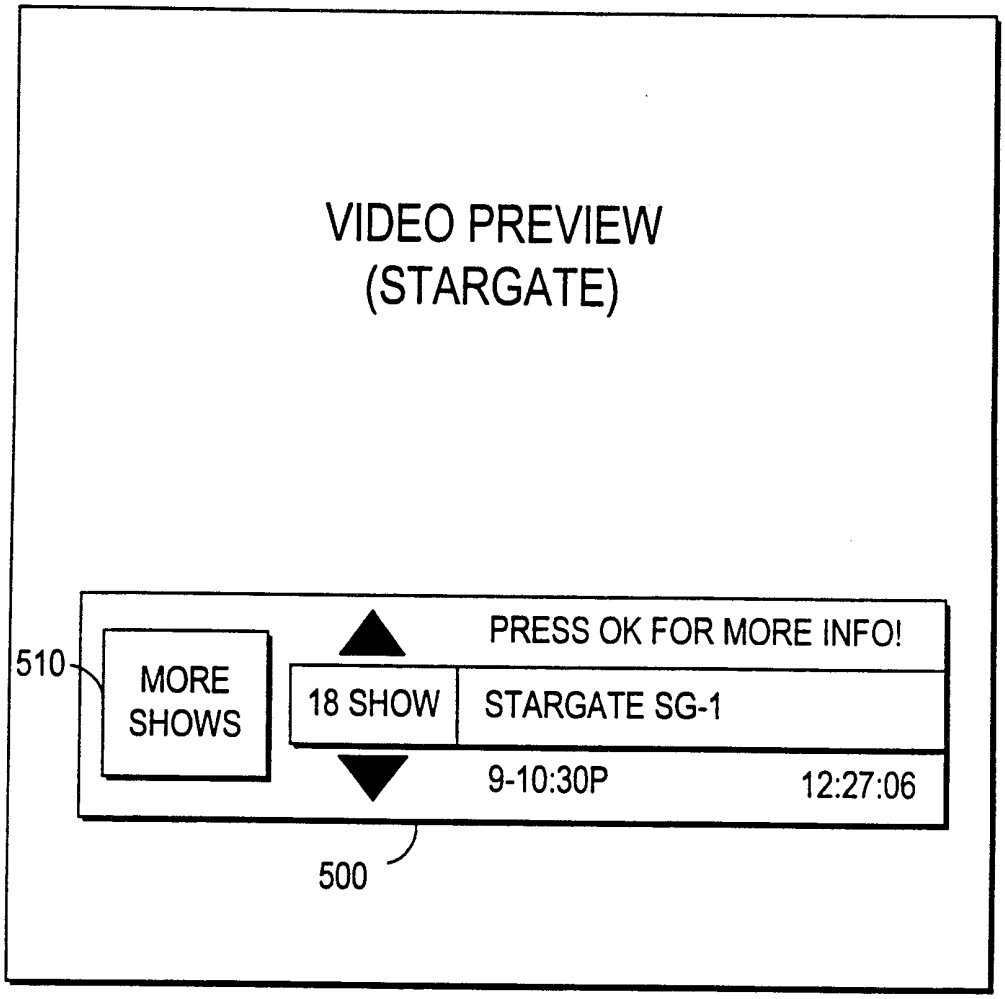
VIDEO PREVIEW
(STARGATE)
510
MORE SHOWS
PRESS OK FOR MORE INFO!
18 SHOW
STARGATE SG-1
9-10:30P
12:27:06
500

FIG. 11

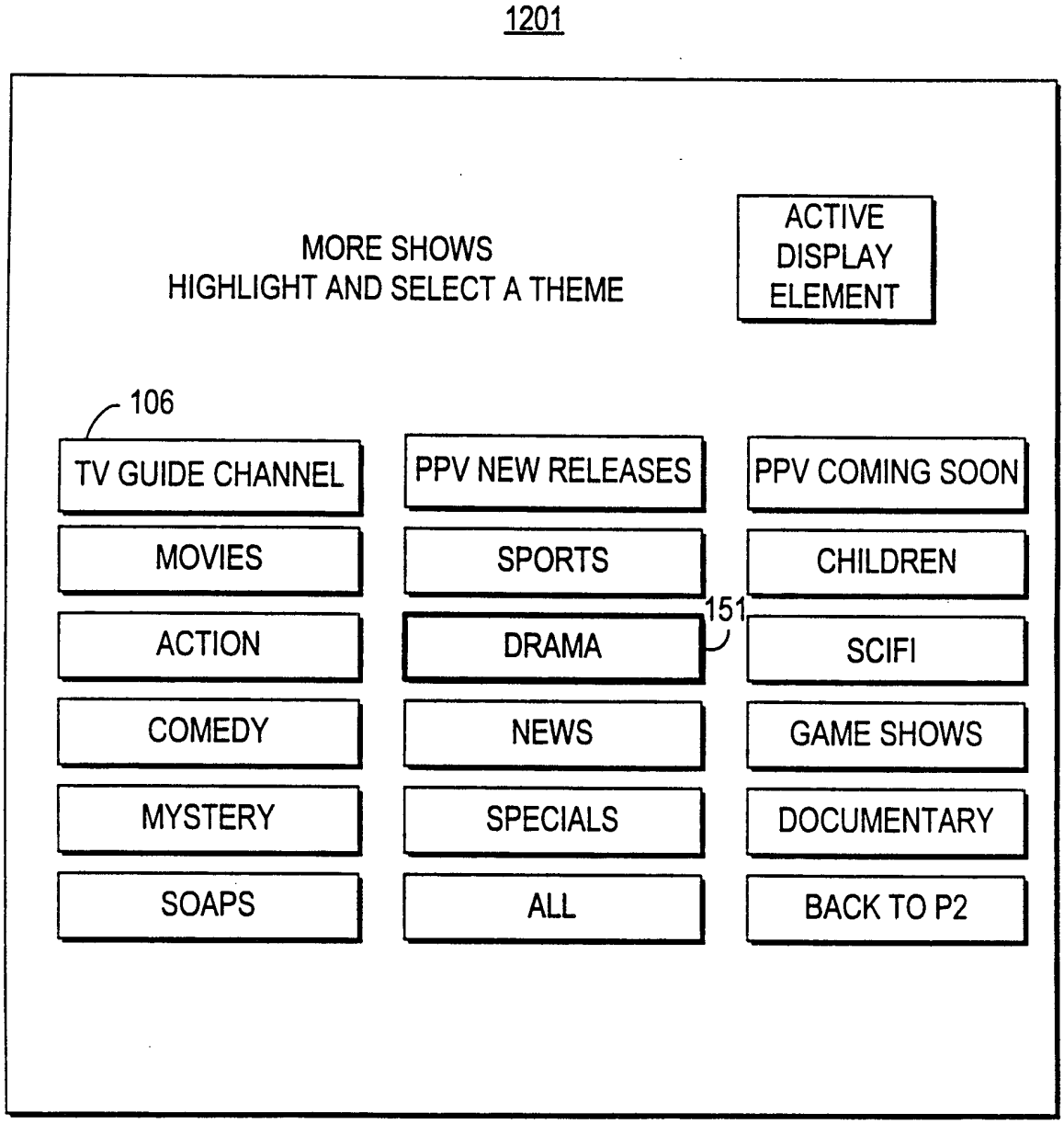
1201
MORE SHOWS
HIGHLIGHT AND SELECT A THEME
ACTIVE DISPLAY ELEMENT
106
TV GUIDE CHANNEL
PPV NEW RELEASES
PPV COMING SOON
MOVIES
SPORTS
CHILDREN
151
ACTION
DRAMA
SCIFI
COMEDY
NEWS
GAME SHOWS
MYSTERY
SPECIALS
DOCUMENTARY
SOAPS
ALL
BACK TO P2

FIG. 12

1301

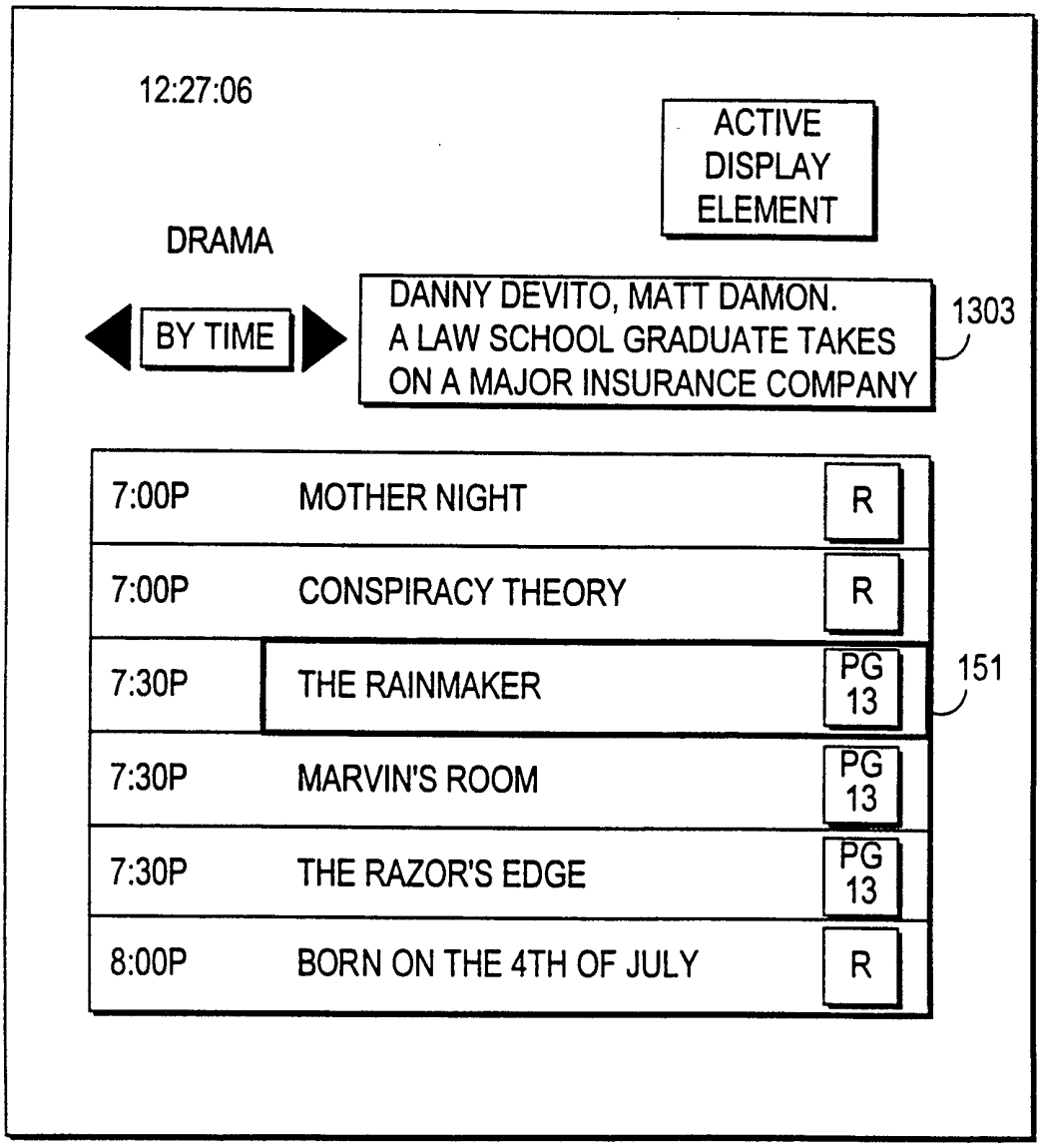
12:27:06
ACTIVE DISPLAY ELEMENT
DRAMA
BY TIME
DANNY DEVITO, MATT DAMON. A LAW SCHOOL GRADUATE TAKES ON A MAJOR INSURANCE COMPANY
1303
7:00P MOTHER NIGHT R
7:00P CONSPIRACY THEORY R
7:30P THE RAINMAKER PG 13
151
7:30P MARVIN'S ROOM PG 13
7:30P THE RAZOR'S EDGE PG 13
8:00P BORN ON THE 4TH OF JULY R

FIG. 13

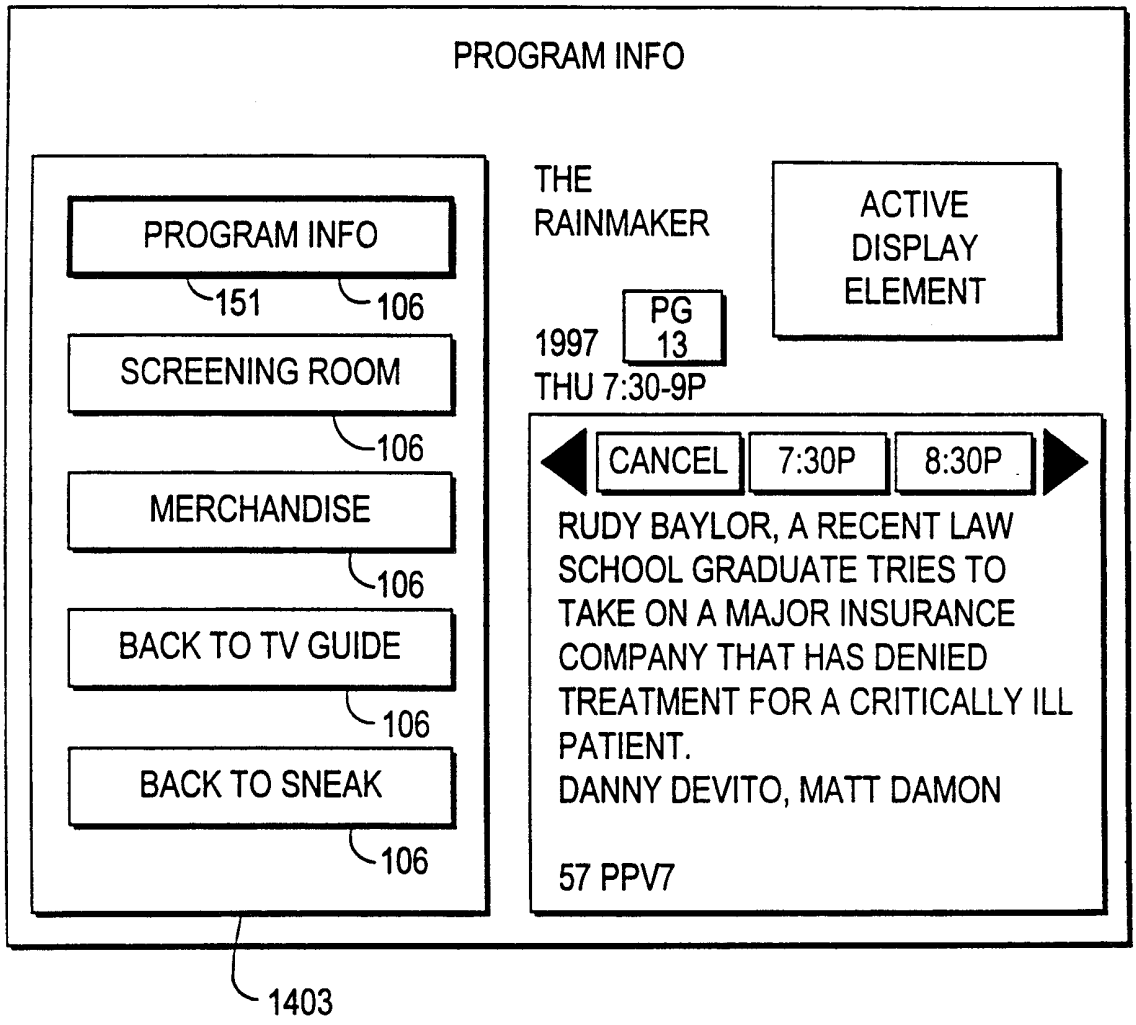
1401
PROGRAM INFO
PROGRAM INFO
151
106
SCREENING ROOM
106
MERCHANDISE
106
BACK TO TV GUIDE
106
BACK TO SNEAK
106
THE RAINMAKER
1997
PG 13
THU 7:30-9P
ACTIVE DISPLAY ELEMENT
CANCEL
7:30P
8:30P
RUDY BAYLOR, A RECENT LAW SCHOOL GRADUATE TRIES TO TAKE ON A MAJOR INSURANCE COMPANY THAT HAS DENIED TREATMENT FOR A CRITICALLY ILL PATIENT.
DANNY DEVITO, MATT DAMON
57 PPV7
1403

FIG. 14

1501

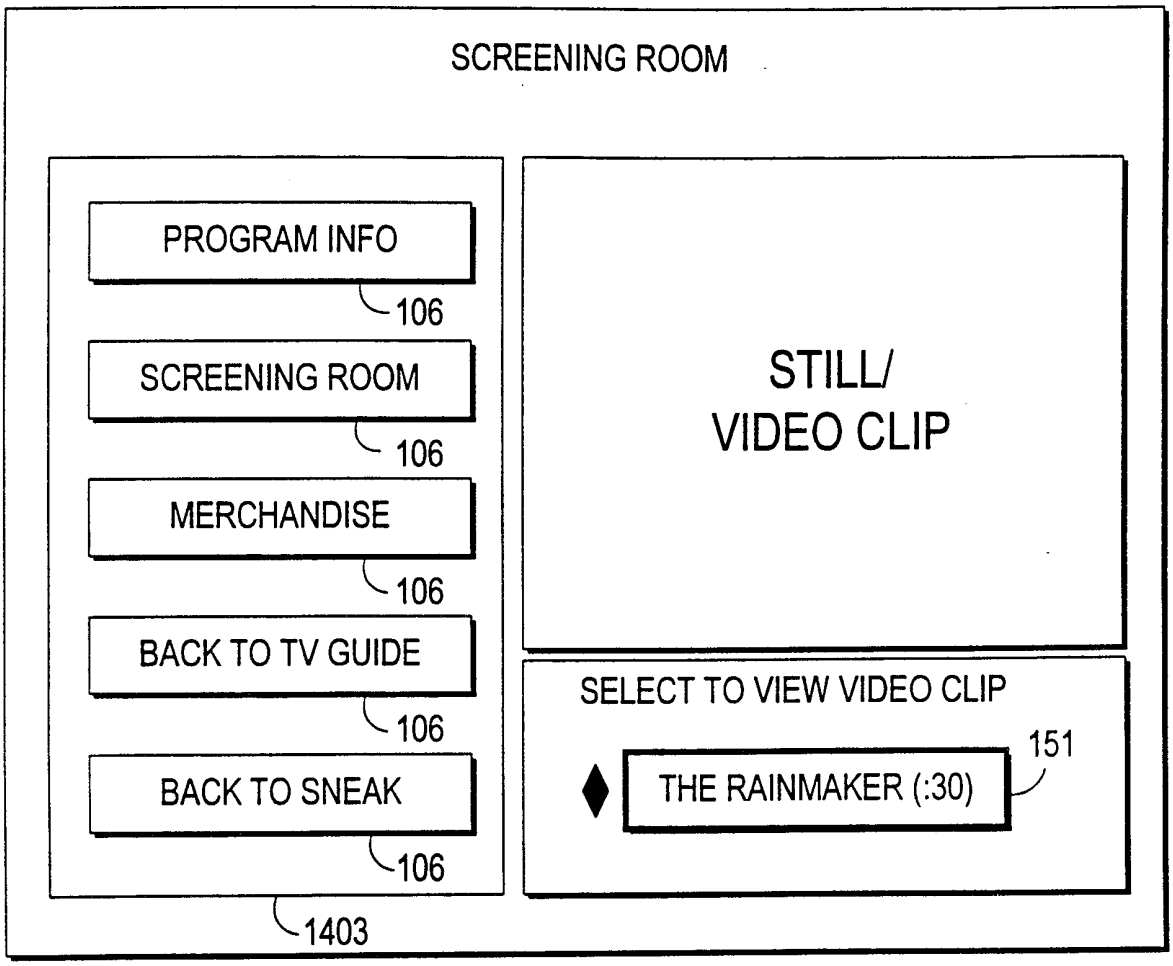
SCREENING ROOM
PROGRAM INFO
106
SCREENING ROOM
106
MERCHANDISE
106
BACK TO TV GUIDE
106
BACK TO SNEAK
106
1403
STILL/
VIDEO CLIP
SELECT TO VIEW VIDEO CLIP
THE RAINMAKER (:30)
151

FIG. 15

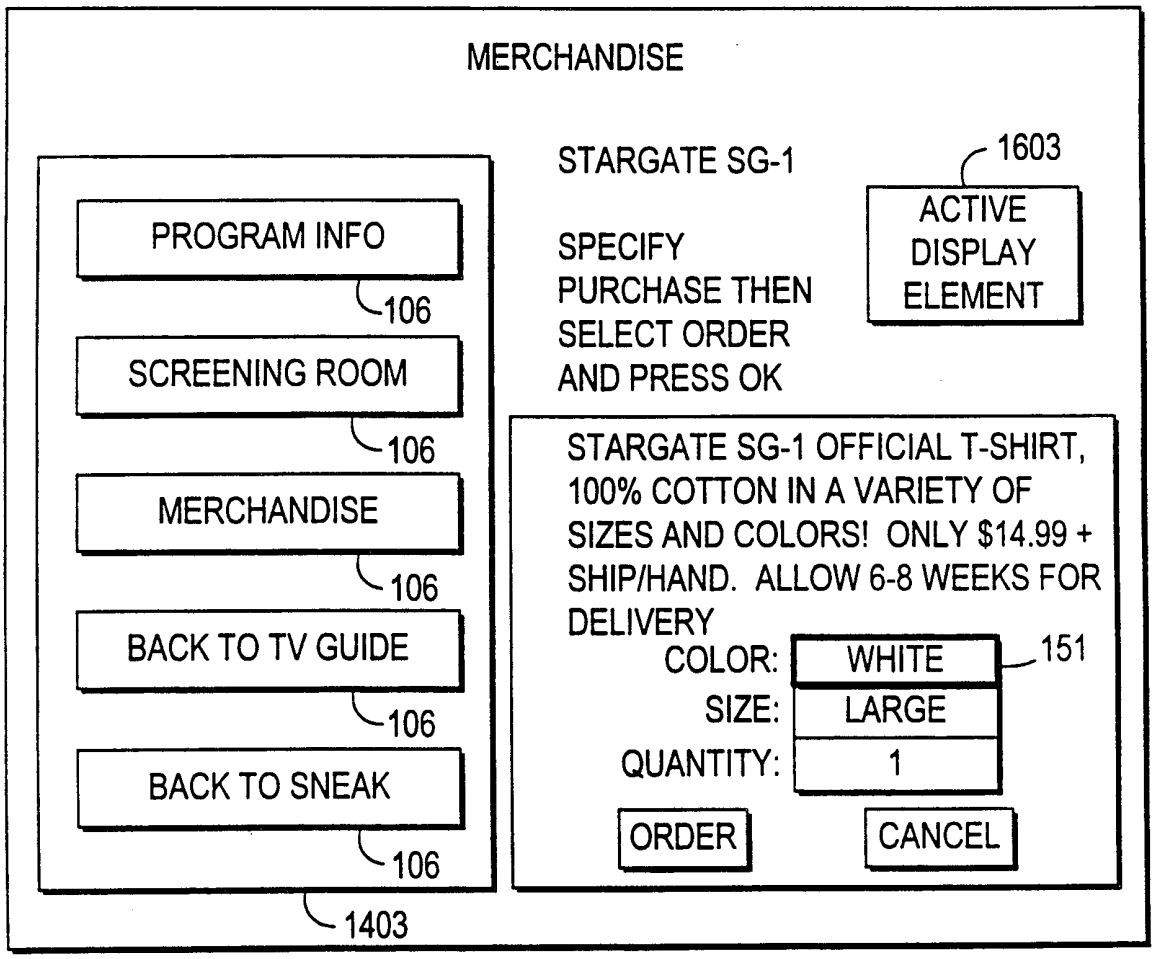
1601
MERCHANDISE
PROGRAM INFO
106
SCREENING ROOM
106
MERCHANDISE
106
BACK TO TV GUIDE
106
BACK TO SNEAK
106
1403
STARGATE SG-1
1603
ACTIVE DISPLAY ELEMENT
SPECIFY PURCHASE THEN SELECT ORDER AND PRESS OK
STARGATE SG-1 OFFICIAL T-SHIRT, 100% COTTON IN A VARIETY OF SIZES AND COLORS! ONLY $14.99 + SHIP/HAND. ALLOW 6-8 WEEKS FOR DELIVERY
COLOR: WHITE
151
SIZE: LARGE
QUANTITY: 1
ORDER
CANCEL

FIG. 16

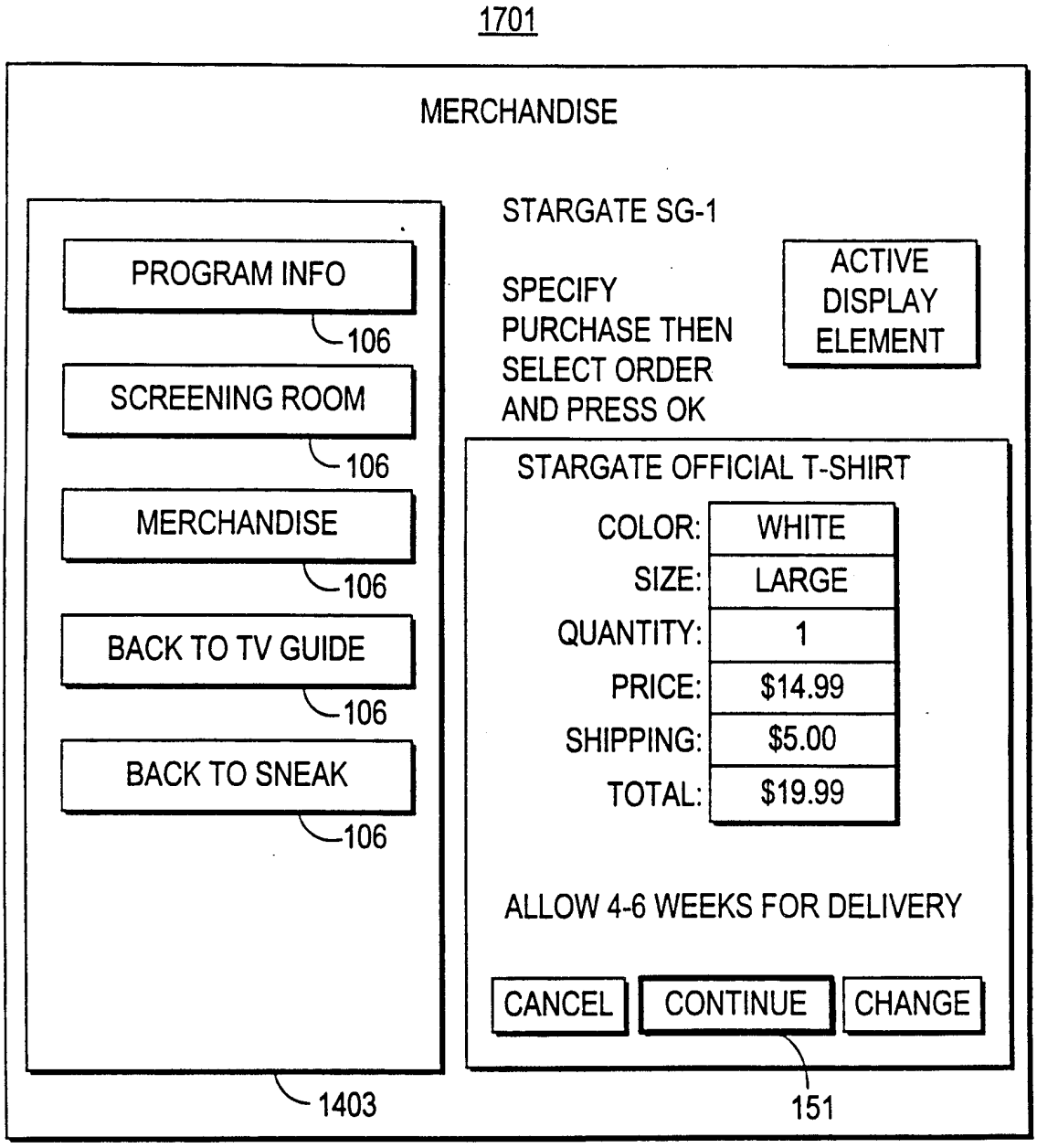
1701
MERCHANDISE
PROGRAM INFO
106
SCREENING ROOM
106
MERCHANDISE
106
BACK TO TV GUIDE
106
BACK TO SNEAK
106
1403
STARGATE SG-1
SPECIFY PURCHASE THEN SELECT ORDER AND PRESS OK
ACTIVE DISPLAY ELEMENT
STARGATE OFFICIAL T-SHIRT
COLOR: WHITE
SIZE: LARGE
QUANTITY: 1
PRICE: $14.99
SHIPPING: $5.00
TOTAL: $19.99
ALLOW 4-6 WEEKS FOR DELIVERY
CANCEL
CONTINUE
CHANGE
151

FIG. 17

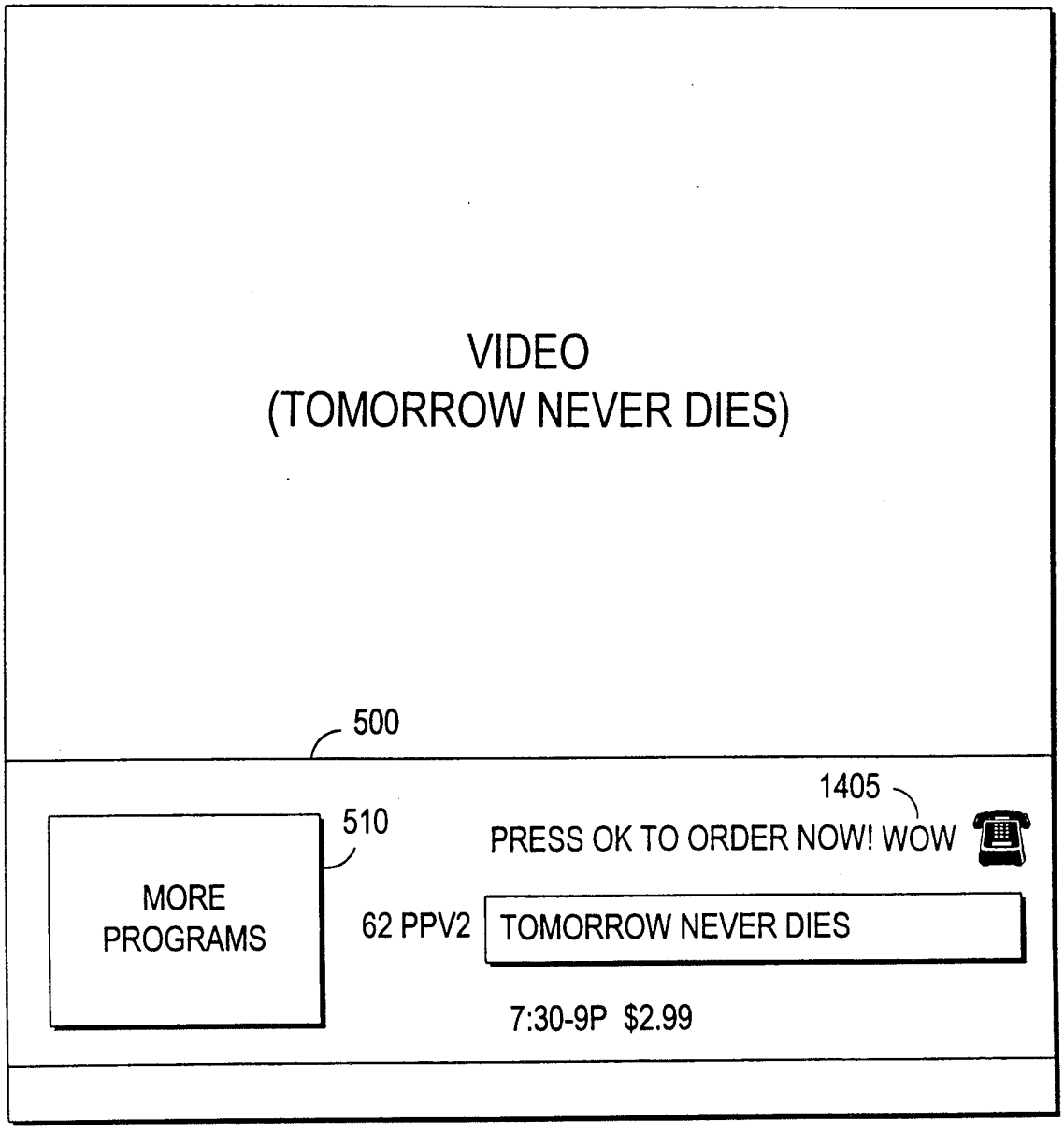
VIDEO
(TOMORROW NEVER DIES)
500
1405
510
PRESS OK TO ORDER NOW! WOW
MORE PROGRAMS
62 PPV2
TOMORROW NEVER DIES
7:30-9P $2.99

FIG. 18

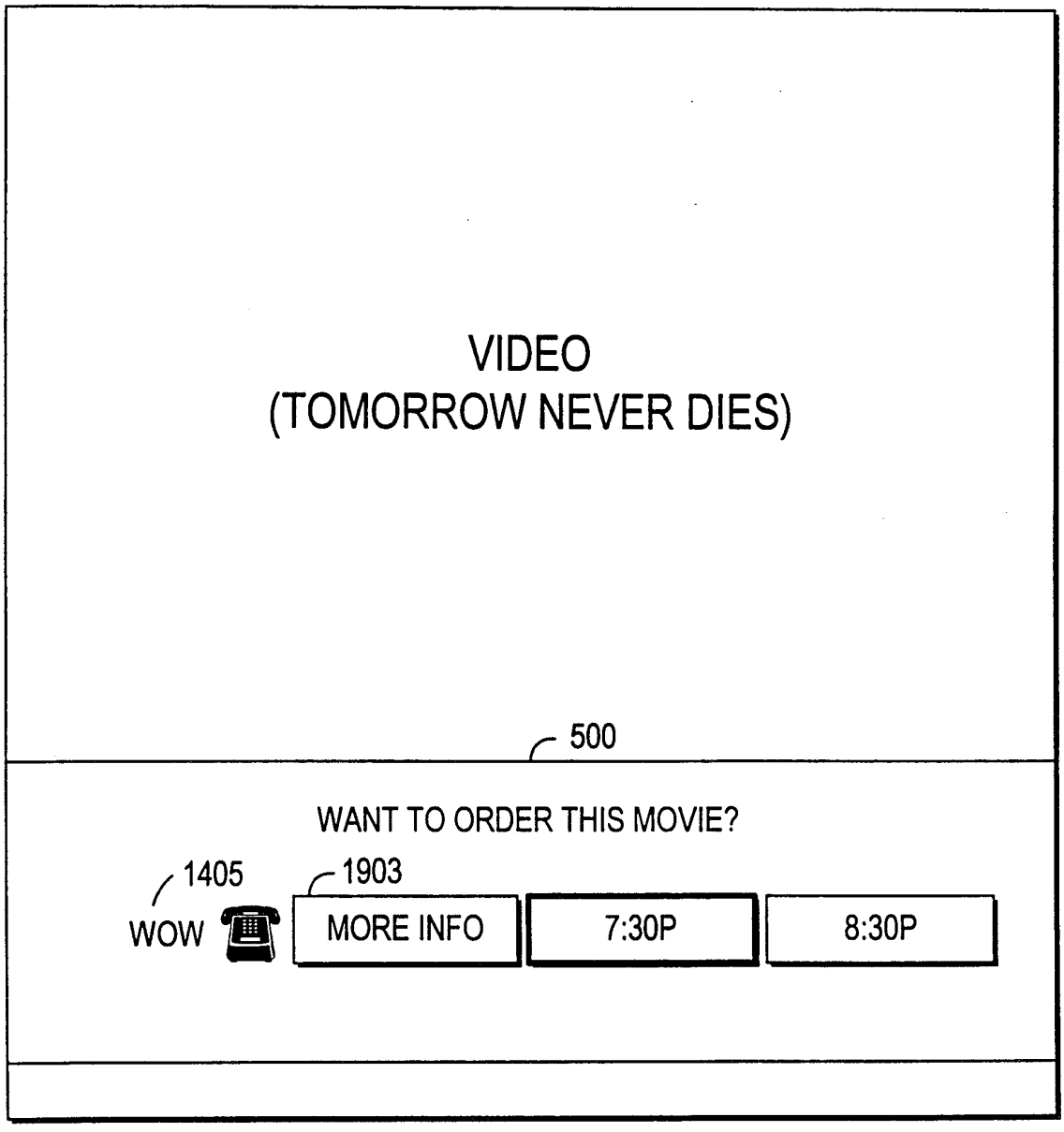
VIDEO
(TOMORROW NEVER DIES)
500
WANT TO ORDER THIS MOVIE?
1405
WOW
1903
MORE INFO
7:30P
8:30P

FIG. 19

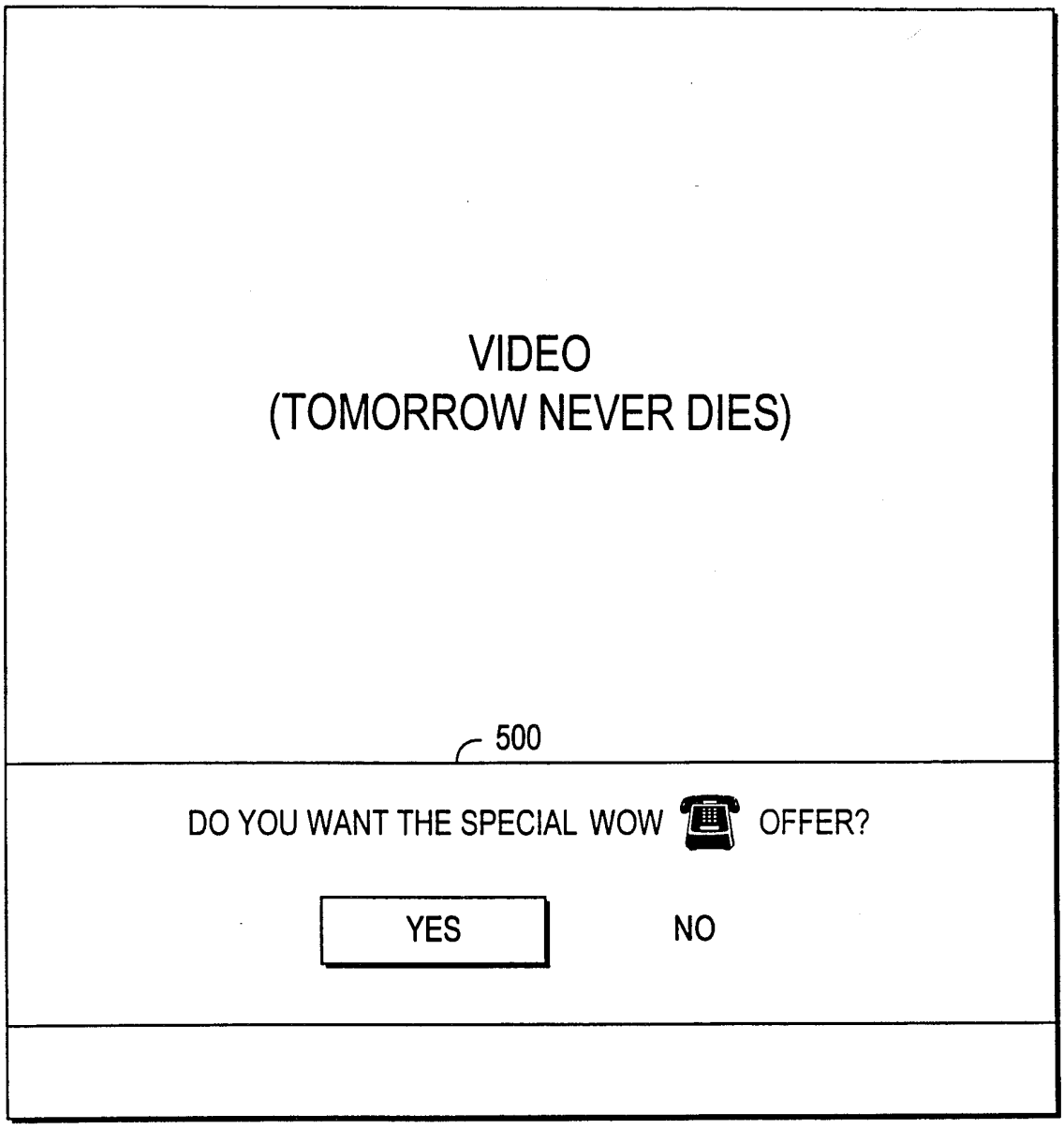
VIDEO
(TOMORROW NEVER DIES)
500
DO YOU WANT THE SPECIAL WOW
OFFER?
YES
NO

FIG. 20

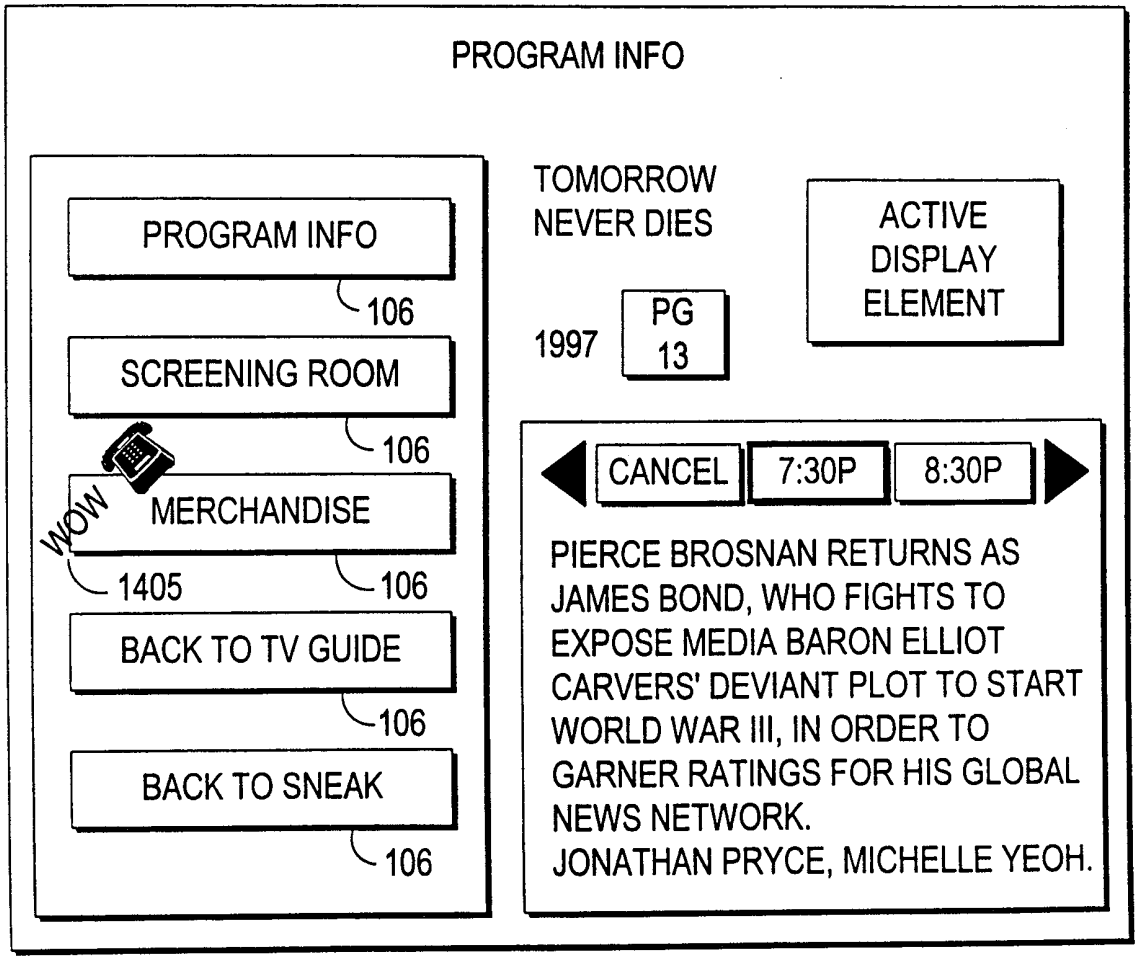
2101
PROGRAM INFO
PROGRAM INFO
106
SCREENING ROOM
106
WOW
MERCHANDISE
1405
106
BACK TO TV GUIDE
106
BACK TO SNEAK
106
TOMORROW NEVER DIES
1997
PG 13
ACTIVE DISPLAY ELEMENT
CANCEL
7:30P
8:30P
PIERCE BROSNAN RETURNS AS JAMES BOND, WHO FIGHTS TO EXPOSE MEDIA BARON ELLIOT CARVERS' DEVIANT PLOT TO START WORLD WAR III, IN ORDER TO GARNER RATINGS FOR HIS GLOBAL NEWS NETWORK.
JONATHAN PRYCE, MICHELLE YEOH.

FIG. 21

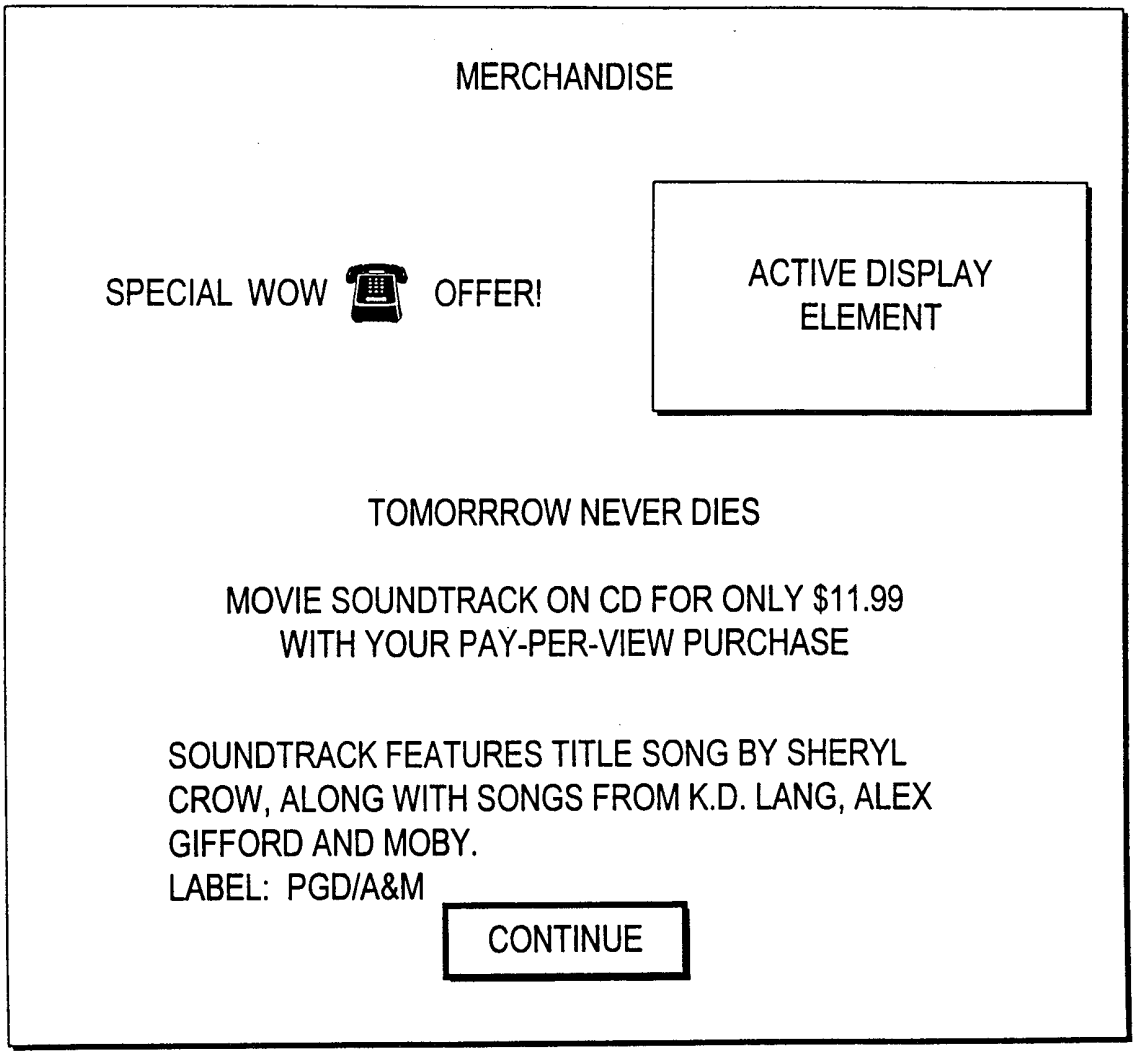
2201
MERCHANDISE
SPECIAL WOW
OFFER!
ACTIVE DISPLAY ELEMENT
TOMORRROW NEVER DIES
MOVIE SOUNDTRACK ON CD FOR ONLY $11.99
WITH YOUR PAY-PER-VIEW PURCHASE
SOUNDTRACK FEATURES TITLE SONG BY SHERYL CROW, ALONG WITH SONGS FROM K.D. LANG, ALEX GIFFORD AND MOBY.
LABEL: PGD/A&M
CONTINUE

FIG. 22

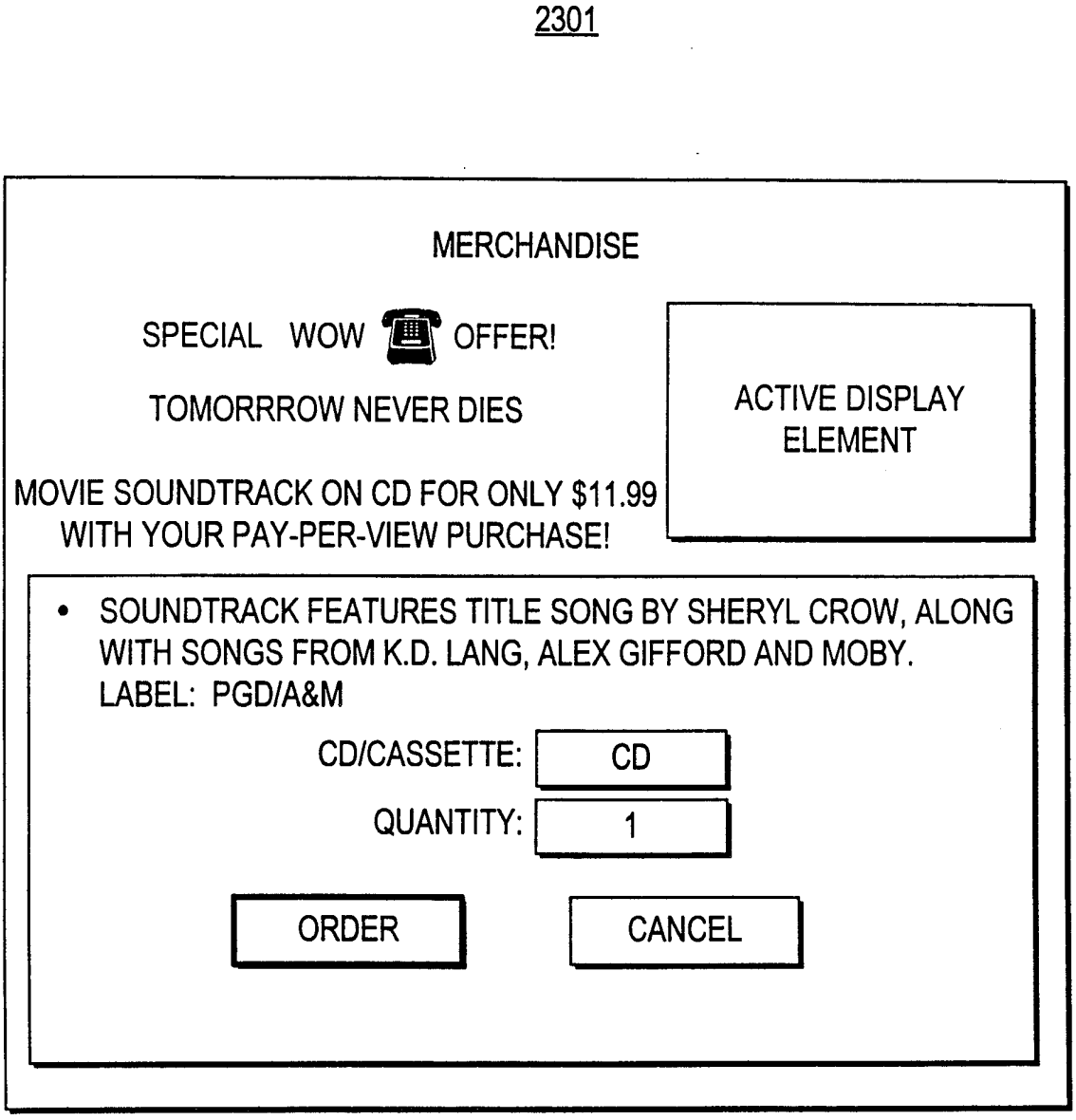
2301
MERCHANDISE
SPECIAL WOW OFFER!
TOMORRROW NEVER DIES
MOVIE SOUNDTRACK ON CD FOR ONLY $11.99
WITH YOUR PAY-PER-VIEW PURCHASE!
ACTIVE DISPLAY ELEMENT
• SOUNDTRACK FEATURES TITLE SONG BY SHERYL CROW, ALONG WITH SONGS FROM K.D. LANG, ALEX GIFFORD AND MOBY.
LABEL: PGD/A&M
CD/CASSETTE: CD
QUANTITY: 1
ORDER
CANCEL

FIG. 23

2401

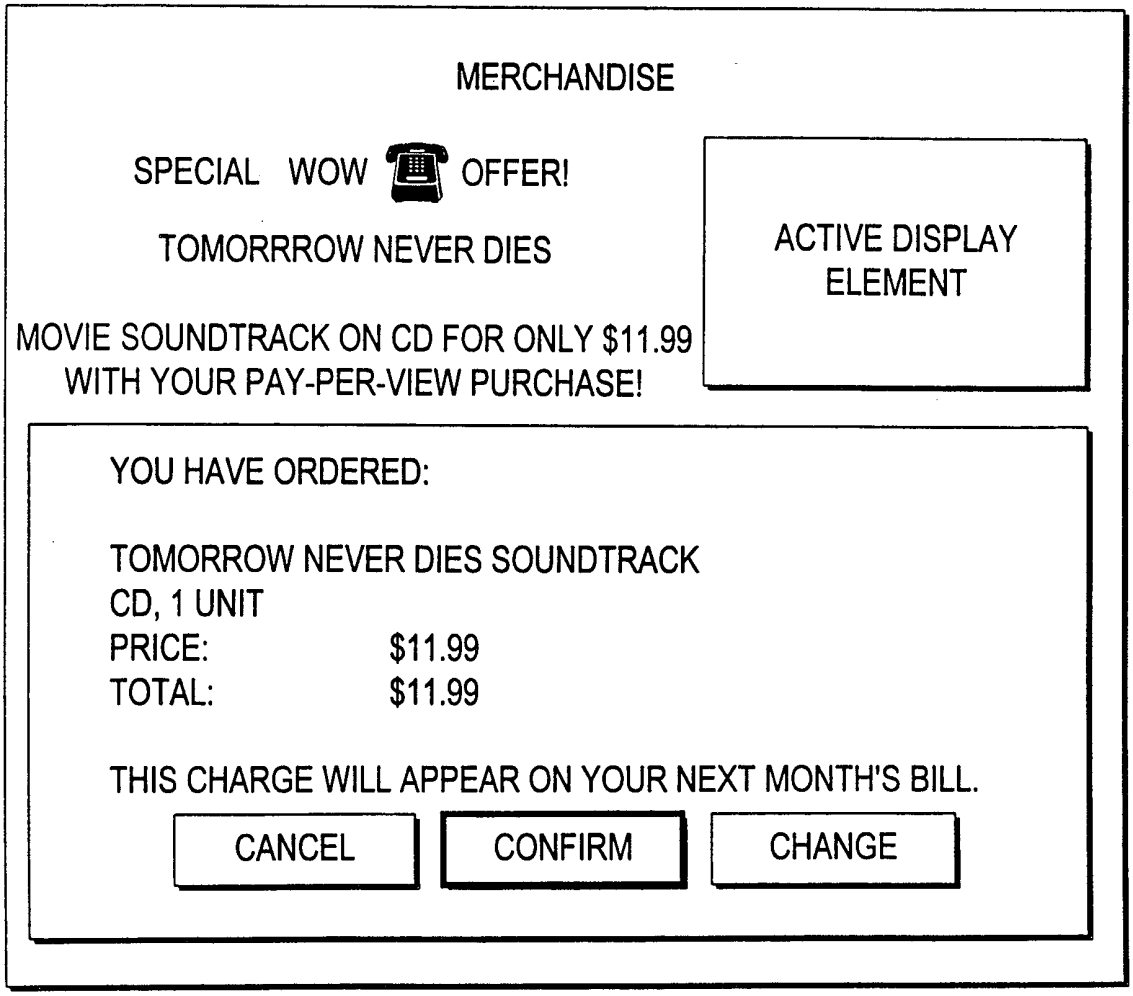
MERCHANDISE
SPECIAL WOW OFFER!
TOMORRROW NEVER DIES
MOVIE SOUNDTRACK ON CD FOR ONLY $11.99
WITH YOUR PAY-PER-VIEW PURCHASE!
ACTIVE DISPLAY ELEMENT
YOU HAVE ORDERED:
TOMORROW NEVER DIES SOUNDTRACK
CD, 1 UNIT
PRICE: $11.99
TOTAL: $11.99
THIS CHARGE WILL APPEAR ON YOUR NEXT MONTH'S BILL.
CANCEL
CONFIRM
CHANGE

FIG. 24

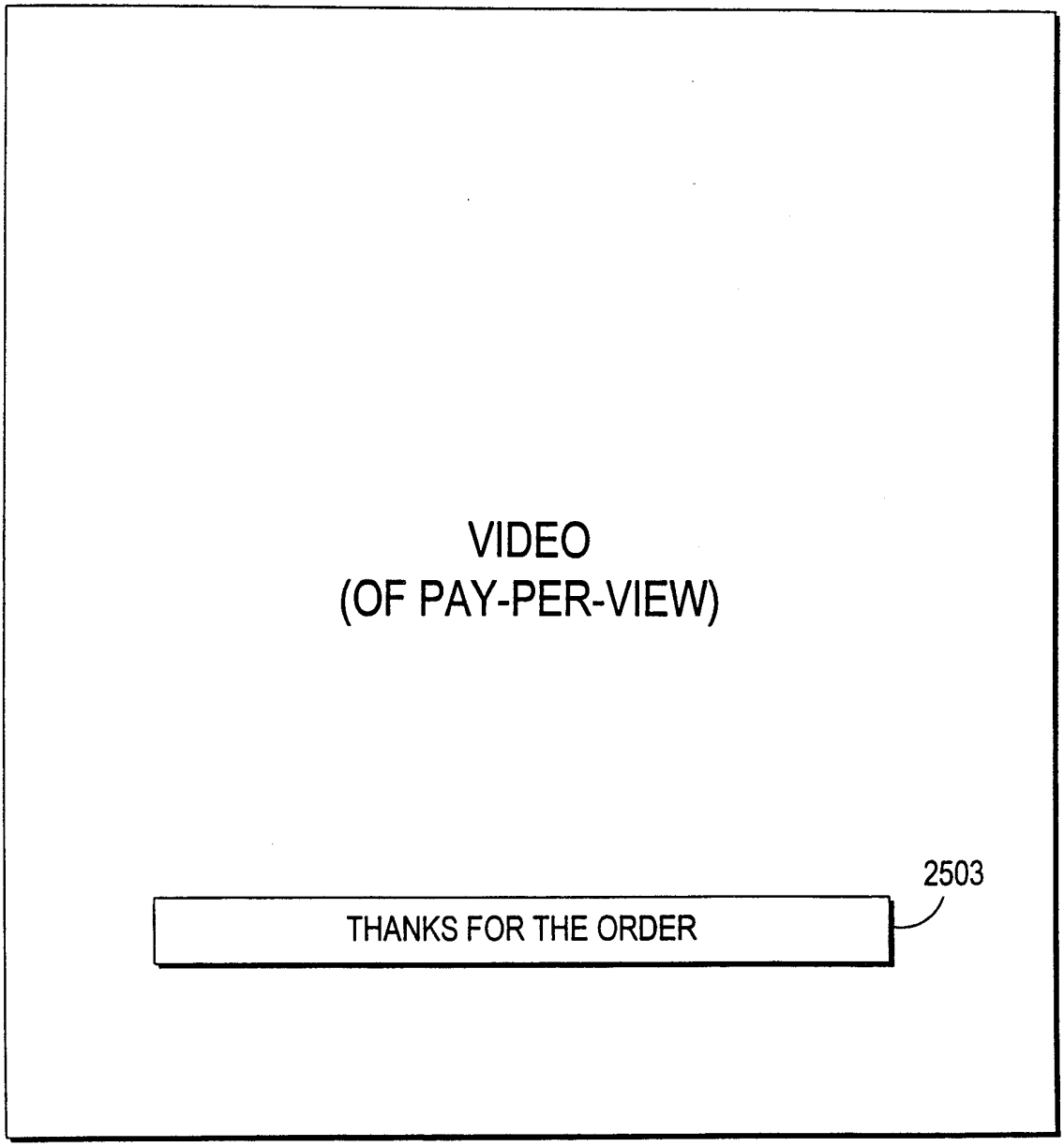

FIG. 25

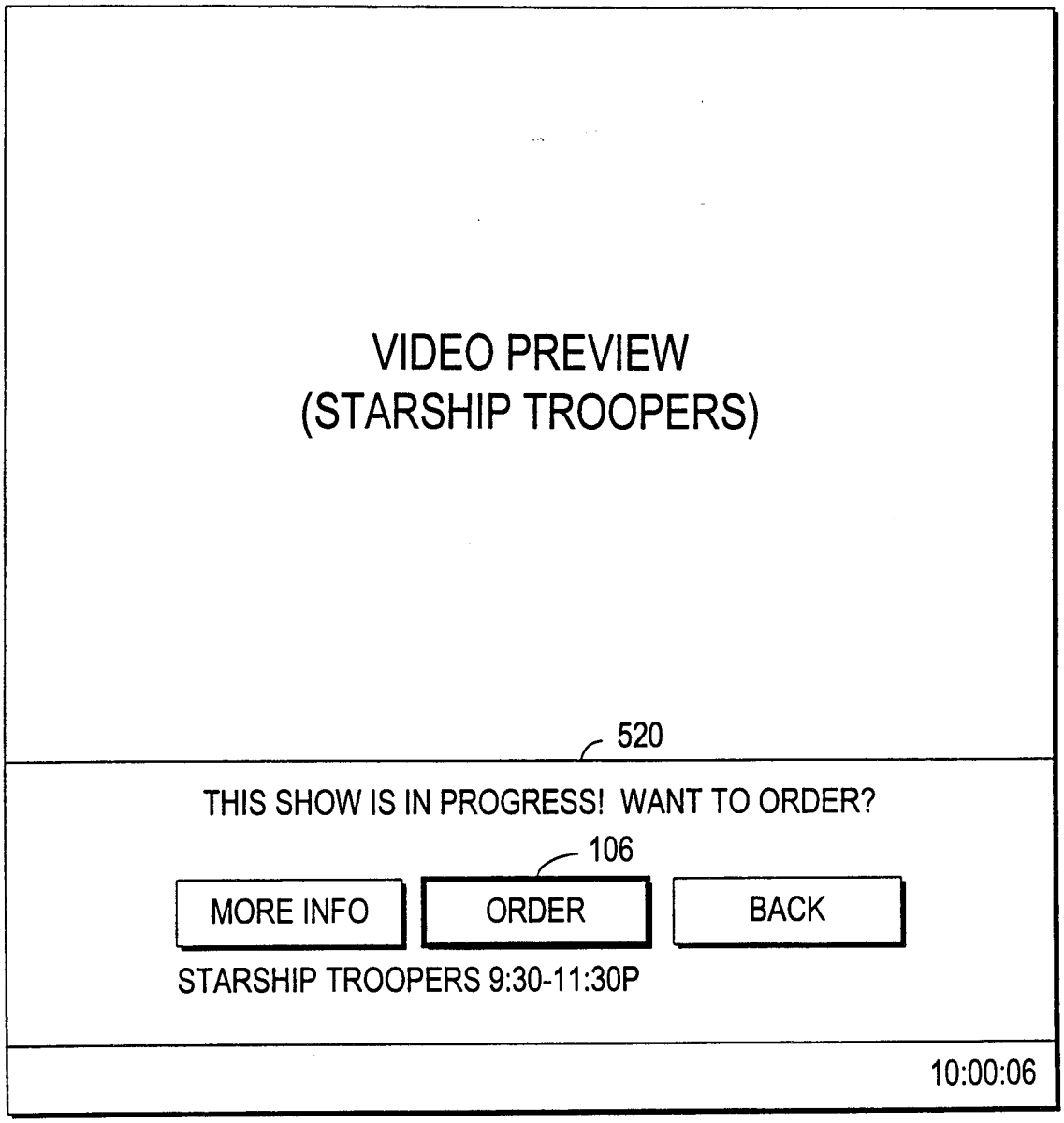
VIDEO PREVIEW
(STARSHIP TROOPERS)
520
THIS SHOW IS IN PROGRESS! WANT TO ORDER?
106
MORE INFO
ORDER
BACK
STARSHIP TROOPERS 9:30-11:30P
10:00:06

FIG. 26

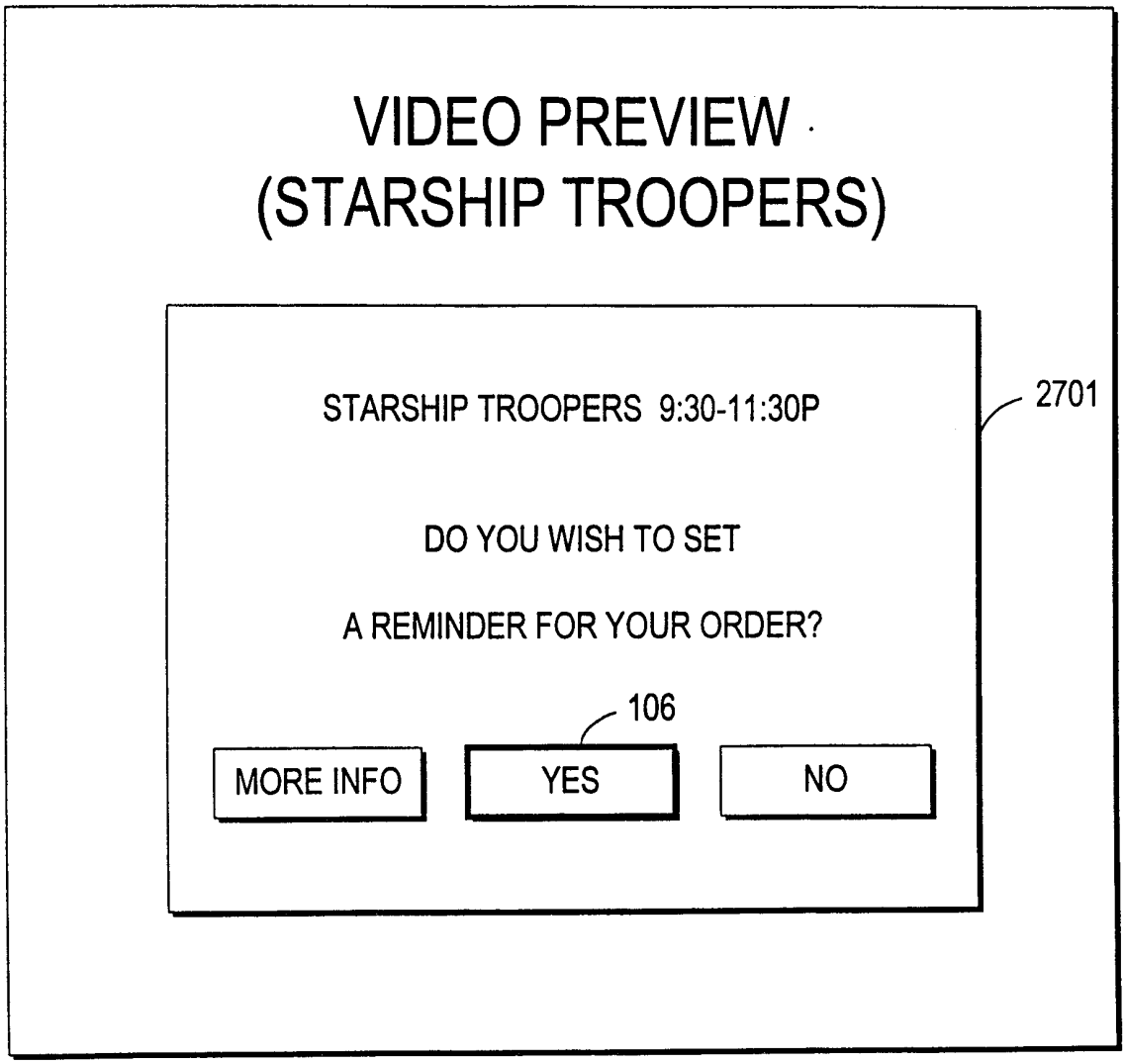
VIDEO PREVIEW
(STARSHIP TROOPERS)
STARSHIP TROOPERS 9:30-11:30P
2701
DO YOU WISH TO SET
A REMINDER FOR YOUR ORDER?
106
MORE INFO
YES
NO

FIG. 27

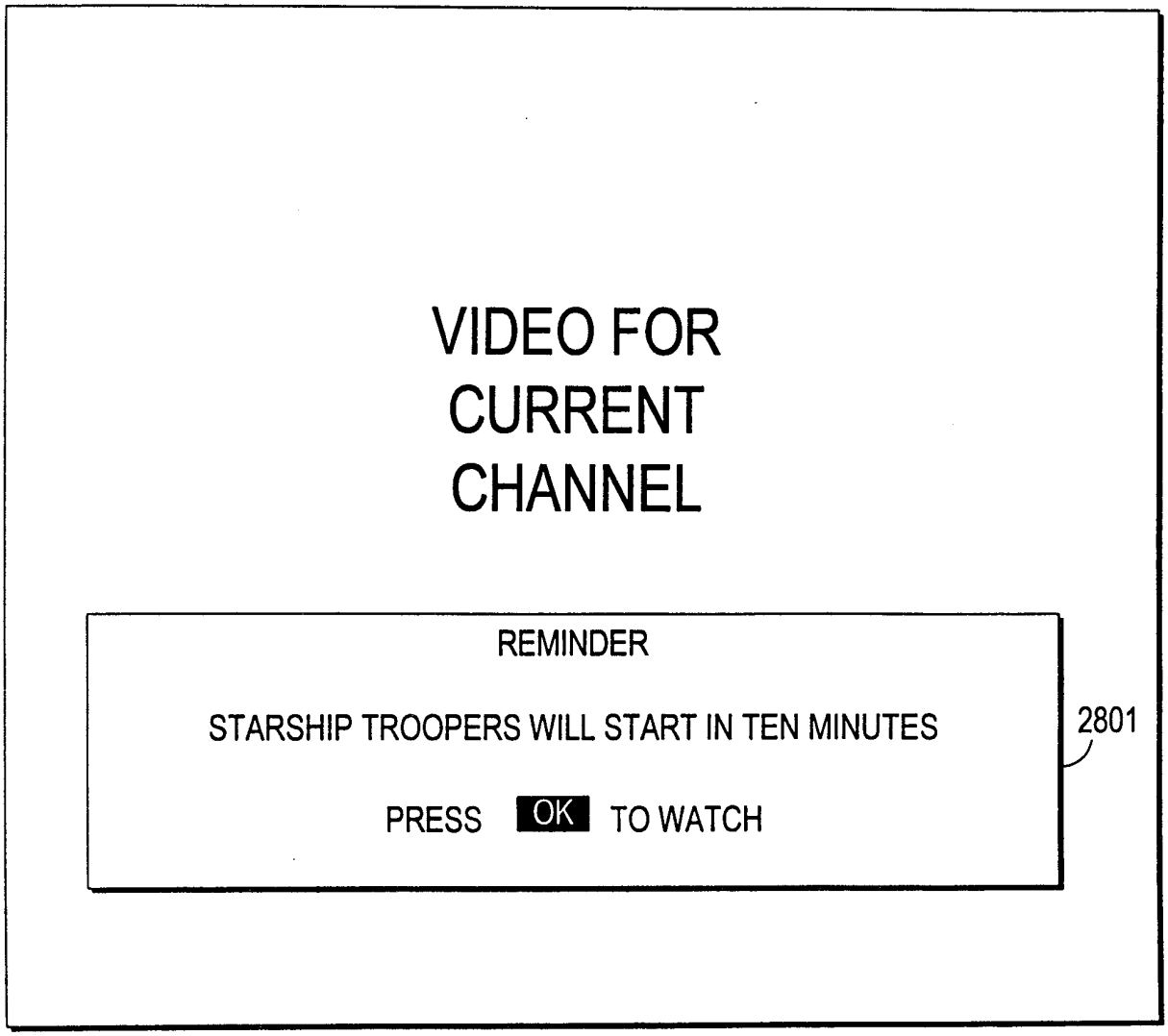
VIDEO FOR
CURRENT
CHANNEL
REMINDER
STARSHIP TROOPERS WILL START IN TEN MINUTES
PRESS OK TO WATCH
2801

FIG. 28

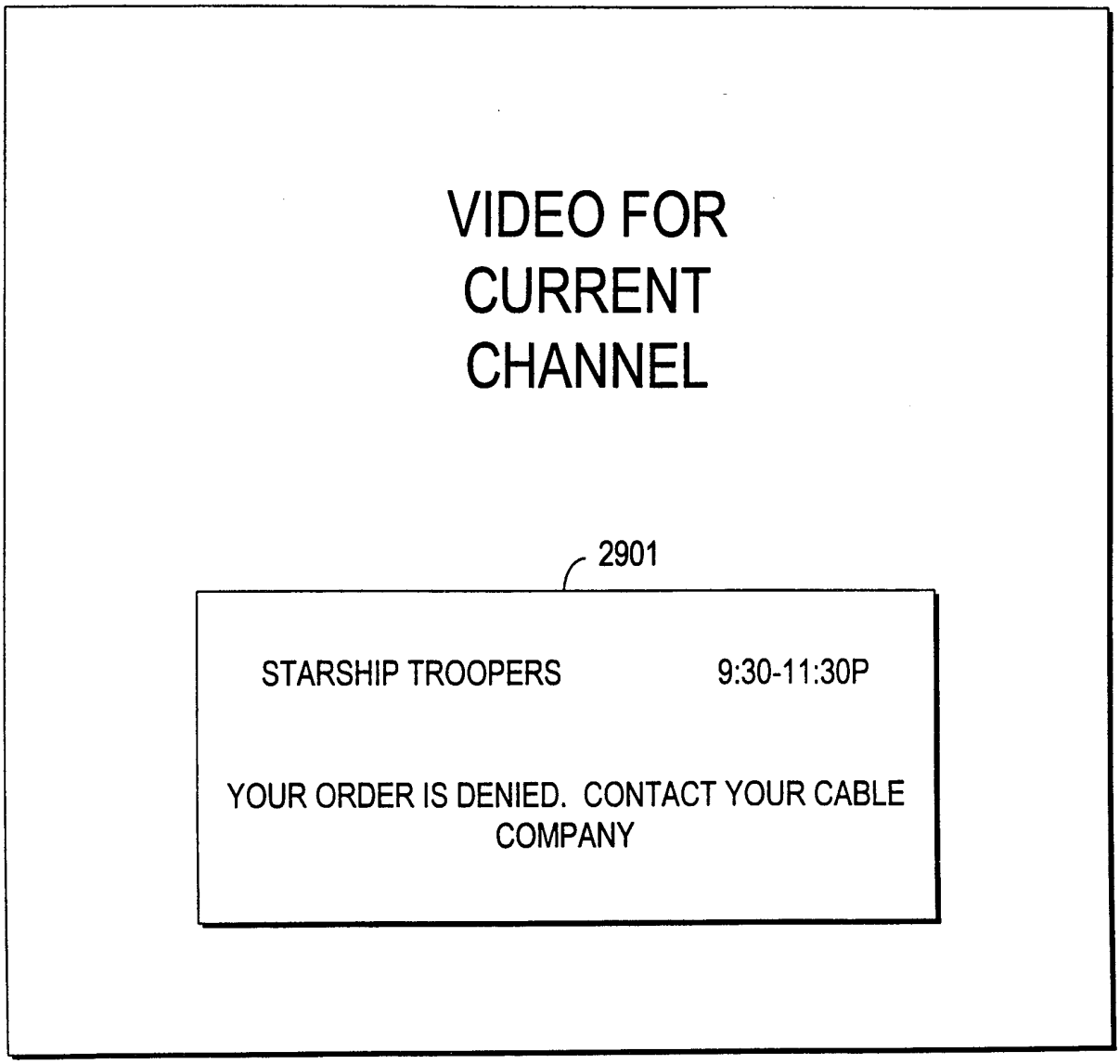
VIDEO FOR CURRENT CHANNEL
2901
STARSHIP TROOPERS
9:30-11:30P
YOUR ORDER IS DENIED. CONTACT YOUR CABLE COMPANY

FIG. 29

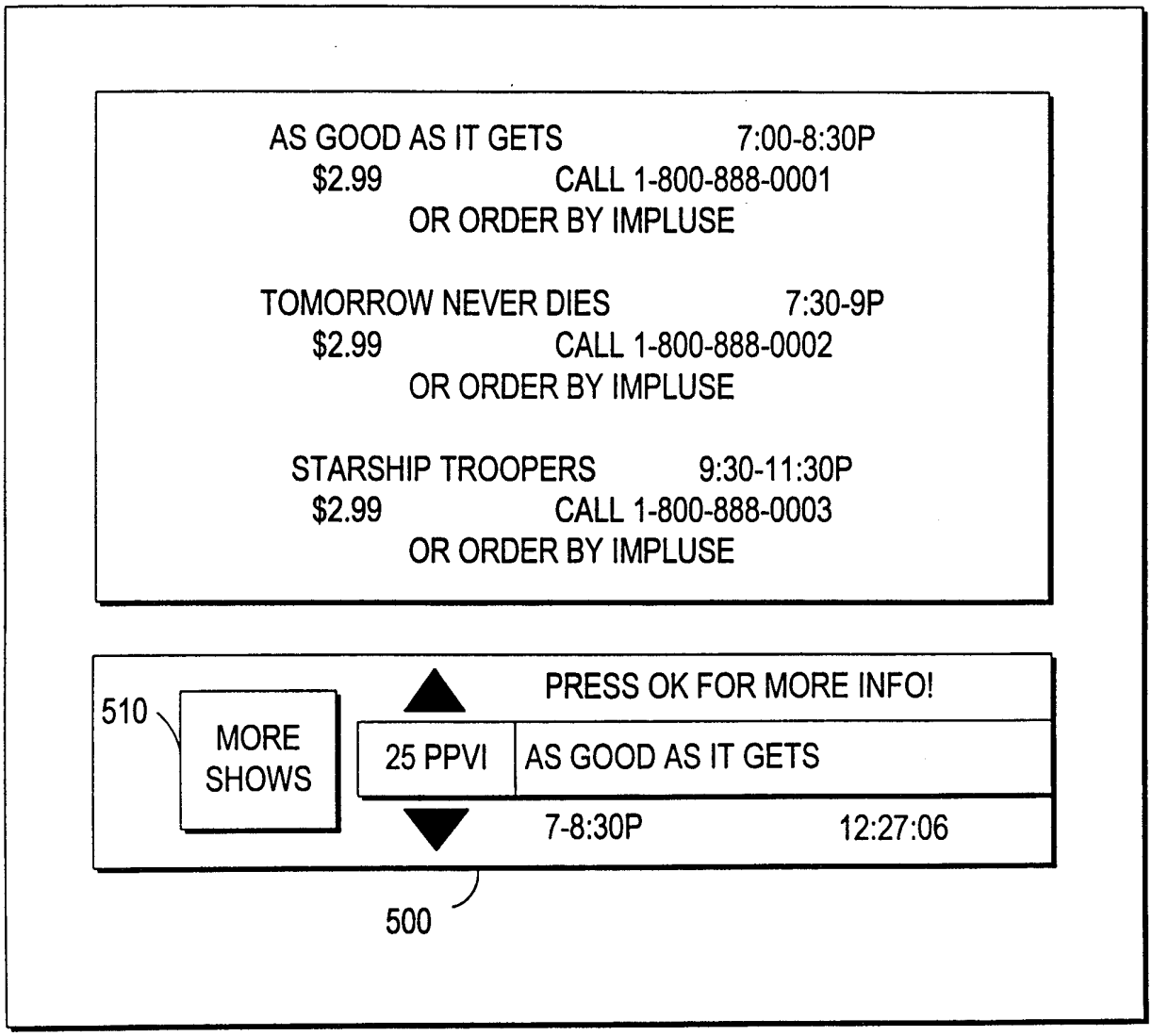
AS GOOD AS IT GETS 7:00-8:30P
$2.99 CALL 1-800-888-0001
OR ORDER BY IMPLUSE
TOMORROW NEVER DIES 7:30-9P
$2.99 CALL 1-800-888-0002
OR ORDER BY IMPLUSE
STARSHIP TROOPERS 9:30-11:30P
$2.99 CALL 1-800-888-0003
OR ORDER BY IMPLUSE
510
MORE SHOWS
PRESS OK FOR MORE INFO!
25 PPVI
AS GOOD AS IT GETS
7-8:30P
12:27:06
500

FIG. 30

80

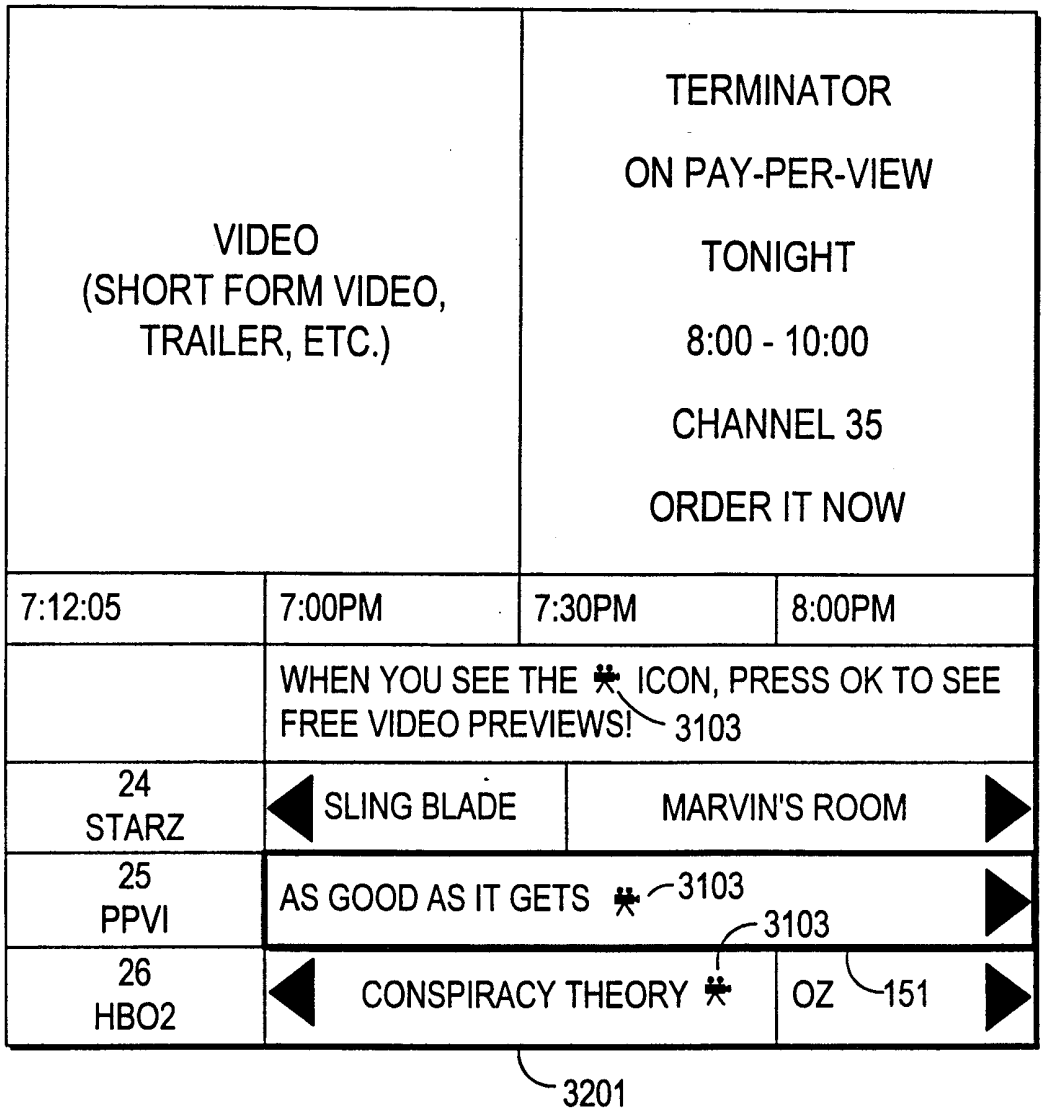
VIDEO
(SHORT FORM VIDEO,
TRAILER, ETC.)
TERMINATOR
ON PAY-PER-VIEW
TONIGHT
8:00 - 10:00
CHANNEL 35
ORDER IT NOW
7:12:05
7:00PM
7:30PM
8:00PM
WHEN YOU SEE THE ICON, PRESS OK TO SEE FREE VIDEO PREVIEWS!
3103
24
STARZ
SLING BLADE
MARVIN'S ROOM
25
PPVI
AS GOOD AS IT GETS
3103
3103
26
HBO2
CONSPIRACY THEORY
OZ
151
3201

FIG. 31A

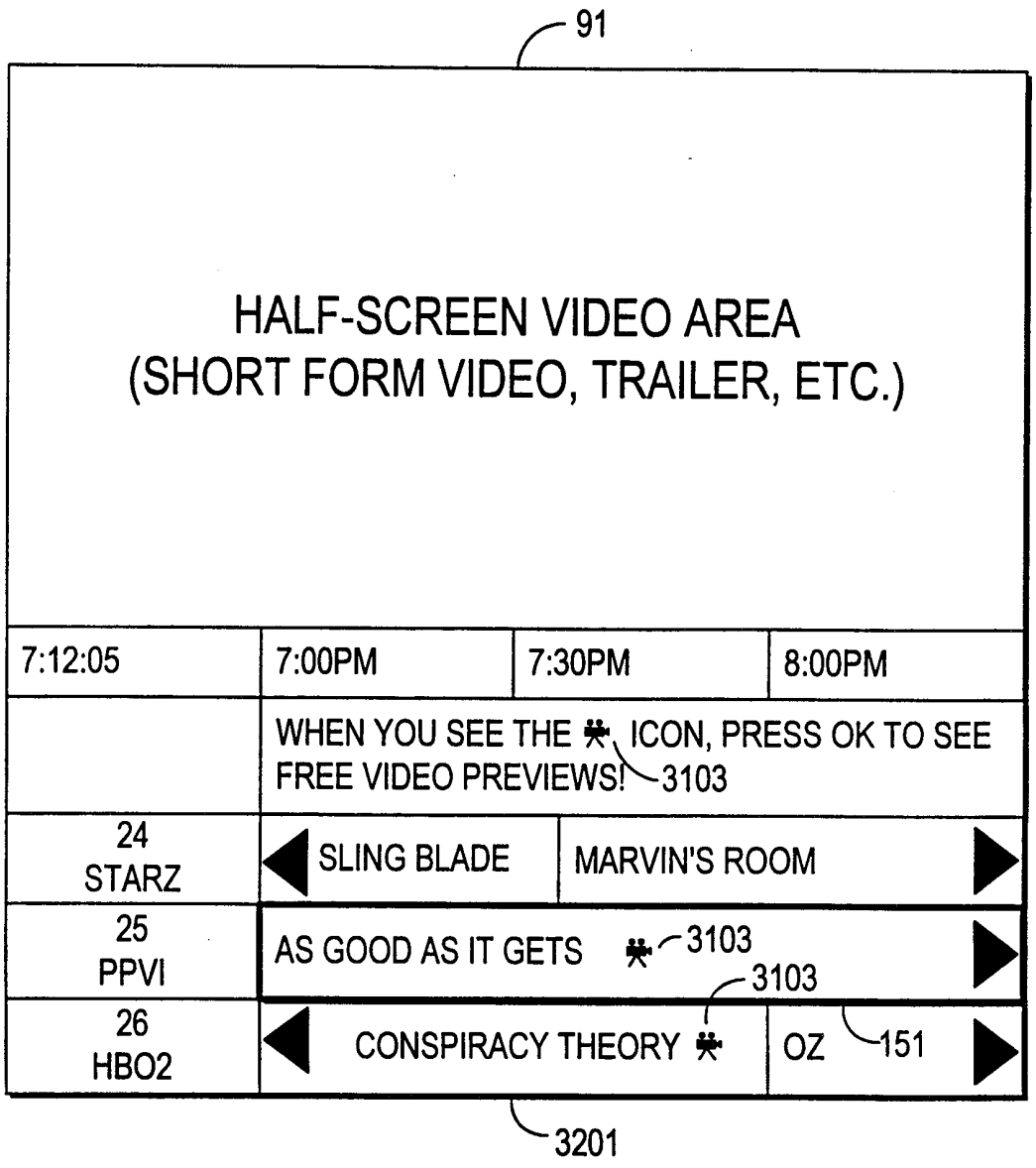
81
91
HALF-SCREEN VIDEO AREA
(SHORT FORM VIDEO, TRAILER, ETC.)
7:12:05
7:00PM
7:30PM
8:00PM
WHEN YOU SEE THE ICON, PRESS OK TO SEE FREE VIDEO PREVIEWS!
3103
24 STARZ
SLING BLADE
MARVIN'S ROOM
25 PPVI
AS GOOD AS IT GETS
3103
3103
26 HBO2
CONSPIRACY THEORY
OZ
151
3201

FIG. 31B

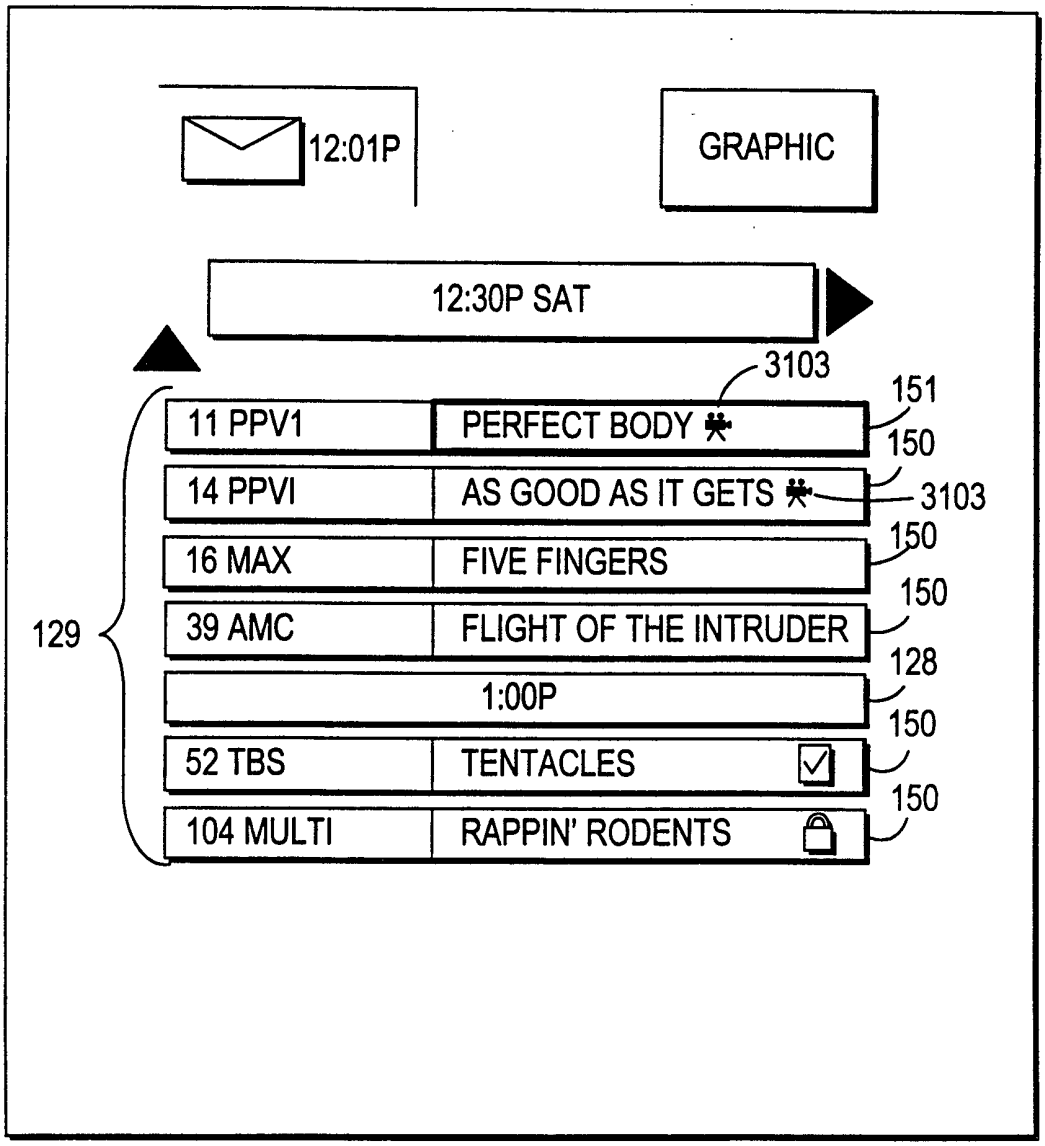
12:01P
GRAPHIC
12:30P SAT
3103
151
11 PPV1
PERFECT BODY
150
14 PPVI
AS GOOD AS IT GETS
3103
16 MAX
FIVE FINGERS
150
39 AMC
FLIGHT OF THE INTRUDER
150
129
128
1:00P
150
52 TBS
TENTACLES
150
104 MULTI
RAPPIN' RODENTS

FIG. 32

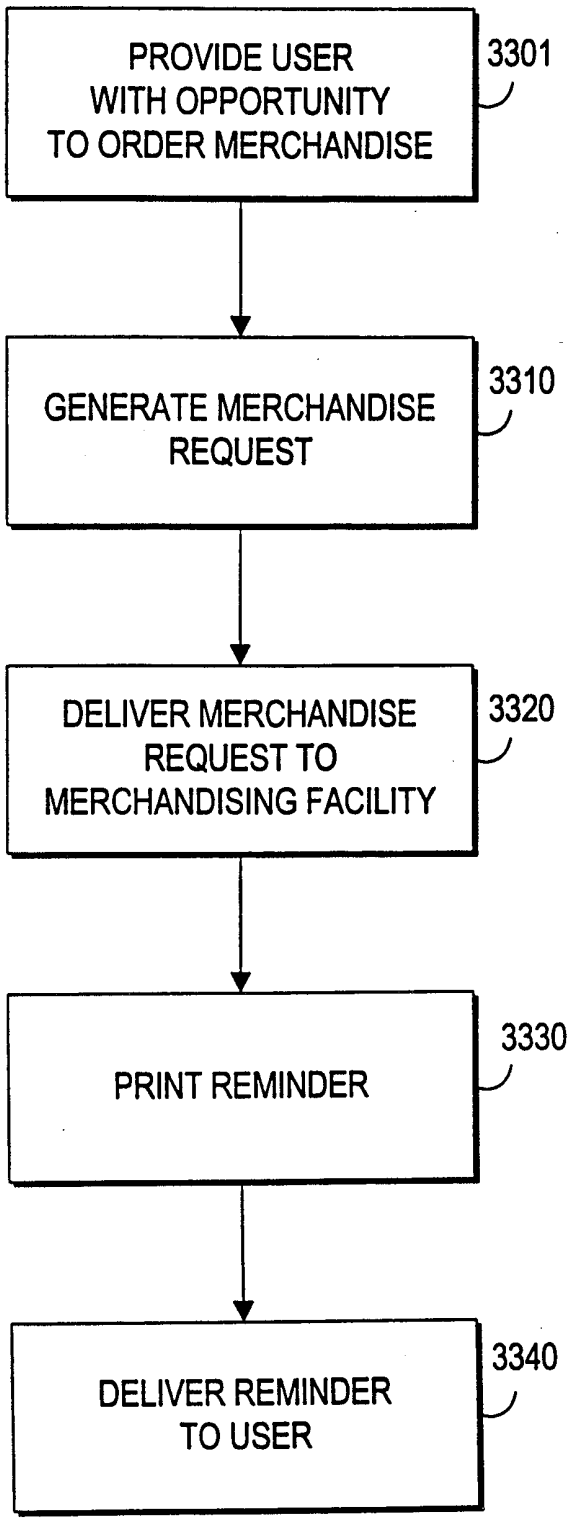
PROVIDE USER WITH OPPORTUNITY TO ORDER MERCHANDISE
3301
GENERATE MERCHANDISE REQUEST
3310
DELIVER MERCHANDISE REQUEST TO MERCHANDISING FACILITY
3320
PRINT REMINDER
3330
DELIVER REMINDER TO USER
3340

FIG. 33

INTERNATIONAL SEARCH REPORT

International Application No
PC./US 99/17983

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H04N7/16

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

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 H04N

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 97 13368 A (BRIEN SEAN ANDREW O ;MILNES KENNETH ALAN (US); SCHEIN STEVEN MICHA) 10 April 1997 (1997-04-10) page 7, line 33 -page 35, line 37 figures 1-17	1-72
A	WO 98 17064 A (WESTBERG THOMAS E ;KWOH DANIEL S (US); LEUNG ELSIE Y (US); MANKOVI) 23 April 1998 (1998-04-23) page 3, line 33 -page 14, line 20 figures 1-9	1-72
A	US 5 751 282 A (MATTHEWS III JOSEPH H ET AL) 12 May 1998 (1998-05-12) column 2, line 66 -column 7, line 65 figures 1-8	1-72

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

☒ Patent family members are listed in annex.

° Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"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
17 November 1999	23/11/1999

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Van der Zaal, R

1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PC./US 99/17983

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9713368 A	10-04-1997	AU 7387196 A	28-04-1997
		BR 9611064 A	13-07-1999
		CA 2232003 A	10-04-1997
		CN 1200221 A	25-11-1998
		EP 0880856 A	02-12-1998
		JP 10512420 T	24-11-1998
WO 9817064 A	23-04-1998	AU 4823197 A	11-05-1998
		EP 0932979 A	04-08-1999
US 5751282 A	12-05-1998	NONE	