configurations of the disclosure are possible utilizing, alone or in combination, one or more of the features set forth above or described in detail below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0051] FIG. 1A includes a first view of an embodiment of an environment or a intelligent television;

[0052] FIG. 1B includes a second view of an embodiment of an environment or a intelligent television;

[0053] FIG. 2A includes a first view of an embodiment of a intelligent television;

[0054] FIG. 2B includes a second view of an embodiment of a intelligent television;

[0055] FIG. 2C includes a third view of an embodiment of a intelligent television;

[0056] FIG. 2D includes a fourth view of an embodiment of a intelligent television;

[0057] FIG. 3 is a block diagram of an embodiment of the hardware of the intelligent television;

[0058] FIG. 4 is a block diagram of an embodiment of the intelligent television software and/or firmware;

[0059] FIG. 5 is a second block diagram of an embodiment of the intelligent television software and/or firmware;

[0060] FIG. 6 is a third block diagram of an embodiment of the intelligent television software and/or firmware;

[0061] FIG. 7 is a plan view of an embodiment of a handheld remote control;

[0062] Fig. 8 is a side view of an embodiment of a remote control;

[0063] Fig. 9A is a bottom view of an embodiment of a remote control with a joystick in a neutral position;

[0064] Fig. 9B is a bottom view of an embodiment of a remote control with the joystick in a lower position;

[0065] Fig. 9C is a bottom view of an embodiment of a remote control with the joystick in an upper position;

[0066] Fig. 10 is a plan view of another embodiment of a handheld remote control;

[0067] Fig. 11A is a front view of an embodiment of an Intelligent TV screen;

[0068] Fig. 11B is a front view of an embodiment of an Intelligent TV screen;

[0069] Fig. 11C is a front view of an embodiment of an Intelligent TV screen;

[0070] Fig. 12 is a block diagram of an embodiment of a handheld remote control of either Figs. 7 or 10;

[0071] Fig. 13 is a block diagram of an embodiment of a content data service;

[0072] Fig. 14A is a visual representation of one or more embodiments of a badge presented with the Intelligent TV;

[0073] Fig. 14B is a visual representation of one or more embodiments of a badge presented with the Intelligent TV;

[0074] Fig. 14C is a visual representation of one or more embodiments of a badge presented with the Intelligent TV;

[0075] Fig. 15 is a visual representation of an embodiment of a Live TV display including badges;

[0076] Fig. 16 is a visual representation of an embodiment of an electronic program guide display including badges;

[0077] Fig. 17A is a visual representation of an embodiment of a video on demand (VOD) display including badges;

[0078] Fig. 17B is a visual representation of an embodiment of a VOD menu display including badges;

[0079] Fig. 18 is a process diagram of an embodiment of a method for associating a badge with content; and

[0080] Fig. 19 is a process diagram of an embodiment of a method for presenting a badge with content.

[0081] In the appended figures, similar components and/or features may have the same reference label. Further, various components of the same type may be distinguished by following the reference label by a letter that distinguishes among the similar components. If only the first reference label is used in the specification, the description is applicable to any one of the similar components having the same first reference label irrespective of the second reference label.

DETAILED DESCRIPTION

[0082] Presented herein are embodiments of a device. The device can be a telecommunications device, such as a television, an electronic visual display device, or other smart device. The device can include one or more screens, or sections of a screen, that are configured to receive and present information from a number of sources. Further,

the device can receive user input in unique ways. The overall design and functionality of the device provides for an enhanced user experience making the device more useful and more efficient.

[0083] Intelligent Television (TV) Environment:

[0084] Referring to Figs. 1A and 1B, an Intelligent TV, or device, 100 is shown. It is anticipated that the Intelligent TV 100 may be used for entertainment, business applications, social interaction, content creation and/or consumption, and to organize and control one or more other devices that are in communication with the Intelligent TV 100. As can be appreciated, the Intelligent TV can be used to enhance the user interactive experience whether at home or at work.

[0085] In some embodiments, the Intelligent TV 100 may be configured to receive and understand a variety of user and/or device inputs. For example, a user may interface with the Intelligent TV 100 via one or more physical or electrical controls, such as buttons, switches, touch sensitive screens/regions (e.g., capacitive touch, resistive touch, etc.), and/or other controls associated with the Intelligent TV 100. In some cases, the Intelligent TV 100 may include the one or more interactive controls. Additionally or alternatively, the one or more controls may be associated with a remote control. The remote control may communicate with the Intelligent TV 100 via wired and/or wireless signals. As can be appreciated, the remote control may operate via radio frequency (RF), infrared (IR), and/or a specific wireless communications protocol (e.g., Bluetooth™, Wi-Fi, etc.). In some cases, the controls, whether physical or electrical, may be configured (e.g., programmed) to suit a user's preferences.

[0086] Additionally or alternatively, smart phones, tablets, computers, laptops, netbooks, and other smart devices may be used to control the Intelligent TV 100. For example, control of the Intelligent TV 100 may be achieved via an application running on a smart device. The application may be configured to present a user with various Intelligent TV 100 controls in an intuitive user interface (UI) on a screen associated with the device 100. The screen may be a touch sensitive, or touch screen, display. Selections input by a user via the UI may be configured to control the Intelligent TV 100 by the application accessing one or more communication features associated with the smart device.

[0087] It is anticipated that the Intelligent TV 100 can receive input via various input devices including, but in no way limited to, video, audio, radio, light, tactile, and

combinations thereof. Among other things, these input devices may be configured to allow the Intelligent TV 100 to see, recognize, and react to user gestures. For instance, a user may talk to the Intelligent TV 100 in a conversational manner. The Intelligent TV 100 may hear and understand voice commands in a manner similar to a smart device's intelligent personal assistant and voice-controlled navigator application (*e.g.*, Apple's Siri, Android's Skyvi, Robin, Iris, and other applications).

[0088] The Intelligent TV 100 may also be a communications device which can establish network connections 104 through many alternate means, including wired 108 or wireless 112 means, over cellular networks 116, and by using a telephone line 120 to connect to telephone networks operated by telephone companies. These connections 104 enable the Intelligent TV 100 to access one or more communication networks. The communication networks may comprise any type of known communication medium or collection of communication media and may use any type of protocols to transport messages or signals between endpoints. The communication networks may include wired and/or wireless communication technologies. The Internet is an example of the communication network 132 that constitutes an Internet Protocol (IP) network consisting of many computers, computing networks, and other communication devices located all over the world, which are connected through many telephone systems and other means.

[0089] Other examples of the communication network 132 include, without limitation, a standard Plain Old Telephone System (POTS), an Integrated Services Digital Network (ISDN), the Public Switched Telephone Network (PSTN), a Local Area Network (LAN), a Wide Area Network (WAN), a cellular network, and any other type of packet-switched or circuit-switched network known in the art. In addition, it can be appreciated that the communication network 132 need not be limited to any one network type, and instead may be comprised of a number of different networks and/or network types.

[0090] In some embodiments, the Intelligent TV 100 may be equipped with multiple communication means. The multiple communication means may allow the Intelligent TV 100 to communicate across Local Area Networks (LANs) 124, wireless local area networks (WLANs) 128, and other networks 132. The networks may be connected in a redundant manner to ensure network access. In other words, if one connection is interrupted, the intelligent TV 100 can use an alternate communications path to reestablish and/or maintain the network connection 104. Among other things, the intelligent TV 100 may use these network connections 104 to send and receive

information, interact with an electronic program guide (EPG) 136, receive software updates 140, contact customer service 144 (e.g., to receive help or service, etc.), and/or access remotely stored digital media libraries 148. In addition, these connections can allow the Intelligent TV 100 to make phone calls, send and/or receive email messages, send and/or receive text messages (such as email and instant messages), surf the Internet using an internet search engine, post blogs by a blogging service, and connect/interact with social media sites and/or online community (e.g., Facebook, Twitter, LinkedIn, Pinterest, GooglePlus, MySpace, and the like) maintained by a social network service. In combination with other components of the Intelligent TV 100 described in more detail below, these network connections 104 also enable the Intelligent TV 100 to conduct video teleconferences, electronic meetings, and other communications. The Intelligent TV 100 may capture and store images and sound, using associated cameras, microphones, and other sensors. Additionally or alternatively, the Intelligent TV 100 may create and save screen shots of media, images, and data displayed on a screen associated with the Intelligent TV 100.

[0091] Further, as shown in Fig. 1B, the Intelligent TV 100 can interact with other electronic devices 168 by either by the wired 108 and/or wireless 112 connections. As described herein, components of the Intelligent TV 100 allow the device 100 to be connected to devices 168 including, but not limited to, DVD players 168a, BluRay players 168b, portable digital media devices 168c, smart phones 168d, tablet devices 168e, personal computers 168f, external cable boxes 168g, keyboards 168h, pointing devices 168i, printers 168j, game controllers and/or game pads 168k, satellite dishes 168l, external display devices 168m, and other universal serial bus (USB), local area network (LAN), Bluetooth™, high-definition multimedia interface (HDMI) compliant devices, and/or wireless devices. When connected to an external cable box 168g or satellite dish 168l, the Intelligent TV 100 can access additional media content. Also, as further described below, the Intelligent TV 100 is capable of receiving digital and/or analog signals broadcast by TV stations. The Intelligent TV 100 can be configured as one or more of a standard-definition television, enhanced television, and high-definition television. It may operate as one or more of cable, Internet, Internet Protocol, satellite, web, and/or smart television. The Intelligent TV 100 may also be used to control the operation of, and may interface with, other smart components such as security systems 172, door/gate controllers 176,

remote video cameras 180, lighting systems 184, thermostats 188, refrigerators 192, and other appliances.

[0092] Intelligent TV:

[0093] Figs. 2A-2D illustrate components of the Intelligent TV 100. In general, as shown by Fig. 2A, the Intelligent TV 100 can be supported by a removable base or stand 204 that is attached to a frame 208. The frame 208 surrounds edges of a display screen 212, leaving a front surface of the display screen 212 uncovered. The display screen 212 may comprise a Liquid Crystal Display (LCD) screen, a plasma screen, Light Emitting Diode (LED) screen, or other screen types. In embodiments, the entire front surface of the screen 212 may be touch sensitive and capable of receiving input by the user touching the front surface of the screen 212.

[0094] The Intelligent TV 100 may include integrated speakers 216 and at least one microphone 220. A first area of the frame 208 may comprise a horizontal gesture capture region 224 and second areas comprise vertical gesture capture regions 228. The gesture capture regions 224, 228 may comprise areas or regions that are capable of receiving input by recognizing gestures made by the user, and in some examples, without the need for the user to actually touch the screen 212 surface of the Intelligent TV 100. However, the gesture capture regions 224, 228 may not include pixels that can perform a display function or capability.

[0095] One or more image capture devices 232, such as a camera, can be included for capturing still and/or video images. The image capture device 232 can include or be associated with additional elements, such as a flash or other light source 236 and a range finding device 240 to assist focusing of the image capture device. In addition, the microphone 220, gesture capture regions 224, 228, image capture devices 232, and the range finding device 240 may be used by the Intelligent TV 100 to recognize individual users. Additionally or alternatively, the Intelligent TV 100 may learn and remember preferences associated with the individual users. In some embodiments, the learning and remembering (i.e., identifying and recalling stored information) may be associated with the recognition of a user.

[0096] An IR transmitter and receiver 244 may also be provided to connect the Intelligent TV 100 with a remote control device (not shown) or other IR devices. Additionally or alternatively, the remote control device may transmit wireless signals via RF, light, and/or a means other than IR. Also shown in Fig. 2A is an audio jack 248,

which may be hidden behind a panel that is hinged or removable. The audio jack 248 accommodates a tip, ring, sleeve (TRS) connector, for example, to allow the user to utilize headphones, a headset, or other external audio equipment.

[0097] The Intelligent TV 100 can also include a number of buttons 252. For example, Fig. 2A illustrates the buttons 252 on the top of the Intelligent TV 100, although the buttons could be placed at other locations. As shown, the Intelligent TV 100 includes six buttons 252a-f, which can be configured for specific inputs. For example, the first button 252a may be configured as an on/off button used to control overall system power to the Intelligent TV 100. The buttons 252 may be configured to, in combination or alone, control a number of aspects of the Intelligent TV 100. Some non-limiting examples include, but are not limited to, overall system volume, brightness, the image capture device, the microphone, and initiation/termination of a video conference. Instead of separate buttons, two of the buttons may be combined into a rocker button. This rocker button arrangement may be useful in situations where the buttons are configured to control features such as volume or brightness. In some embodiments, one or more of the buttons 252 are capable of supporting different user commands. By way of example, a normal press has a duration commonly of less than about 1 second and resembles a quick input. A medium press has a duration commonly of 1 second or more but less than about 12 seconds. A long press has a duration commonly of about 12 seconds or more. The function of the buttons is normally specific to the application that is active on the Intelligent TV 100. In the video conference application for instance and depending on the particular button, a normal, medium, or long press can mean end the video conference, increase or decrease the volume, increase a rate speed associated with a response to an input, and toggle microphone mute. Depending on the particular button, a normal, medium, or long press can also control the image capture device 232 to increase zoom, decrease zoom, take a photograph, or record video.

[0098] In support of communications functions or capabilities, the Intelligent TV 100 can include one or more shared or dedicated antennae 256 and wired broadband connections 260 as shown in Fig. 2B. The antennae 256 also enable the Intelligent TV 100 to receive digital and/or analog broadcast TV channels. The wired broadband connections 260 are, for example, a Digital Subscriber Line (DSL), an optical line, an Ethernet port, an IEEE 1394 interface, or other interfaces. The Intelligent TV 100 also has a telephone line jack 262 to further provide communications capability.

[0099] In addition to the removable base 204, the Intelligent TV 100 may include hardware and mounting points 264 on a rear surface to facilitate mounting the Intelligent TV 100 to a surface, such as a wall. In one example, the Intelligent TV 100 may incorporate at least one Video Equipment Standards Association (VESA) mounting interface for attaching the device 100 to the surface.

[0100] As shown in Fig. 2C, the Intelligent TV 100 may include docking interfaces or ports 268. The docking ports 268 may include proprietary or universal ports to support the interconnection of the Intelligent TV 100 to other devices or components, which may or may not include additional or different capabilities from those integral to the Intelligent TV 100. In addition to supporting an exchange of communication signals between the Intelligent TV 100 and a connected device or component, the docking ports 268 can support the supply of power to the connected device or component. The docking ports 268 can also comprise an intelligent element that comprises a docking module for controlling communications or other interactions between the Intelligent TV 100 and the connected device or component.

[0101] The Intelligent TV 100 also includes a number of card slots 272 and network or peripheral interface ports 276. The card slots 272 may accommodate different types of cards including subscriber identity modules (SIM), secure digital (SD) cards, MiniSD cards, flash memory cards, and other cards. Ports 276 in embodiments may include input/output (I/O) ports, such as universal serial bus (USB) ports, parallel ports, game ports, and high-definition multimedia interface (HDMI) connectors.

[0102] An audio/video (A/V) I/O module 280 can be included to provide audio to an interconnected speaker or other device, and to receive audio input from a connected microphone or other device. As an example, the audio input/output interface 280 may comprise an associated amplifier and analog to digital converter.

[0103] Hardware Features:

[0104] Fig. 3 illustrates components of an Intelligent TV 100 in accordance with embodiments of the present disclosure. In general, the Intelligent TV 100 includes a primary screen 304. Screen 304 can be a touch sensitive screen and can include different operative areas.

[0105] For example, a first operative area, within the screen 304, may comprise a display 310. In some embodiments, the display 310 may be touch sensitive. In general, the display 310 may comprise a full color, display.

[0106] A second area within the screen 304 may comprise a gesture capture region 320. The gesture capture region 320 may comprise an area or region that is outside of the display 310 area, and that is capable of receiving input, for example in the form of gestures provided by a user. However, the gesture capture region 320 does not include pixels that can perform a display function or capability.

[0107] A third region of the screen 304 may comprise a configurable area 312. The configurable area 312 is capable of receiving input and has display or limited display capabilities. In embodiments, the configurable area 312 may present different input options to the user. For example, the configurable area 312 may display buttons or other relatable items. Moreover, the identity of displayed buttons, or whether any buttons are displayed at all within the configurable area 312 of a screen 304, may be determined from the context in which the Intelligent TV 100 is used and/or operated.

[0108] In an exemplary touch sensitive screen 304 embodiment, the touch sensitive screen 304 comprises a liquid crystal display extending across at least those regions of the touch sensitive screen 304 that are capable of providing visual output to a user, and a capacitive input matrix over those regions of the touch sensitive screen 304 that are capable of receiving input from the user.

[0109] One or more display controllers 316 may be provided for controlling the operation of the screen 304. The display controller 316 may control the operation of the touch sensitive screen 304, including input (touch sensing) and output (display) functions. The display controller 316 may also control the operation of the screen 304 and may interface with other inputs, such as infrared and/or radio input signals (e.g., door/gate controllers, alarm system components, etc.). In accordance with still other embodiments, the functions of a display controller 316 may be incorporated into other components, such as a processor 364.

[0110] The processor 364 may comprise a general purpose programmable processor or controller for executing application programming or instructions. In accordance with at least some embodiments, the processor 364 may include multiple processor cores, and/or implement multiple virtual processors. In accordance with still other embodiments, the processor 364 may include multiple physical processors. As a particular example, the processor 364 may comprise a specially configured application specific integrated circuit (ASIC) or other integrated circuit, a digital signal processor, a controller, a hardwired electronic or logic circuit, a programmable logic device or gate

array, a special purpose computer, or the like. The processor 364 generally functions to run programming code or instructions implementing various functions of the Intelligent TV 100.

[0111] In support of connectivity functions or capabilities, the Intelligent TV 100 can include a module for encoding/decoding and/or compression/decompression 366 for receiving and managing digital television information. Encoding/decoding compression/decompression module 366 enables decompression and/or decoding of analog and/or digital information dispatched by a public television chain or in a private television network and received across antenna 324, I/O module 348, wireless connectivity module 328, and/or other wireless communications module 332. The television information may be sent to screen 304 and/or attached speakers receiving analog or digital reception signals. Any encoding/decoding and compression/decompression is performable on the basis of various formats (e.g., audio, video, and data). Encrypting module 324 is in communication with encoding/decoding compression/decompression module 366 and enables the confidentiality of all the data received or transmitted by the user or supplier.

[0112] In support of communications functions or capabilities, the Intelligent TV 100 can include a wireless connectivity module 328. As examples, the wireless connectivity module 328 can comprise a GSM, CDMA, FDMA and/or analog cellular telephony transceiver capable of supporting voice, multimedia and/or data transfers over a cellular network. Alternatively or in addition, the Intelligent TV 100 can include an additional or other wireless communications module 332. As examples, the other wireless communications module 332 can comprise a Wi-Fi, Blutooth™, WiMax, infrared, or other wireless communications link. The wireless connectivity module 328 and the other wireless communications module 332 can each be associated with a shared or a dedicated antenna 324 and a shared or dedicated I/O module 348.

[0113] An input/output module 348 and associated ports may be included to support communications over wired networks or links, for example with other communication devices, server devices, and/or peripheral devices. Examples of an input/output module 348 include an Ethernet port, a Universal Serial Bus (USB) port, Thunderbolt™ or Light Peak interface, Institute of Electrical and Electronics Engineers (IEEE) 1394 port, or other interface.

[0114] An audio input/output interface/device(s) 344 can be included to provide analog audio to an interconnected speaker or other device, and to receive analog audio

input from a connected microphone or other device. As an example, the audio input/output interface/device(s) 344 may comprise an associated amplifier and analog-to-digital converter. Alternatively or in addition, the Intelligent TV 100 can include an integrated audio input/output device 356 and/or an audio jack for interconnecting an external speaker or microphone. For example, an integrated speaker and an integrated microphone can be provided, to support near talk or speaker phone operations.

[0115] A port interface 352 may be included. The port interface 352 may include proprietary or universal ports to support the interconnection of the device 100 to other devices or components, such as a dock, which may or may not include additional or different capabilities from those integral to the device 100. In addition to supporting an exchange of communication signals between the device 100 and another device or component, the docking port 136 and/or port interface 352 can support the supply of power to or from the device 100. The port interface 352 also comprises an intelligent element that comprises a docking module for controlling communications or other interactions between the Intelligent TV 100 and a connected device or component. The docking module may interface with software applications that allow for the remote control of other devices or components (e.g., media centers, media players, and computer systems).

[0116] An Intelligent TV 100 may also include memory 308 for use in connection with the execution of application programming or instructions by the processor 364, and for the temporary or long term storage of program instructions and/or data. As examples, the memory 308 may comprise RAM, DRAM, SDRAM, or other solid state memory. Alternatively or in addition, data storage 312 may be provided. Like the memory 308, the data storage 312 may comprise a solid state memory device or devices. Alternatively or in addition, the data storage 312 may comprise a hard disk drive or other random access memory.

[0117] Hardware buttons 358 can be included for example for use in connection with certain control operations. One or more image capture interfaces/devices 340, such as a camera, can be included for capturing still and/or video images. Alternatively or in addition, an image capture interface/device 340 can include a scanner, code reader, or motion sensor. An image capture interface/device 340 can include or be associated with additional elements, such as a flash or other light source. The image capture

interfaces/devices 340 may interface with a user ID module 350 that assists in identifying users of the Intelligent TV 100.

[0118] The Intelligent TV 100 can also include a global positioning system (GPS) receiver 336. In accordance with embodiments of the present invention, the GPS receiver 336 may further comprise a GPS module that is capable of providing absolute location information to other components of the Intelligent TV 100. As will be appreciated, other satellite-positioning system receivers can be used in lieu of or in addition to GPS.

[0119] Power can be supplied to the components of the Intelligent TV 100 from a power source and/or power control module 360. The power control module 360 can, for example, include a battery, an AC to DC converter, power control logic, and/or ports for interconnecting the Intelligent TV 100 to an external source of power.

[0120] Firmware and Software:

[0121] An embodiment of the software system components and modules 400 is shown in Fig. 4. The software system 400 may comprise one or more layers including, but not limited to, an operating system kernel 404, one or more libraries 408, an application framework 412, and one or more applications 416. The one or more layers 404-416 can communicate with each other to perform functions for the Intelligent TV 100.

[0122] An operating system (OS) kernel 404 contains the primary functions that allow the software to interact with hardware associated with the Intelligent TV 100. Kernel 404 can include a collection of software that manages the computer hardware resources and provides services for other computer programs or software code. The operating system kernel 404 is the main component of the operating system and acts as an intermediary between the applications and data processing done with the hardware components. Part of the operating system kernel 404 can include one or more device drivers 420. A device driver 420 can be any code within the operating system that helps operate or control a device or hardware attached to or associated with the Intelligent TV. The driver 420 can include code for operating video, audio, and/or other multimedia components of the Intelligent TV 100. Examples of drivers include display, camera, flash, binder (IPC), keypad, WiFi, and audio drivers.

[0123] Library 408 can contain code or other components that may be accessed and implemented during the operation of the software system 400. The library 408 may contain one or more of, but is not limited to, an operating system runtime library 424, a TV services hypertext application language (HAL) library 428, and/or a data service

library 432. The OS runtime library 424 may contain the code required by the operating system kernel 404 or other operating system functions to be executed during the runtime of the software system 400. The library can include the code that is initiated during the running of the software system 400.

[0124] The TV services hypertext application language 428 can include code required by TV services either executed in the application framework 412 or an application 416. The TV services HAL library 428 is specific to the Intelligent TV 100 operations that control different functions of the Intelligent TV. The TV service HAL library 428 can also be formed from other types of application languages or embodiments of different types of code or formats for code beyond the hypertext application language.

[0125] The data services library 432 can include the one or more components or codes to implement components for the data services function. The data services function can be implemented in the application framework 412 and/or applications layer 416. An embodiment of a function of the data services and the type of components that may be included is shown in Fig. 6.

[0126] The application framework 412 can include a general abstraction for providing functionality that can be selected by one or more application 416 to provide specific application functions or software for those applications. Thus, the framework 412 can include one or more different services, or other applications, that can be accessed by the applications 416 to provide general functions across two or more applications. Such functions include, for example, management of one or more of windows or panels, surfaces, activities, content, and resources, The application framework 412 can include one or more, but is not limited to, TV services 434, TV services framework 440, TV resources 444, and user interface component 448.

[0127] The TV services framework 440 can provide an additional abstraction for different TV services. TV services framework 440 allows for the general access and function of services that are associated with the TV functionality. The TV services 436 are general services provided within the TV services framework 440 that can be accessed by applications in the applications layer 416. The TV resources 444 provide code for accessing TV resources including any types of storage, video, audio, or other functionality provided with the Intelligent TV 100. The TV resources 444, TV services 436, and TV services framework 440 provide for the different implementations of TV functionality that may occur with the Intelligent TV 100.

[0128] One or more user interface components 448 can provide general components for display of the Intelligent TV 100. The user interface components 448 might be general components that may be accessed by different applications provided in the application framework 412. The user interface components 448 may be accessed to provide for panels and silos as described in conjunction with Fig. 5.

[0129] The applications layer 416 can both contain and execute applications associated with the Intelligent TV 100. Applications layer 416 may include one or more of, but is not limited to, a live TV application 452, a video on demand application 456, a media center application 460, an application center application 464, and a user interface application 468. The live TV application 452 can provide live TV over different signal sources. For example, the live TV application, 452, can provide TV from input from cable television, over air broadcasts, from satellite services, or other types of live TV services. Live TV application 452 may then present the multimedia presentation or video and audio presentation of the live television signal over the display of the Intelligent TV 100.

[0130] The video on demand application 456 can provide for video from different storage sources. Unlike Live TV application 452, video on demand 456 provides for display of videos that are accessed from some memory source. The sources of the video on demand can be associated with users or with the Intelligent TV or some other type of service. For example, the video on demand 456 may be provided from an iTunes library stored in a cloud, from a local disc storage that contains stored video programs, or from some other source.

[0131] The media center application 460 can provide application for different types of media presentation. For example, the media center 460 can provide for displaying pictures or audio that is different from, but still accessible by the user and different from live TV or video on demand. The media center 460 allows for the access of different sources to obtain the media in the display of such media on the Intelligent TV 100.

[0132] The application center 464 allows for the provision, storage and use of applications. An application can be a game, a productivity application, or some other application generally associated with computer systems or other devices, but may be operated within the Intelligent TV. An application center 464 may obtain these applications from different sources, store them locally and then execute those types of applications for the user on the Intelligent TV 100.

[0133] User interface application 468 provides for the specific user interfaces associated with the Intelligent TV 100. These user interfaces can include the silos and panels that are described in Fig. 5. An embodiment of the user interface software 500 is shown in Fig. 5. Here the application framework 412 contains one or more code components which help control the user interface events while one or more applications in the applications layer 416 affects the user interface use for the Intelligent TV 100. The application framework 412 can include a silo transition controller 504 and/or an input event dispatcher 508. There may be more or fewer code components in the application framework 412 than those shown in Fig. 5. The silo transition controller 504 contains the code and language that manages the transitions between one or more silos. A silo can be a vertical user interface feature on the Intelligent TV that contains information for user. The transition controller 504 can manage the changes between two silos when an event occurs in the user interface. The input event dispatcher 508 can receive user interface events that may be received from the operating system and provided to the input even dispatcher 508. These events can include selections of buttons on a remote control or on the TV or other types of user interface inputs. The input even dispatcher may then send these events to a silo manager 532 or panel manager 536 depending on the type of the event. The silo transition controller 504 can interface with the silo manager 532 to affect changes in the silos.

[0134] The application framework 416 can include a user interface application 468 and/or a silo application 512. The application framework 416 can include more or fewer user interface applications as necessary to control the user interface of the Intelligent TV 100 than those shown in Fig. 5. The user interface application can include a silo manager 532, a panel manager 536, and one or more types of panels 516 through 528. The silo manager 532 manages the display and/or features of silos. The silo manager 532 can receive or send information from the silo transition controller 504 or the input event dispatcher 508 to change the silos displayed and/or to determine types of input received in the silos.

[0135] A panel manager 536 is operable to display panels in the user interface to manage transitions between those panels or to affect user interface inputs received in the panel. The panel manager 536 may thus be in communication with different user interface panels such as a global panel 516, a volume panel 520, a settings panel 524, and/or a notification panel 528. The panel manager 536 can display these types of panels

depending on the inputs received from the input event dispatcher 508. The global panel 516 may include information that is associated with the home screen or top level hierarchal information for the user. A volume panel 520 may display information about an audio volume control or other settings for volume. A settings panel 524 can include information displayed about the settings of the audio or video, or other settable characteristics of the Intelligent TV 100. A notification panel 528 can provide information about notifications to a user. These notifications can be associated with information, such as, video on demand displays, favorites, currently provided programs, or other information. Notifications can be associated with the media or with some type of setting, or operation or the Intelligent TV 100. The panel manager 536 may be in communication with the panel controller 552 of the silo application 512.

[0136] The panel controller 552 may operate to control portions of the panels of the types described previously. Thus, the panel controller 552 may be in communication with a top panel application 540, an application panel 544, and/or bottom panel 548. These types of panels may be differently displayed in the user interface of the Intelligent TV 100. The panel control thus may be based on the configuration of the system or the type of display being used currently, put the types of panels 516-528 into a certain display orientation governed by the top panel application 540, application panel 544, or bottom panel application 548.

[0137] An embodiment of the data service 432 and the operation of the data management is shown in Fig. 6. The data management 600 can include one or more code components that are associated with different types of data. For example, there may be code components within the data service 432 that execute and are associated with video on demand, the electronic program guide, or media data. There may be more or fewer types of data service 432 components than those shown in Fig. 6. Each of the different types of data may include a data model 604-612. The data models govern what information is to be stored and how that information will be stored by the data service. Thus, the data model can govern regardless of where the data comes from, how the data will be received or managed within the Intelligent TV system. Thus, the data model 604, 608, and/or 612, can provide a translation ability or affect the ability to translate data from one form to another to be used by the Intelligent TV 100.

[0138] The different types of data services (video on demand, electronic programming guide, media) each have a data subservice 620, 624, and/or 628 that is in

communication with one or more internal and/or external content providers 616. The data subservices 620, 624, and 628 that communicate with the content providers 616 to obtain data that may then be stored in databases 632, 636, and 640. The subservices 620, 624, and 628 may communicate with and initiate or enable one or more source plug-ins 644, 648, and 652 to communicate with the content provider. For each content provider 616, there may be a different source plug-in 644, 648, and 652. Thus, if there is more than one source of content for the data, each of the data subservice 620, 624, and 628 may determine and then enable or initiate a different source plug-in 644, 648, and/or 652. The content providers 616 may also provide information to a resource arbitrator 656 and/or thumbnail cache manager 660. The resource arbitrator 656 may operate to communicate with resources 664 that are external to the data service 432. Thus, the resource arbitrator 656 may communicate with cloud based storage, network based storage, or other types of external storage in the resources 664. This information may then be provided through the content provider module 616 to the data subservices 620, 624, 628. Likewise, a thumbnail cache manager may obtain thumbnail information from one of the data subservices 620, 624, 628 and store that information in the thumbnail database 666. Further the thumbnail cache manager 660 may extract or retrieve that information from the thumbnails database 666 to provide to one of the data subservices 620, 624, 628.

[0139] An exemplary content aggregation architecture 1300 is shown in Fig. 13. The architecture can include a user interface and content aggregation layers 1304 and 1308. The user interface layer 1304 may include a TV application 1312, media player 1316, and application(s) 1320. The TV application 1312 enables the viewer to view channels received via an appropriate transmission medium, such as cable, satellite, and/or the Internet. The media player 1316 views other types of media received via an appropriate transmission medium, such as the Internet. The application(s) 1320 include other TV-related (pre-installed) applications, such as content viewing, content searching, device viewing, and setup algorithms, and coordinates with the media player 1316 to provide information to the viewer.

[0140] The content source layer 1308 includes, as data services, a content source service 1328, a content aggregation service 1332 and a content presentation service 1336. The content source service 1328 can manage content source investigators, including local and/or network file system(s), digital network device manager (which discovers handheld and non-handheld devices (e.g., digital media servers, players, renderers, controllers,

printers, uploaders, downloaders, network connectivity functions, and interoperability units) by known techniques, such as a multicast universal plug and play or UPnP discovery techniques, and, for each discovered device, retrieves, parses, and encodes device descriptors, notifies the content source service of the newly discovered device, and provides information, such as an index, on previously discovered devices), Internet Protocol Television or IPTV, digital television or DTV (including high definition and enhanced TV), third party services (such as those referenced above), and applications (such as Android applications).

[0141] Content source investigators can track content sources and are typically configured as binaries. The content source service 1328 starts content source investigators and maintains open and persistent channels for communications. The communications include query or command and response pairs. The content aggregation service 1332 can manage content metadata fetchers, such as for video, audio, and/or picture metadata. The content presentation service 1336 may provide interfaces to the content index, such as an Android application interface and digital device interfaces.

[0142] The content source service 1328 can send and receive communications 1344 to and from the content aggregation service 1332. The communications can include notifications regarding new and removed digital devices and/or content and search queries and results. The content aggregation service 1332 can send and receives communications 1348 to and from the content presentation service 1336 including device and/or content lookup notifications, content-of-interest advisories and notifications, and search queries and results.

[0143] When a search is performed, particularly when the user is searching or browsing content, a user request may be received from the user interface layer 1300, by the content presentation service 1336, which responsively opens a socket and sends the request to the content aggregation service 1332. The content aggregation service 1332 first returns results from the local database 1340. The local database 1340 includes an index or data model and indexed metadata. The content source service 1328 further issues search and browse requests for all content source investigators and other data management systems. The results are forwarded to the content aggregation service 1332, which updates the database 1340 to reflect the further search results and provides the original content aggregation database search results and the data updates, reflecting the additional content source service search results, over the previously opened socket to the content presentation

service 1336. The content presentation service 1336 then provides the results to one or more components in the user interface layer 1300 for presentation to the viewer. Then the search session is over, the user interface layer 1300 disconnects the socket. As shown, media can be provided directly by the content aggregation service 1332 to the media player 1316 for presentation to the user.

[0144] Remote Control:

[0145] A handheld remote control can be provided to enable user interaction with the Intelligent TV 100. An exemplary handheld remote control is shown in Figs.7-9. The remote control 700 can include one or more of, but is not limited to, top, side and bottom housings 704, 708, and 712, an (on/off) power button 716, an input source button 720 (to select input source such as Live TV, video on demand, media center, application center, high definition multimedia interface or HDMI, component or COMP, audio/Video or A/V, digital or analog television or DTV/ATV, and video graphics array (VGA)), a (volume) mute button 724, a Live TV button 728 (to activate or select the Live TV silo), a video on demand (VOD) button 732 (to activate or select the video on demand silo), a media center button 736 (to activate or select the media center application or silo, which access various types of media such as music, TV programming, videos, and the like), an application center button 740 (to activate or select the application center application or silo), a global panel button 744, an application panel button 748, a back button 752 (to select a prior user operation or Intelligent TV state and/or navigate up a hierarchy of any displayed image or object(s) (in which case the back button 752 does not navigate within application panels or across application silos), a play button 756 (to play or pause media), a D-pad 760 (which includes north, east, west, and south directional arrows to navigate among displayed images and/or move between levels of an application's or object's hierarchy such as application view navigation, panel navigation, and collection navigation), an OK (or select) button 764 (to select a highlighted displayed image (such as displayed speed control, rewind, forward, play, and pause objects and/or objects on menu bar or in a menu box) and/or navigate down a hierarchy of any displayed image or object(s)), a rocker-type volume-up and volume-down button 768 (to adjust the volume), a menu/guide button 772 (to select for display a menu or guide of programming), a 0-9 (number) button 776 (to display a number pad on the TV screen), a settings button 780 (which launches an application to access current and change TV settings (such as channel settings and settings used to adjust picture and sound effects (e.g., image mode (e.g., standard, playground,

game, cinema, concert, and studio), brightness, contrast, saturation, color temperature, energy savings, 3D noise reduction, hue, sharpness, zoom mode (e.g., full screen, standard, smart zoom, and dot-to-dot), picture position, 3D mode, for picture, and sound retrieval system or SRS TruSurround, sound mode (e.g., standard, live 1, live 2, theatre, music, speech, user equalizer mode, Left/Right speaker balance, auto volume control, Sony/Philips Interconnect Format or S/PDIF (off, auto, pulse code modulation or PCM) for sound) and system settings (such as system (e.g., selected language for graphical user interface, user geographical and/or geopolitical location information, input method, area settings, and sleep time), network (e.g., WiFi, WiFi hotspot, WiFi direct, Point-to-Point Protocol over Ethernet or PPPoE (asymmetric digital subscriber line or ADSL), Ethernet) settings (e.g., enabled and disabled and selected and non-selected) and information (e.g., network information (e.g., electronic address such as Internet Protocol or IP address, subnet mask, gateway, domain name server information, domain name, Media Access Control or MAC address, service set identification or SSID, security information, and password information) and inline status), manage applications (e.g., currently installed applications, currently executing applications, and internal and external computer readable medium usage), and view user information regarding the Intelligent TV 100)), a rocker-type channel-up and channel-down button 784 (to increment or decrement the selected channel), and first, second, third and fourth hotkeys 788, 792, 794, and 796, and/or a moveable joystick 900 on a bottom of the remote control 700. The first, second, third, and fourth hotkeys are generally assigned different colors, which color indexing is depicted as displayed images on a selected panel to show the currently assigned function, if any, for each hotkey. As can be seen, the actuator layout can provide a highly efficient, satisfactory, and easily usable experience to the end user.

[0146] Unlike the functional associations and functions of many of the actuators, those of some of the actuators are not readily apparent. A number of examples will now be discussed by way of illustration.

[0147] The media center button 736, when selected, can provide information regarding music, videos, photographs, collections or groupings of music, videos, and/or photographs, and internal and external computational devices (such as personal computers, laptops, tablet computers, wireless phones, removable computer readable media, and the like), which can be grouped in a selected manner (such as favorites, most recently viewed, most watched or viewed, and most recently added). The information can includes

previews (which can include selected portions of the media content, duration, file size, date created, date last watched, times watched or viewed, and audio and/or video format information).

[0148] The application center button 740, when selected, may provide information regarding pre-installed and downloaded applications. Unlike downloaded applications, pre-installed applications cannot be removed by the user or manually updated. Exemplary pre-installed applications include web browser, settings control, and content search algorithms. By way of illustration, the application center button 740 can provide a scrollable graphical grid of icons (each icon being associated with an application) currently available in the application center.

[0149] The global panel button 744, when selected, can provide the user, via one or more panels or windows, with access to one or more of, but not limited to, silos, notifications, a web browser, system settings, and/or information associated therewith. For example, the global panel button 744 can enable the user to determine what external devices are currently connected to and/or disconnected from the Intelligent TV 100, determine what inputs (e.g., HDMI ports) are currently available for connecting to external devices, determine a connection and/or operational status of a selected external device and/or network (*e.g.,* WiFi connected, Ethernet connected, and offline), assign a custom (or user selected) name to each input source, determine what content is currently being offered on Live TV, on demand, the media center, and/or the application center, access vendor messages and notifications to the user (e.g., system and/or application updates are available), activate the Internet browser, and/or access shortcuts on a displayed shortcut bar to more frequently used and desired applications. Common shortcuts are Internet browser (e.g., Internet search engine), system settings, and notifications. The common types of panels are for information (which is typically information related to a currently displayed image and/or content (e.g., title, date/time, audio/visual indicator, rating, and genre), browse requests, and/or search requests (such as search term field)). Each of the panel types may include a panel navigation bar, detailed information or relevant content to the panel function, operation and/or purpose, and a hotkey bar (defining currently enabled functional associations of hotkeys).

[0150] The application panel button 748, when selected, can display an application window or panel. One application panel may be an information panel regarding a selected (pre-installed or previously downloaded) application icon. The information panel can one

or more of identify the selected application, provide a description of the functionality (including application developer and/or vendor, version, release, and/or last update date and a category or type of application based on the application's functionality) and user ratings and/or degree of other user downloading of the application (*e.g.,* a star rating assigned based on one or more of the foregoing inputs), provide the option to launch, remove, update, and add to favorites the identified application, and provide a listing of selectable links of other (not yet downloaded) recommended applications that provide similar functionality to the identified application. The latter listing can, in turn, provide a description of the functionality (including application developer and/or vendor, version, release, and/or last update date and a category or type of application based on the application's functionality) and user ratings and/or degree of other user downloading of the application (*e.g.,* a star rating assigned based on one or more of the foregoing inputs).

[0151] The functions of the first, second, third, and fourth hotkeys 788, 792, 794, and 796 can change depending on system state, context, and/or, within a selected screen and/or panel, based on a content or currently selected portion of (or relative cursor position on) the screen. Commonly, a currently assigned function of any of the first, second, third, and fourth hotkeys 788, 792, 794, and 796 depends on a currently accessed silo and/or panel (with which the user is currently interacting within the silo). In other words, a first function of one of the first, second, third, and fourth hotkeys 788, 792, 794, and 796 is activated by the respective hotkey in a first system state while a different second function is activated by the respective hotkey in a different second system state. In another example, a third function of one of the first, second, third, and fourth hotkeys 788, 792, 794, and 796 is activated by the respective hotkey when a user focus (or currently selected cursor position or screen portion) is at a first screen position while a different fourth function is activated by the respective hotkey when a user focus (or currently selected cursor position or screen portion) is at a different second screen position. The first screen position can, for instance, be within an icon while the second screen position is outside of the icon. Hotkey functionality that could be enabled when in the first screen position may be "configure" and "remove" and disabled is "add", and, when in the second position hotkey functionality enabled can be "add" and disabled is "configure" and "remove". Generally, the states of hotkeys can include normal (for enabled actions or functions), disabled (when an action or function is temporarily disabled), pressed (when selected by a user to command an action or function to be performed), and unavailable (when no

association between the hotkey and an action or function is currently available). While examples of hotkey functions are discussed below, it is to be understood that these are not intended to be exhaustive or limiting examples.

[0152] The first hotkey 788, when selected in a first system state, can enable the user to assign, change, or edit a name of an input source. It is typically enabled only when the input source of HDMI, Comp/YPbPr (e.g., component video cables), video output, and VGA is in focus. When selected in a second system state, the first hotkey 788 can return the user to a top of a scrollable collection of objects, such as application icons.

[0153] The second hotkey 792 may show all or less. In other words, the hotkey 792 can allow the user to show all inputs, including the unconnected/undetected ones and to hide the unconnected/undetected inputs, e.g., to expand and collapse the silo/input list. Each input source can have one of two states, namely connected/detected and unconnected/undetected. Some input sources, including Live TV, video on demand, media center, and application center are always connected/detected.

[0154] The moveable joystick 900 on the bottom of the remote control 700, when manipulated, can cause a displayed image on the Intelligent TV 100 screen to be displaced a proportional amount. In other words, the displayed image is displaced substantially simultaneously with displacement of the joystick 900 within the joystick aperture 904 in the bottom housing 712 of the remote control. As shown in Figs. 9B-C, the joystick 900 moves or slides between forward and reverse positions. Releasing the joystick 900 causes the joystick 900 to return to the center position of Fig. 9A, and the window to move or slide upwardly (when the joystick is released from the joystick position of Fig. 9B) or downwardly (when the joystick is released from the joystick position of Fig. 9C) until it disappears from view as shown in Fig. 11A. The effect on the screen of the Intelligent TV 100 is shown in Figs. 11A-C. In Fig. 11A, video content, such as TV programming, a video, movie, and the like, is being displayed by front surface of the screen 212. In Fig, 11B, the joystick 900 is moved or slid to the upper position of Fig. 9B, and a drop down window or panel 1100 moves or slides down (at the substantially the same rate of joystick 900 movement) at the top of the screen 212. In Fig, 11C, the joystick 900 is moved or slid to the lower position of Fig. 9C, and a drop up window or panel 1100 moves or slides up (at the substantially the same rate of joystick 900 movement) at the bottom of the screen 212. The window 1100 partially covers the video content appearing on the remainder of

the screen 212 and/or causes a portion of the screen 212 displaying video content to move and/or compress up or down the height of the window 1100.

[0155] The window 100 can include one or more of information (which is typically information related to a currently displayed image and/or content (e.g., panel navigation bar, detailed information (e.g., title, date/time, audio/visual indicator, rating, and genre), and hotkey bar (defining current functional associations of hotkeys)), browse requests, and/or search requests. Commonly, the window 1100 includes suitable information about the content (such as name, duration, and/or remaining viewing duration of content), settings information, TV or system control information, application (activation) icons (such as for pre-installed and/or downloaded applications such as application center, media center and WEB browser), and/or information about input source(s), When the joystick 900 is in either the forward or reverse position, the user can select an actuator on the front of the remote control, such as the OK button 764, and be taken, by displayed images on the screen 212, to another location in the user interface, such as a desktop. This can be done in an unobtrusive manner and without affecting the flow of content that is pushed up or down. The joystick 900 could be moved, additionally or differently, from side-to-side to cause the window to appear at the left or right edge of the screen 212.

[0156] An alternative actuator configuration is shown in Fig. 10. The actuators are substantially the same as those of Figs. 7-9 except that the social network button 1000, when selected, can automatically select content and publish, via a social network service or other social media, the content to a social network or online community. User or viewer comments and/or other messages can be included in the outbound message. For example, all or one or frames or portions of media content (such as a video, music, a photograph, a picture, or text) can be provided automatically to a predetermined or selected group of people via Linked-In™, Myspace™, Twitter™, YouTube™, DailyMotion™, Facebook™, or Second Life™. The user, upon activating the button 1000 could, in response, select a social forum or media upon which the selected content (which is the content displayed to the user when the social network button 1000 is activated) is to be posted and/or a predetermined group within that social media to which the content is to be posted. Alternatively, these selections could be preconfigured or preselected by the user.

[0157] The social network button can also be used to "turn up" or "turn down" a social volume visualization. The Intelligent TV 100 can create dynamically a visualization of aggregated connections (and inbound and/or outbound messages) from a variety of social networks. The aggregation (and inbound and outbound messages) can be depicted graphically on the screen as a volume of connections to influence the viewer user. With a social volume visualization, selected contents of each linked social network profile of a social contact (and inbound and/or outbound messages from or to the linked social network contact and/or current activity of the social contact (such as watching the same programming or content the viewer is currently watching) can be presented in a separate tile (or visually displayed object). The size of the tile can be related to any number of criteria, including a relationship of the linked social contact (e.g., a relative degree of importance or type of relationship can determine the relative size of the tile, a degree of influence of the linked social contact to the current viewer, a geographic proximity of the linked social contact to the current viewer, a degree to which the currently provided media content is of interest to both the viewer and linked social contact (e.g., both parties enjoy war movies, murder mysteries, musicals, comedies, and the like), an assigned ranking of the linked viewer by the viewer, a type of social network type linking the viewer with the linked social contact, a current activity of the social network contact (e.g., currently watching the same content that the viewer is currently watching), a current online or offline status of the linked social contact, and a social network grouping type or category to which both the viewer and linked social contact belong (*e.g.,* work contact, best friend, family member, *etc.*).

[0158] The viewer can designate a portion of the screen to depict the social network aggregation. By turning the social volume up (+) or down (-), the viewer can increase the size and/or numbers of linked contact tiles provided to the viewer. In other words, by increasing the social volume the viewer can view, access, and/or push more social content from those of his or her social networks associated with him or her in a memory of the Intelligent TV. By decreasing the social volume, the viewer can view, access, and/or push less social content from his or her associated social networks. By selecting the mute button 724, the viewer can stop or pause any interactivity with his or her associated social networks (*e.g.,* inbound or outbound messages). Social volume and/or mute can be separated into two (or more) volume settings for outbound and inbound social network activity. By way of illustration, a first volume setting, control,

and/or button can control the volume for outbound social network activity (e.g., outbound social messages) while a second (different) volume setting, control, and/or button can control the volume for inbound social network activity (e.g., inbound social messages). By way of further illustration, a first mute setting, control, and/or button can stop or pause outbound social network activity (e.g., outbound social messages) while a second (different) mute setting, control, and/or button can stop or pause inbound social network activity (e.g., inbound social messages).

[0159] A functional block diagram of the remote control is shown in Fig. 12. The remote control 700 includes a controller 1208 to control and supervise remote control operations, optional wireless (RF) transceiver 1224 and antenna 1244 to send and receive wireless signals to and from the Intelligent TV 100 and other external components, optional infrared emitter 1228 to emit infrared signals to the Intelligent TV 100, optional light emitting diode or LED driver 1232 to control LED operation to provide video-enabled feedback to the user, actuators 1220 (including the various buttons and other actuators discussed above in connection with Figs. 7 and 10), and joystick 900, all interconnected via a bus 1248. An on board power source 1200 and power management module 1204 provide power to each of these components via power circuitry 1240. The infrared emitter 1228 and receiver (not shown) on the Intelligent TV system 100 can be used to determine a displayed object illuminated by the infrared signal and therefore adjust the displayed image, for example to indicate a focus of the user (e.g., illuminate a displayed object or show cursor position relative to displayed objects on the screen) and to determine and activate a desired command of the user. This can be done by tracking a position of the remote control in relation to infrared tracking reference points (e.g., a sensor bar or infrared LED's) positioned on or adjacent to the screen of the Intelligent TV 100. Motion tracking can further be augmented using position information received from a multi-axis gyroscope and/or accelerometer on board the remote control (not shown).

[0160] Visual representations of different badges are shown in Figs. 14A-14C. Badges may be a visual representation of information associated with content. The badges may be displayed in various user interfaces or panels. In Fig. 14A, two different representations of a favorites badge 1400a and 1400b are shown. The favorites badge 1400 indicates to a user that the content associated with the badge 1400 has been designated as a favorite by a user. A favorite may be designated by selecting an item of content or a source of content and selecting a user interface device or a remote control

button to which to assign the favorite designation. For example, a user may indicate that a television program, television channel, a movie, a picture, a video, or other multimedia is a favorite. When content associated with the favorite designation is playing or going to be played, the badge 1400 may be displayed with the content information to indicate that the content has been designation as a favorite.

[0161] In Fig. 14B, a "fresh" badge 1404 is shown. A fresh badge 1404 indicates to the user that content is new to the user or has not been previously presented. For example, a new video in the VOD silo may be presented with a fresh badge 1404 to indicate that the video is new. The fresh badge 1404 may be displayed with content designated as a favorite or with any content that is new. The fresh badge 1404 can also indicate a new episode of a television program, a newly uploaded or available application, a newly uploaded picture or video, etc.

[0162] An in-progress badge 1408 is shown in Fig. 14C. The in-progress badge 1408 indicates to the user that an item of content has been watched previously and indicates that amount of the content that was previously watched. For example, with in-progress badge 1408a, the user can determine that a quarter of the content associated with the in-progress badge 1408a has been watched. An amount of the circumference, for example, a quarter of the circumference, of the circle represent by section 1412a may be colored a different hue, for example, colored blue, to indicate that a quarter of the content has been viewed. The uncolored portion 1416 indicates the amount of the content left to be viewed. Thus, in-progress badge 1408b indicates that half of the content has been viewed because sections 1412b and 1416b represent half the content. Further, in-progress badge 1408c indicates that three quarters of the content has been viewed because section 1412c is three quarters of the circumference and section 1416c is one quarter of the circumference. Other similar representations may be made with other shapes. The in-progress badge 1408 can be provided with a display of content information to show that some of the content has been viewed. Further, any portion of viewed content may be indicated, *e.g.,* 10%, 37%, 7 eighths, etc., by changing the amount of the circumference of the in-progress badge 1408 that is colored.

[0163] An embodiment of a television display 1500 is shown in Fig. 15. Here, the user may have navigated to the content using a channel changing function of a remote control or some other user interface interaction. The television display 1500 may include a banner 1504 displaying information associated with the content being displayed. The

information can include a thumbnail 1508 associated with the content. With the thumbnail 1508, or with other information in the display 1500, a badge may be displayed. For example, a favorites badge 1400b is displayed with the thumbnail 1508. This favorites badge 1400b can indicate that the television program being displayed has been designated as a favorite. Further, a fresh badge 1404 can indicate that the program is new or not previously viewed by the user.

[0164] The banner 1504 may also include a channel number or channel designation (*e.g.,* a channel name). Badges may also be associated with a channel. For example, a favorites badge 1400a is shown as being associated with the channel 1512. Thus, for the situation shown in Fig. 15, both the television program and the television channel have been designated as favorites. For a television program, any episode displayed on any channel can be shown as a favorite regardless of whether the channel is designated as a favorite.

[0165] An embodiment of an electronic program guide (EPG) 1600 is shown in Fig. 16. Here, a favorites badge 1400 may be shown with a program 1612 or with a channel 1604. Likewise, a fresh badge 1404 may be shown with a program 1608. Thus, the badges 1400-1408 may be presented in other user interfaces including an EPG. Any representation of information about content can contain a badge, which ensures a user can quickly and easily determine the value of the content to the user.

[0166] When playing a video or other content that is not displayed in real time, an in-progress indication 1708 may be used to shown the amount of the content that has been viewed. Thus, if a user is watching the movie "Sherlock Holmes," as shown in Fig. 17A, the in-progress indication 1708 can indicate that the user has watched one quarter of the movie. The in-progress indication 1708 may be presented in a controls panel 1704 where the in-progress indication 1708 is presented with or associated with playback controls. The information used for the in-progress indication 1708 may also be used to provide an in-progress badge 1408. Further, the in-progress indication 1708 may operate the same as or similarly to the in-progress badge 1408, as discussed above.

[0167] For example, in Fig. 17B, a menu for a VOD silo is provided. The menu 1712 can show information about videos that are available to be displayed. The information can include thumbnails 1716, 1720. The thumbnails 1716, 1720 can also be associated with other information such as the title of the video, the play time for the video, the rating for the video, etc. Further, the information can also include one or more badges.

For example, the information for the movie "Sherlock" can include a favorites badge 1400 and an in-progress badge 1408. The in-progress badge 1408 shows that one quarter of the video has been viewed, which is similar to the in-progress indication 1708 shown in Fig. 17A. Another video, "Fire," can have a freshness badge 1404 that indicates the video is new or has not been viewed by the user. Thus, the badges can be displayed in other user interface associated with other silos or other content.

[0168] An embodiment of a method 1800 for associating a badge with content is shown in Fig. 18. Generally, the method 1800 begins with a start operation 1804 and terminates with an end operation 1816. While a general order for the steps of the method 1800 are shown in Fig. 18, the method 1800 can include more or fewer steps or the order of the steps may be arranged differently than the method 1800 shown in Fig. 18. The method 1800 can be a set of computer-executable instructions executed by a computer system or processor, encoded or stored on a computer readable medium, or embodied as circuits in an Application Specific Integrated Circuit (ASIC) or a Field Programmable Gate Array (FPGA) that executes the method. Hereinafter, the method 1800 shall be explained with reference to the systems, components, modules, data structures, user interfaces, etc. described in conjunction with Figs. 1-17B.

[0169] A user may place focus on an item of content or a content source (*e.g.,* a channel or content provider, for example, CBS, CNN, Disney Channel, etc.) by moving the focus with a directional pad 760. The user may then select the item of content or a content source by depressing the "OK" button 764. By selecting another button on the remote control 700, such as button 748, the user may then change setting for the item of content or a content source. For example, the user can designate item of content or a content source as a favorite. The input event dispatcher 508 may receive the remote control signals associated with the above inputs, in step 1808. Information associated with the inputs may be sent to the user interface application 468.

[0170] In another example, the user may be viewing a video or other media. At some point during the playback of the video or other media, the user may pause the video or other media by selecting a pause button on the remote control 700 or by using the D-pad 760 to select a pause function displayed on the Intelligent TV 100. The input event dispatcher 508 may receive the remote control signals associated with the above inputs, in step 1808. Information associated with the inputs may be sent to the user interface application 468 or the application 452-464 conducting the playback.

[0171] Thereinafter, the application 452-468 can save information regarding the user input, whether the input is pausing the playback or designating an item of content or a content source as a favorite. The user interface application 468 can then associate an appropriate badge 1400-1408 with the item of content or the content source. The user interface application 468 may store the association in a data storage 632, 636, or 640 associated with the media or information about the media. For example, if the favorite designation is for a Live TV program or content provider, the user interface application 468 may store the badge association in the EPG database 636 to ensure that future presentations of the a Live TV program or content provider is embellished with the badge 1400-1408. Similarly, if the favorite designation is for a video, the user interface application 468 may store the badge association in the VOD database 632 to ensure that future presentations of the video is embellished with the badge 1400-1408.

[0172] An embodiment of a method 1900 for presenting a badge with content information is shown in Fig. 19. Generally, the method 1900 begins with a start operation 1904 and terminates with an end operation 1920. While a general order for the steps of the method 1900 are shown in Fig. 19, the method 1900 can include more or fewer steps or the order of the steps may be arranged differently than the method 1900 shown in Fig. 19. The method 1900 can be a set of computer-executable instructions executed by a computer system or processor, encoded or stored on a computer readable medium, or embodied as circuits in an Application Specific Integrated Circuit (ASIC) or a Field Programmable Gate Array (FPGA) that executes the method. Hereinafter, the method 1900 shall be explained with reference to the systems, components, modules, data structures, user interfaces, etc. described in conjunction with Figs. 1-18.

[0173] A user may make a selection to obtain information about content. For example, the user may select an EPG button 776, may change the channel with rocker button 784, may select a user interface with the D-pad 760, may change silos with buttons 728-740, or make another selection. The input event dispatcher 508 may receive the remote control signals associated with the above inputs, in step 1908. Information associated with the inputs may be sent to the user interface application 468.

[0174] The user interface application 468 may then present information about the content selected by the user, in step 1912. For example, an EPG 1600 may be displayed, a channel change banner 1504 may be displayed, or a VOD menu 1712 may be displayed. In another example, the user may pause a video, which causes the user interface

application 468 to display panel 1704. Other inputs and corresponding user interface presentations are possible. Regardless, the user interface application 468 presents information about an item of content or a content source in a display 304.

[0175] The user interface application 468 may also retrieve information about badges that are to be presented with the information about the content. The user interface application 468 can access databases 632-640 to determine if any badges are associated with an item of content or a content source that is to be presented with the information. If there is a badge associated with the item of content or the content source, the user interface application 468 can retrieve the information and the associated badges. The badges 1400-1408 may then be presented with the information about the item of content or the content source, in step 1916.

[0176] For example, an EPG 1600 may be displayed with badges 1400, 1404, a channel change banner 1504 may be displayed with badges 1400, 1404, or a VOD menu 1712 may be displayed with badges 1400, 1404, 1408. In another example, the user may pause a video, which causes the user interface application 468 to display panel 1704 with indicator 1708. Other badge presentations are possible. Regardless, the user interface application 468 presents information about an item of content or a content source and the associated badges in a display 304.

[0177] The exemplary systems and methods of this disclosure have been described in relation to entertainment system. However, to avoid unnecessarily obscuring the present disclosure, the preceding description omits a number of known structures and devices. This omission is not to be construed as a limitation of the scopes of the claims. Specific details are set forth to provide an understanding of the present disclosure. It should however be appreciated that the present disclosure may be practiced in a variety of ways beyond the specific detail set forth herein.

[0178] Furthermore, while the exemplary aspects, embodiments, and/or configurations illustrated herein show the various components of the system collocated, certain components of the system can be located remotely, at distant portions of a distributed network, such as a LAN and/or the Internet, or within a dedicated system. Thus, it should be appreciated, that the components of the system can be combined in to one or more devices, such as a set-top box or television, or collocated on a particular node of a distributed network, such as an analog and/or digital telecommunications network, a packet-switch network, or a circuit-switched network. It will be appreciated from the

preceding description, and for reasons of computational efficiency, that the components of the system can be arranged at any location within a distributed network of components without affecting the operation of the system. For example, the various components can be located in a switch such as a PBX and media server, gateway, in one or more communications devices, at one or more users' premises, or some combination thereof. Similarly, one or more functional portions of the system could be distributed between a telecommunications device(s) and an associated computing device.

[0179] Furthermore, it should be appreciated that the various links connecting the elements can be wired or wireless links, or any combination thereof, or any other known or later developed element(s) that is capable of supplying and/or communicating data to and from the connected elements. These wired or wireless links can also be secure links and may be capable of communicating encrypted information. Transmission media used as links, for example, can be any suitable carrier for electrical signals, including coaxial cables, copper wire and fiber optics, and may take the form of acoustic or light waves, such as those generated during radio-wave and infra-red data communications.

[0180] Also, while the flowcharts have been discussed and illustrated in relation to a particular sequence of events, it should be appreciated that changes, additions, and omissions to this sequence can occur without materially affecting the operation of the disclosed embodiments, configuration, and aspects.

[0181] A number of variations and modifications of the disclosure can be used. It would be possible to provide for some features of the disclosure without providing others.

[0182] In yet another embodiment, the systems and methods of this disclosure can be implemented in conjunction with a special purpose computer, a programmed microprocessor or microcontroller and peripheral integrated circuit element(s), an ASIC or other integrated circuit, a digital signal processor, a hard-wired electronic or logic circuit such as discrete element circuit, a programmable logic device or gate array such as PLD, PLA, FPGA, PAL, special purpose computer, any comparable means, or the like. In general, any device(s) or means capable of implementing the methodology illustrated herein can be used to implement the various aspects of this disclosure. Exemplary hardware that can be used for the disclosed embodiments, configurations and aspects includes computers, handheld devices, telephones (e.g., cellular, Internet enabled, digital, analog, hybrids, and others), and other hardware known in the art. Some of these devices include processors (e.g., a single or multiple microprocessors), memory, nonvolatile

storage, input devices, and output devices. Furthermore, alternative software implementations including, but not limited to, distributed processing or component/object distributed processing, parallel processing, or virtual machine processing can also be constructed to implement the methods described herein.

[0183] In yet another embodiment, the disclosed methods may be readily implemented in conjunction with software using object or object-oriented software development environments that provide portable source code that can be used on a variety of computer or workstation platforms. Alternatively, the disclosed system may be implemented partially or fully in hardware using standard logic circuits or VLSI design. Whether software or hardware is used to implement the systems in accordance with this disclosure is dependent on the speed and/or efficiency requirements of the system, the particular function, and the particular software or hardware systems or microprocessor or microcomputer systems being utilized.

[0184] In yet another embodiment, the disclosed methods may be partially implemented in software that can be stored on a storage medium, executed on programmed general-purpose computer with the cooperation of a controller and memory, a special purpose computer, a microprocessor, or the like. In these instances, the systems and methods of this disclosure can be implemented as program embedded on personal computer such as an applet, JAVA® or CGI script, as a resource residing on a server or computer workstation, as a routine embedded in a dedicated measurement system, system component, or the like. The system can also be implemented by physically incorporating the system and/or method into a software and/or hardware system.

[0185] Although the present disclosure describes components and functions implemented in the aspects, embodiments, and/or configurations with reference to particular standards and protocols, the aspects, embodiments, and/or configurations are not limited to such standards and protocols. Other similar standards and protocols not mentioned herein are in existence and are considered to be included in the present disclosure. Moreover, the standards and protocols mentioned herein and other similar standards and protocols not mentioned herein are periodically superseded by faster or more effective equivalents having essentially the same functions. Such replacement standards and protocols having the same functions are considered equivalents included in the present disclosure.

[0186] The present disclosure, in various aspects, embodiments, and/or configurations, includes components, methods, processes, systems and/or apparatus substantially as depicted and described herein, including various aspects, embodiments, configurations embodiments, subcombinations, and/or subsets thereof. Those of skill in the art will understand how to make and use the disclosed aspects, embodiments, and/or configurations after understanding the present disclosure. The present disclosure, in various aspects, embodiments, and/or configurations, includes providing devices and processes in the absence of items not depicted and/or described herein or in various aspects, embodiments, and/or configurations hereof, including in the absence of such items as may have been used in previous devices or processes, e.g., for improving performance, achieving ease and\or reducing cost of implementation.

[0187] The foregoing discussion has been presented for purposes of illustration and description. The foregoing is not intended to limit the disclosure to the form or forms disclosed herein. In the foregoing Detailed Description for example, various features of the disclosure are grouped together in one or more aspects, embodiments, and/or configurations for the purpose of streamlining the disclosure. The features of the aspects, embodiments, and/or configurations of the disclosure may be combined in alternate aspects, embodiments, and/or configurations other than those discussed above. This method of disclosure is not to be interpreted as reflecting an intention that the claims require more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing disclosed aspect, embodiment, and/or configuration. Thus, the following claims are hereby incorporated into this Detailed Description, with each claim standing on its own as a separate preferred embodiment of the disclosure.

[0188] Moreover, though the description has included description of one or more aspects, embodiments, and/or configurations and certain variations and modifications, other variations, combinations, and modifications are within the scope of the disclosure, e.g., as may be within the skill and knowledge of those in the art, after understanding the present disclosure. It is intended to obtain rights which include alternative aspects, embodiments, and/or configurations to the extent permitted, including alternate, interchangeable and/or equivalent structures, functions, ranges or steps to those claimed, whether or not such alternate, interchangeable and/or equivalent structures, functions,

ranges or steps are disclosed herein, and without intending to publicly dedicate any patentable subject matter.

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What is claimed is:

1. A method for associating badges with an item of content or a content source, the method comprising:

receiving a selection associated with the item of content or the content source;

based on the selection, associating a badge with the item of content or the content source, wherein a badge is a user interface device having visual indicia that indicates the item of content or the content source includes a feature, a state, or a designation.

2. The method as defined in claim 1, further comprising receiving a second selection for a user interface containing information about the item of content or the content source.

3. The method as defined in claim 2, further comprising, based on the second selection, presenting the information about the item of content or the content source

4. The method as defined in claim 3, further comprising, based on the second selection, presenting the badge, associated with the item of content or the content source, with the information the item of content or the content source.

5. The method as defined in claim 4, wherein the designation is a favorite designation.

6. The method as defined in claim 5, wherein the badge is a star or a banner.

7. The method as defined in claim 4, wherein the state is as new content.

8. The method as defined in claim 7, wherein the badge is a fresh badge.

9. The method as defined in claim 4, wherein the state is a paused playback.

10. The method as defined in claim 3, wherein the badge is an in-progress badge.

11. A tangible computer readable medium having instructions stored thereon, wherein when executed by a processor cause the processor to execute a method, the instructions comprising:

instructions to receive a selection associated with the item of content or the content source;

based on the selection, instructions to associate a badge with the item of content or the content source, wherein a badge is a user interface device having visual indicia that indicates the item of content or the content source includes a feature, a state, or a designation.

12. The tangible computer readable medium as defined in claim 11, further comprising:

instructions to receive a second selection for a user interface containing information about the item of content or the content source;

based on the second selection, instructions to present the information about the item of content or the content source; and

based on the second selection, instructions to present the badge, associated with the item of content or the content source, with the information the item of content or the content source.

13. The tangible computer readable medium as defined in claim 12, wherein:

if the designation is a favorite designation, the badge is a star or a banner;

if the state is as new content, the badge is a fresh badge; and

if the state is a paused playback, the badge is an in-progress badge.

14. The tangible computer readable medium as defined in claim 13, wherein the badge is presented in one of a panel, an electronic programming guide, or a menu.

15. The tangible computer readable medium as defined in claim 12, wherein the second selection is a paused playback and the badge is an in-progress indicator presented in a panel with a paused content display.

16. An intelligent television comprising:

a display;

a memory;

a processor in communication with the memory and the display, the processor operable to:

receive a selection associated with the item of content or the content source;

based on the selection, associate a badge with the item of content or the content source, wherein a badge is a user interface device having visual indicia that indicates the item of content or the content source includes a feature, a state, or a designation.

17. The intelligent television as defined in claim 16, wherein the processor is further operable to:

receive a second selection for a user interface containing information about the item of content or the content source;

based on the second selection, present the information about the item of content or the content source; and

based on the second selection, present the badge, associated with the item of content or the content source, with the information the item of content or the content source.

18. The intelligent television as defined in claim 17, wherein:

if the designation is a favorite designation, the badge is a star or a banner;

if the state is as new content, the badge is a fresh badge; and

if the state is a paused playback, the badge is an in-progress badge.

19. The intelligent television as defined in claim 18, wherein the badge is presented in one of a panel, an electronic programming guide, or a menu.

20. The intelligent television as defined in claim 19, wherein the second selection is a paused playback and the badge is an in-progress indicator presented in a panel with a paused content display.

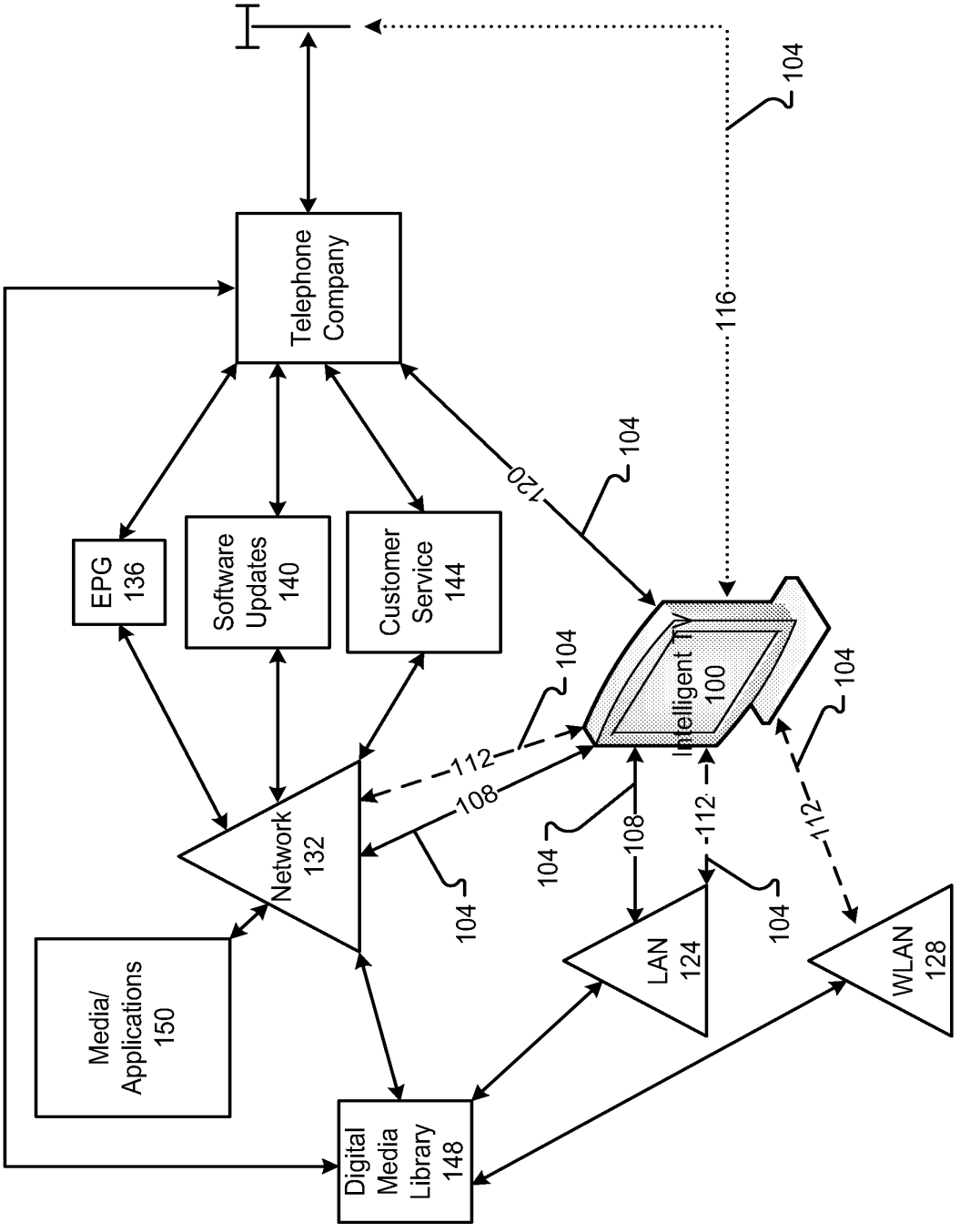

Telephone Company
104
116
120
104
EPG 136
Software Updates 140
Customer Service 144
Intelligent TV 100
104
104
112
108
Network 132
104
104
108
112
112
104
104
Media/ Applications 150
LAN 124
WLAN 128
Digital Media Library 148

Fig. 1A

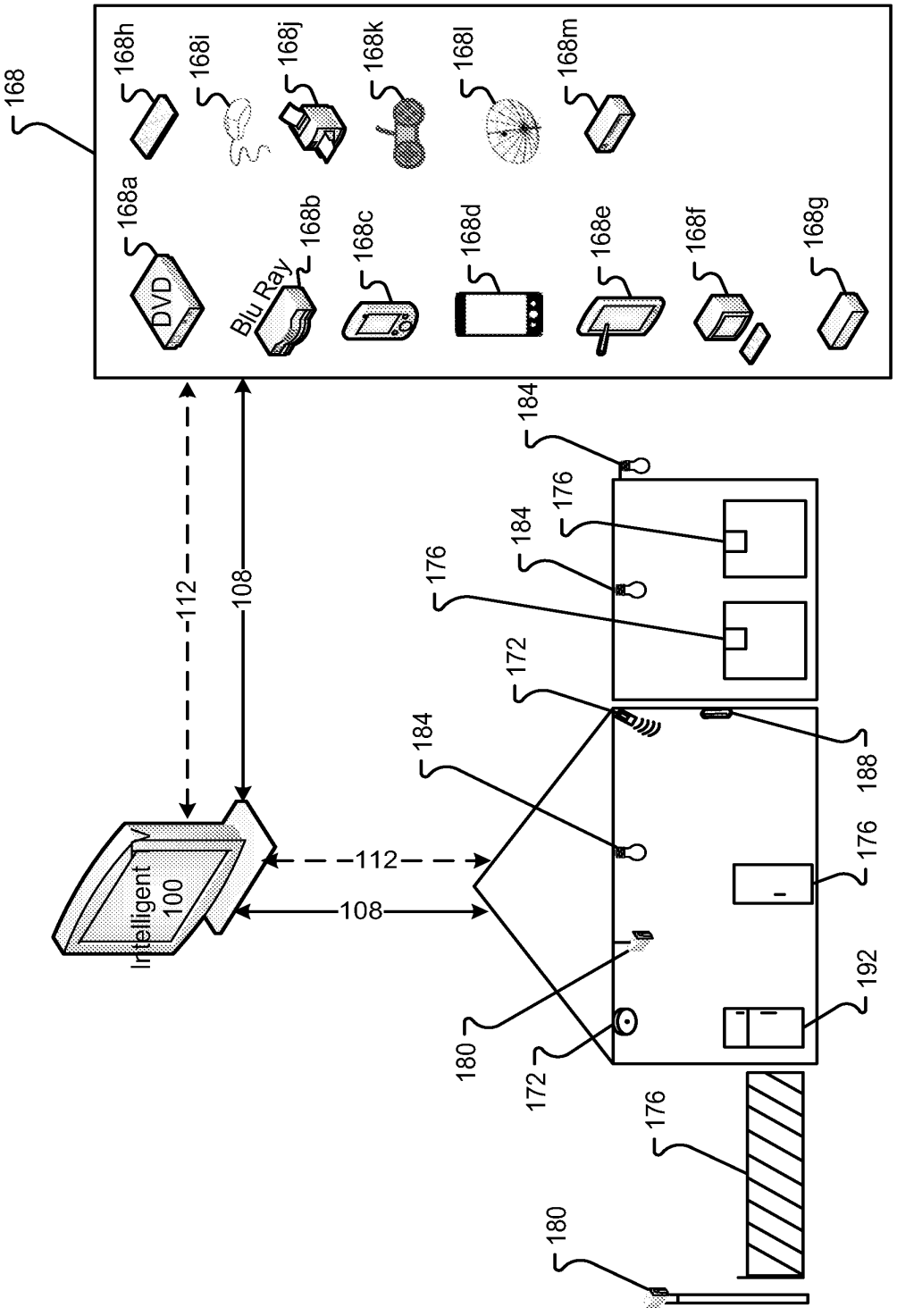

168
168h
168i
168j
168k
168l
168m
168a
168b
168c
168d
168e
168f
168g
DVD
Blu Ray
112
108
184
176
172
188
Intelligent
100
180
192

Fig. 1B

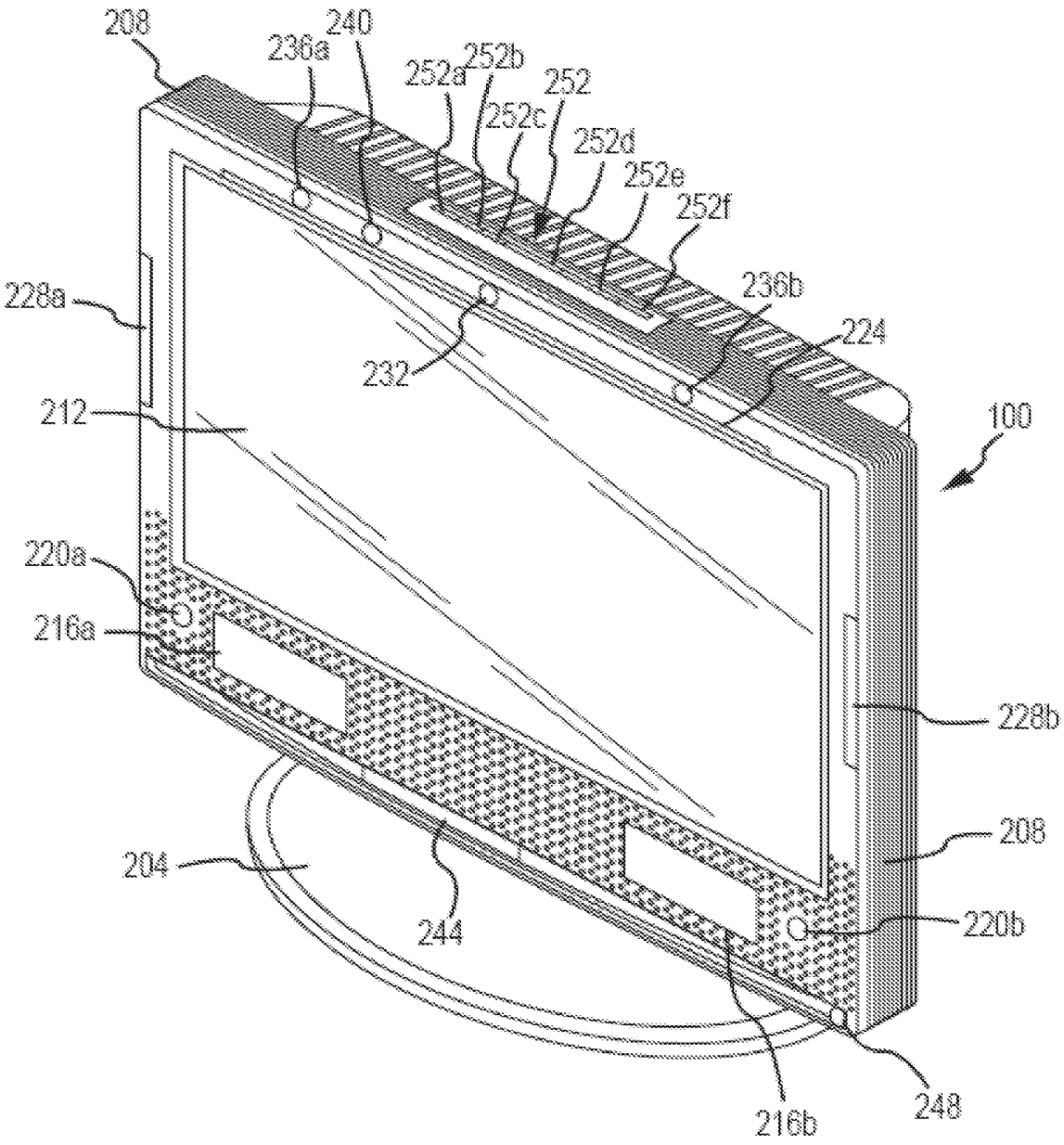

208
240
236a
252a
252b
252
252c
252d
252e
252f
236b
224
228a
232
212
100
220a
216a
228b
208
204
244
220b
248
216b

Fig. 2A

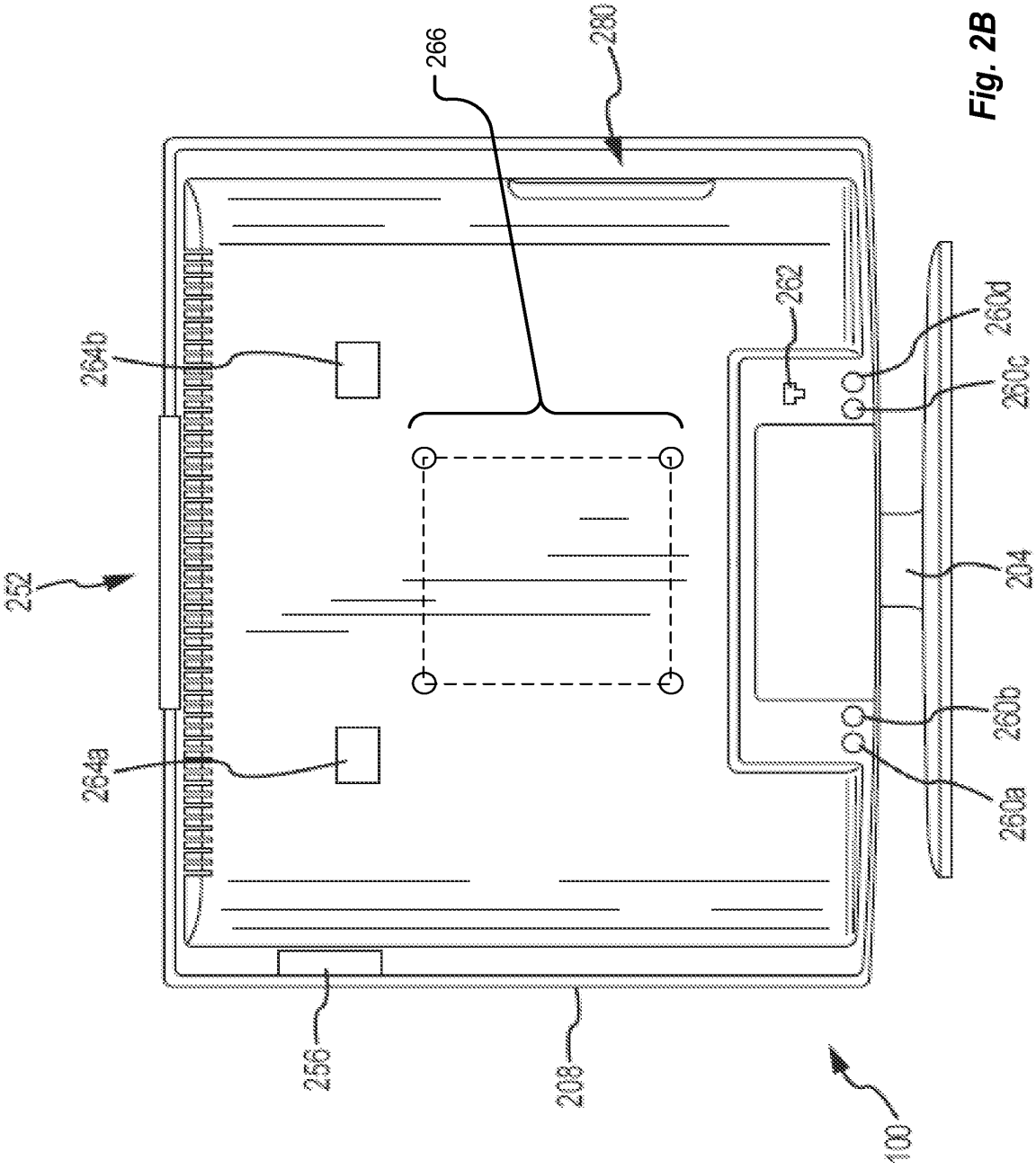


Fig. 2B

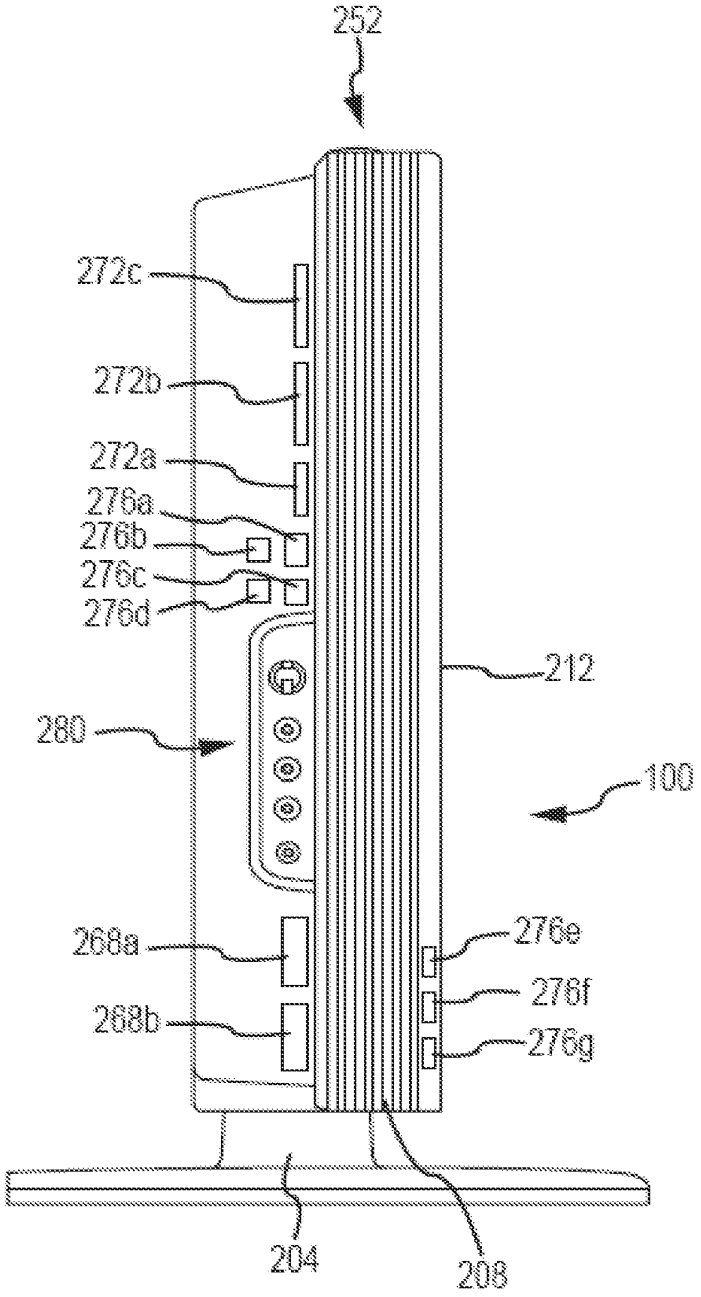

252
272c
272b
272a
276a
276b
276c
276d
212
280
100
268a
268b
276e
276f
276g
204
208

Fig. 2C

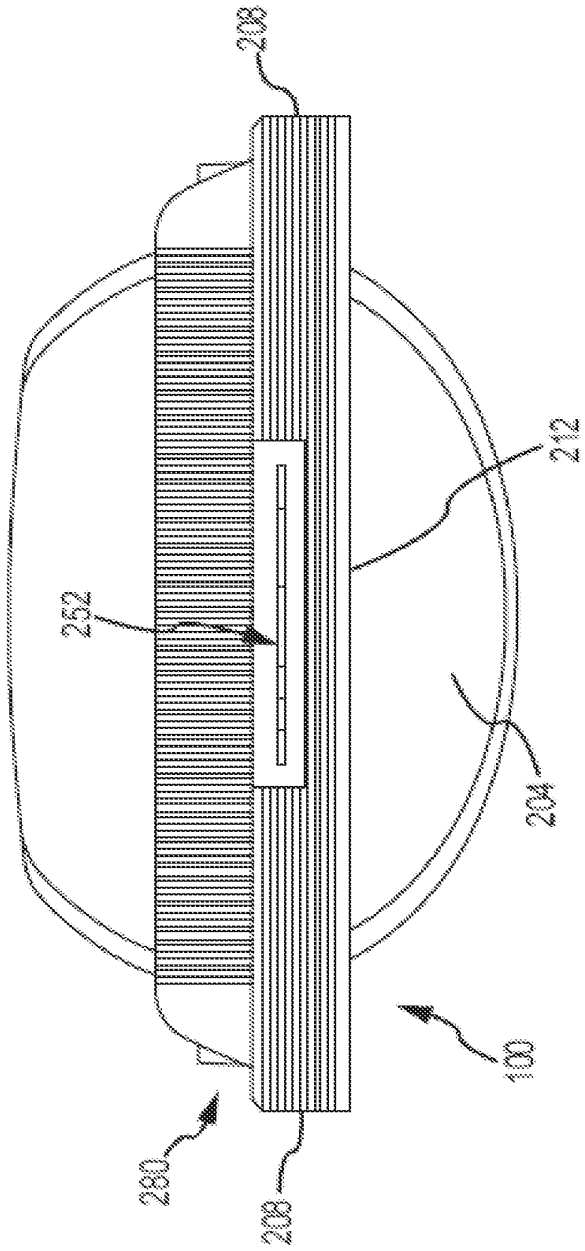


Fig. 2D

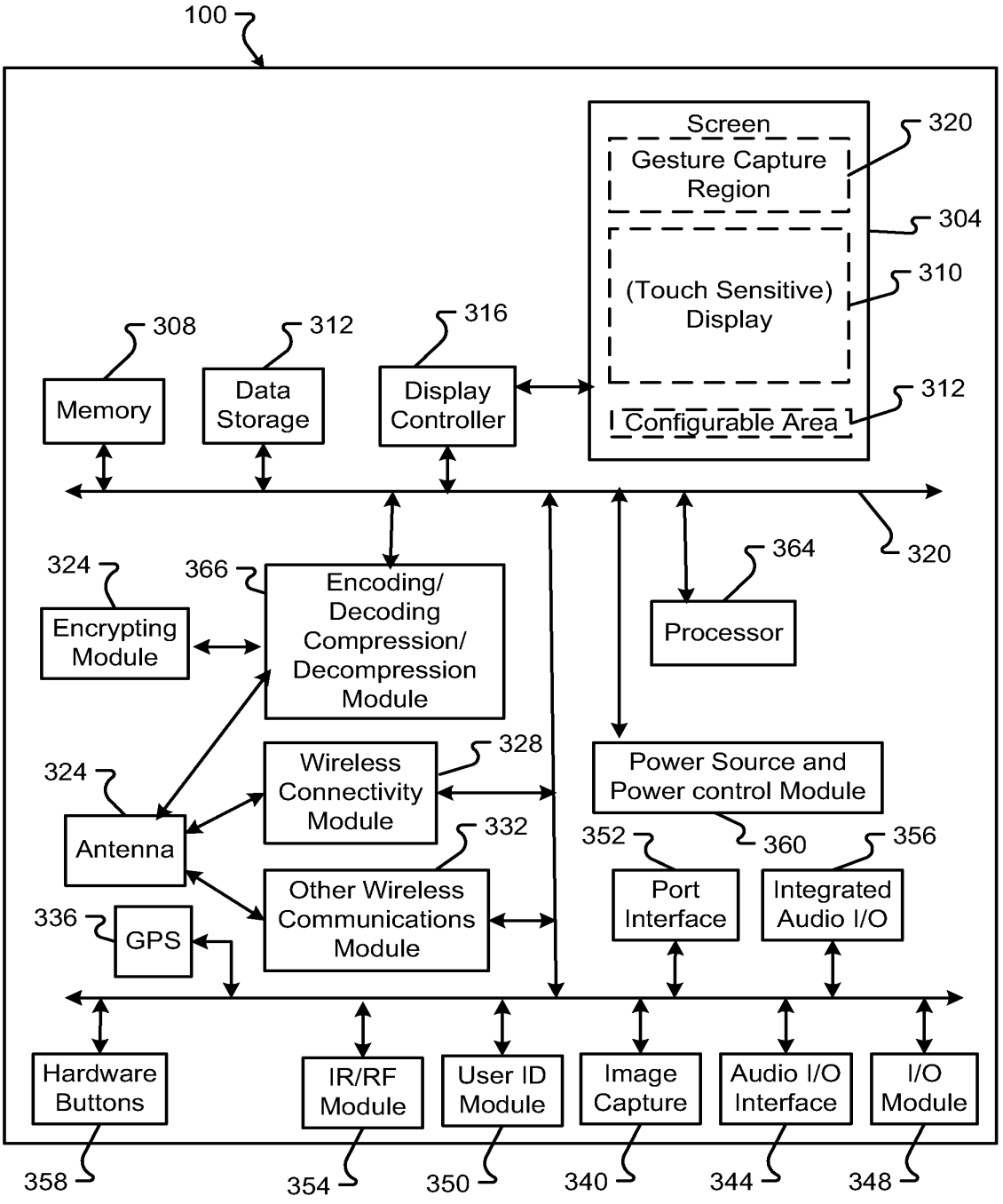

100
Screen
Gesture Capture Region
320
304
(Touch Sensitive) Display
310
312
Configurable Area
308
Memory
312
Data Storage
316
Display Controller
320
364
Processor
324
Encrypting Module
366
Encoding/ Decoding Compression/ Decompression Module
328
Wireless Connectivity Module
Power Source and Power control Module
324
Antenna
332
Other Wireless Communications Module
352
Port Interface
360
356
Integrated Audio I/O
336
GPS
Hardware Buttons
IR/RF Module
User ID Module
Image Capture
Audio I/O Interface
I/O Module
358
354
350
340
344
348

FIG. 3

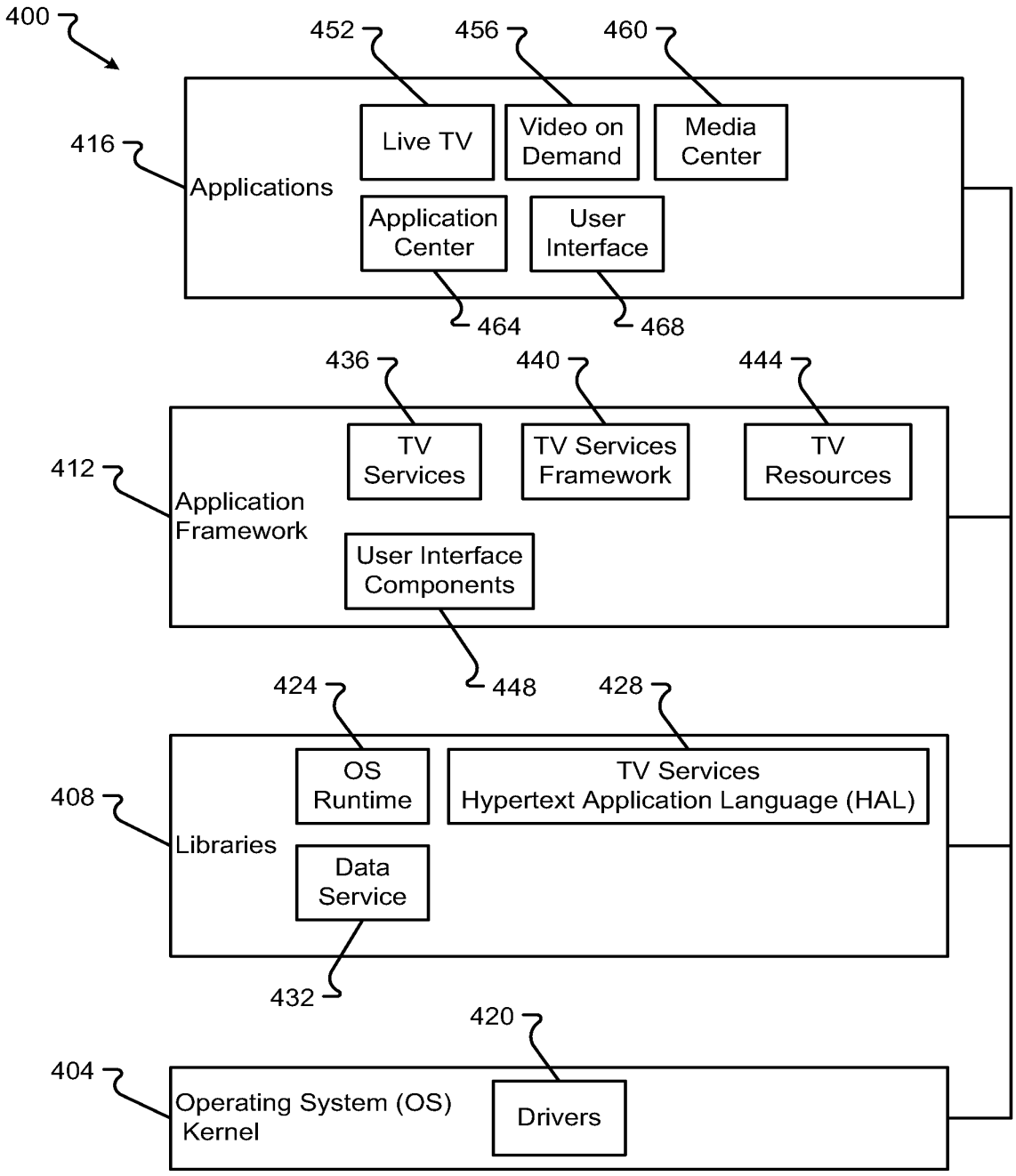

400
452
456
460
416
Applications
Live TV
Video on Demand
Media Center
Application Center
User Interface
464
468
436
440
444
412
Application Framework
TV Services
TV Services Framework
TV Resources
User Interface Components
448
424
428
408
Libraries
OS Runtime
TV Services Hypertext Application Language (HAL)
Data Service
432
420
404
Operating System (OS) Kernel
Drivers

FIG. 4

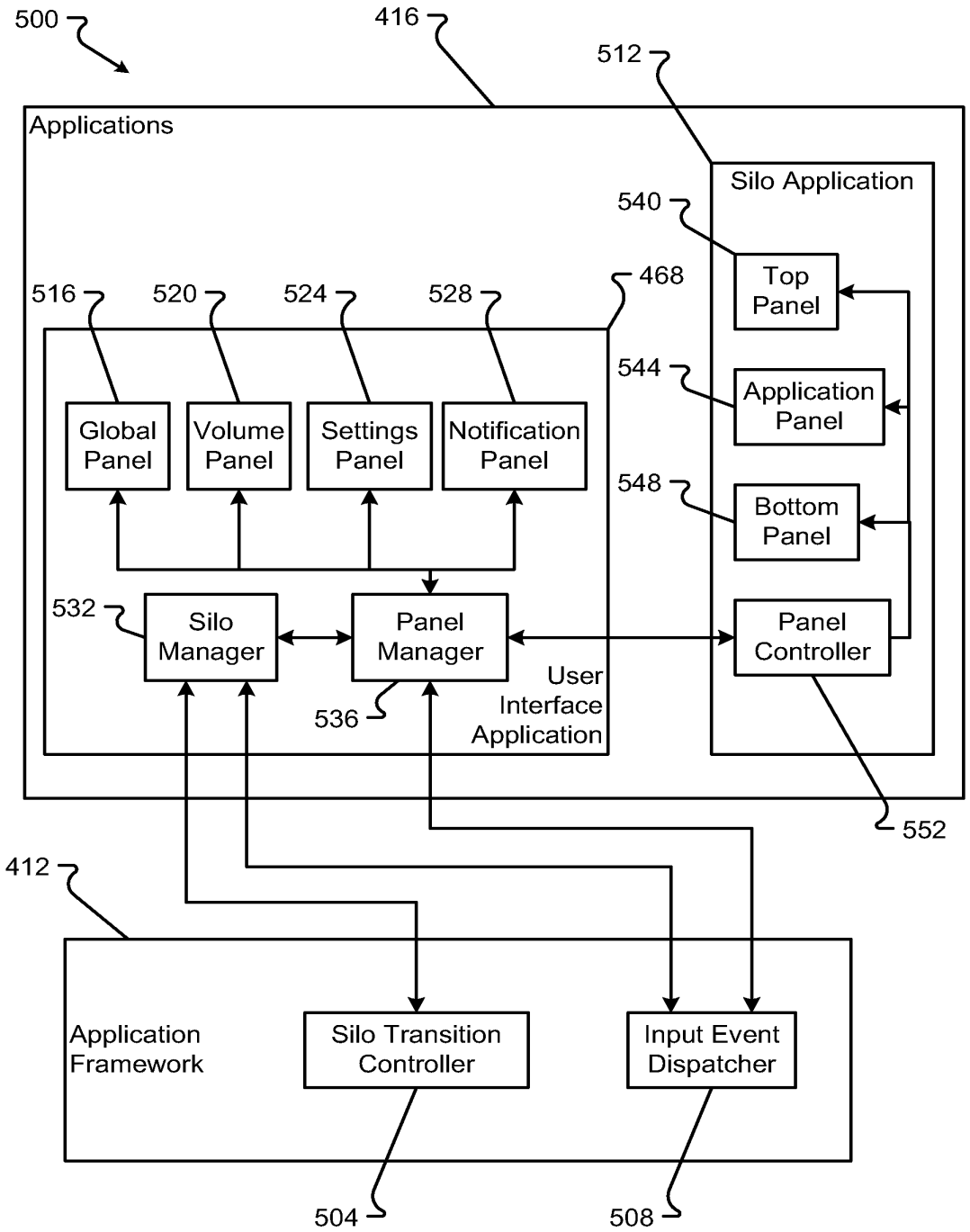

500
416
512
Applications
Silo Application
540
Top Panel
516
520
524
528
468
544
Application Panel
Global Panel
Volume Panel
Settings Panel
Notification Panel
548
Bottom Panel
532
Silo Manager
Panel Manager
Panel Controller
User Interface Application
536
552
412
Application Framework
Silo Transition Controller
Input Event Dispatcher
504
508

FIG. 5

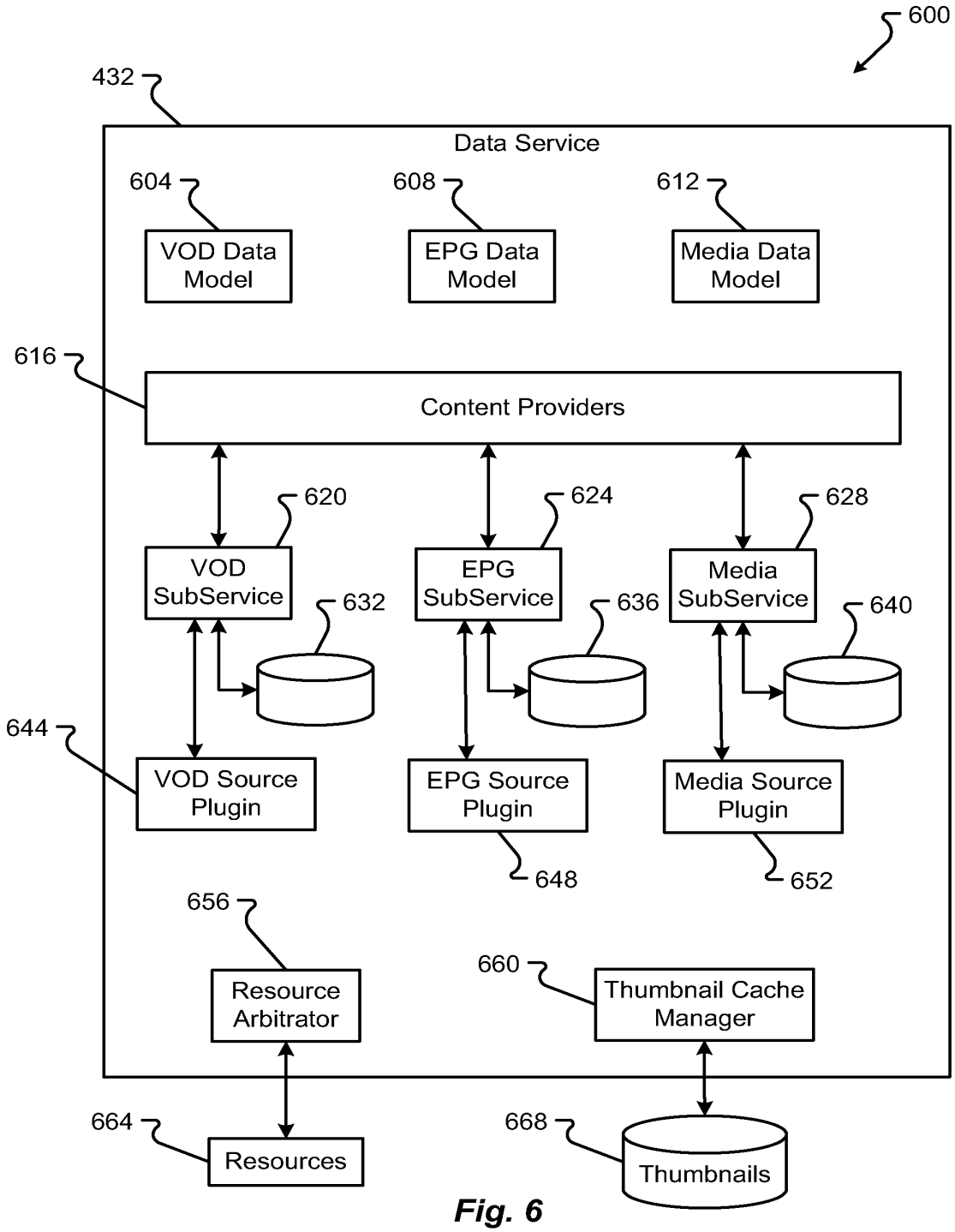

600
432
Data Service
604
VOD Data Model
608
EPG Data Model
612
Media Data Model
616
Content Providers
620
VOD SubService
624
EPG SubService
628
Media SubService
632
636
640
644
VOD Source Plugin
EPG Source Plugin
Media Source Plugin
648
652
656
Resource Arbitrator
660
Thumbnail Cache Manager
664
Resources
668
Thumbnails

Fig. 6

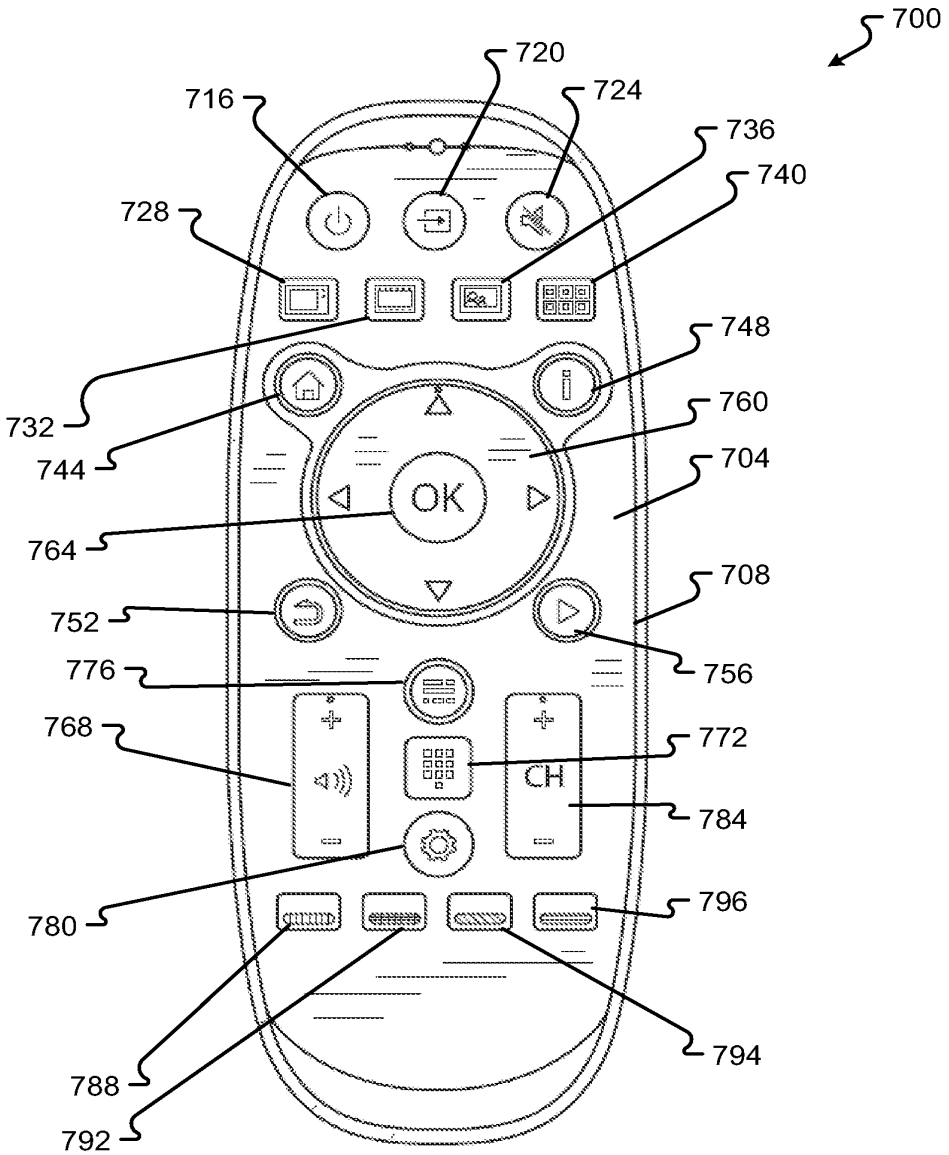

700
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OK
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708
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CH
784
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796
794
788
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Fig. 7

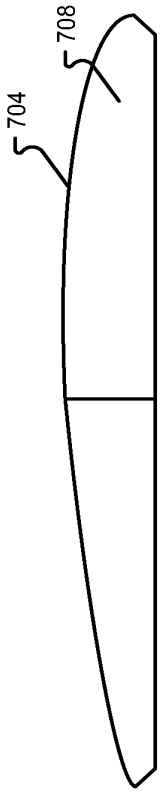


Fig. 8

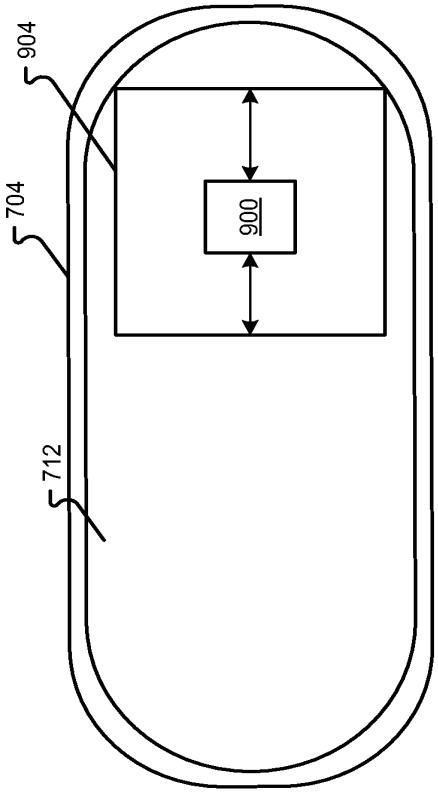


Fig. 9A

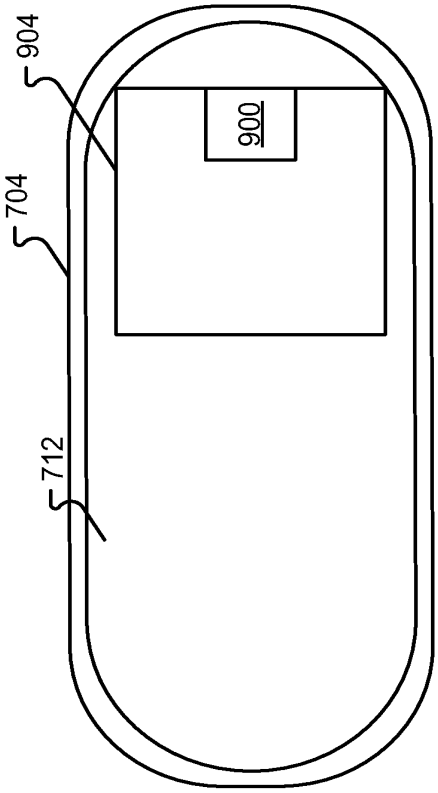


Fig. 9B

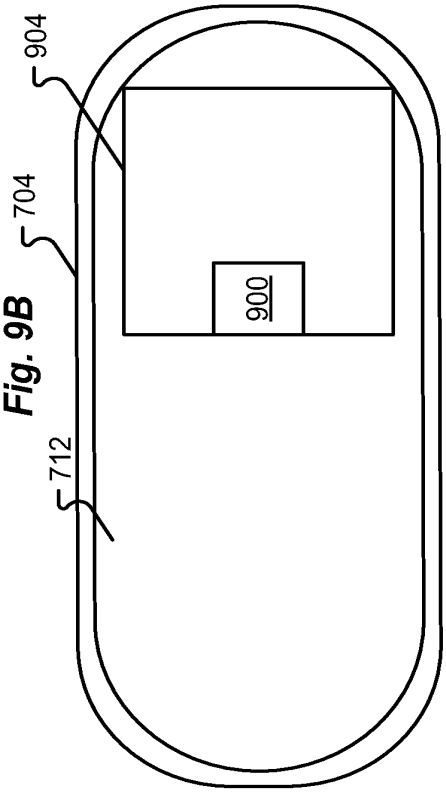


Fig. 9C

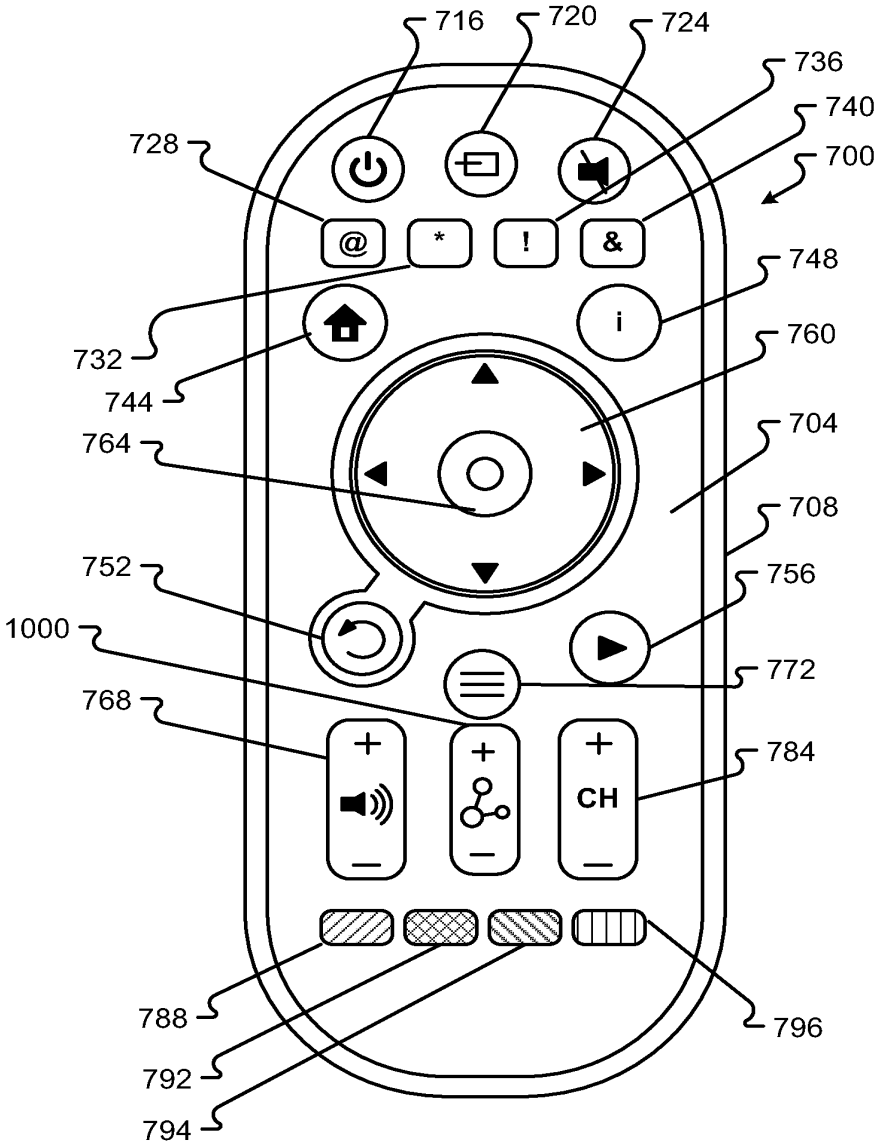

716
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744
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756
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768
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794
796

Fig. 10

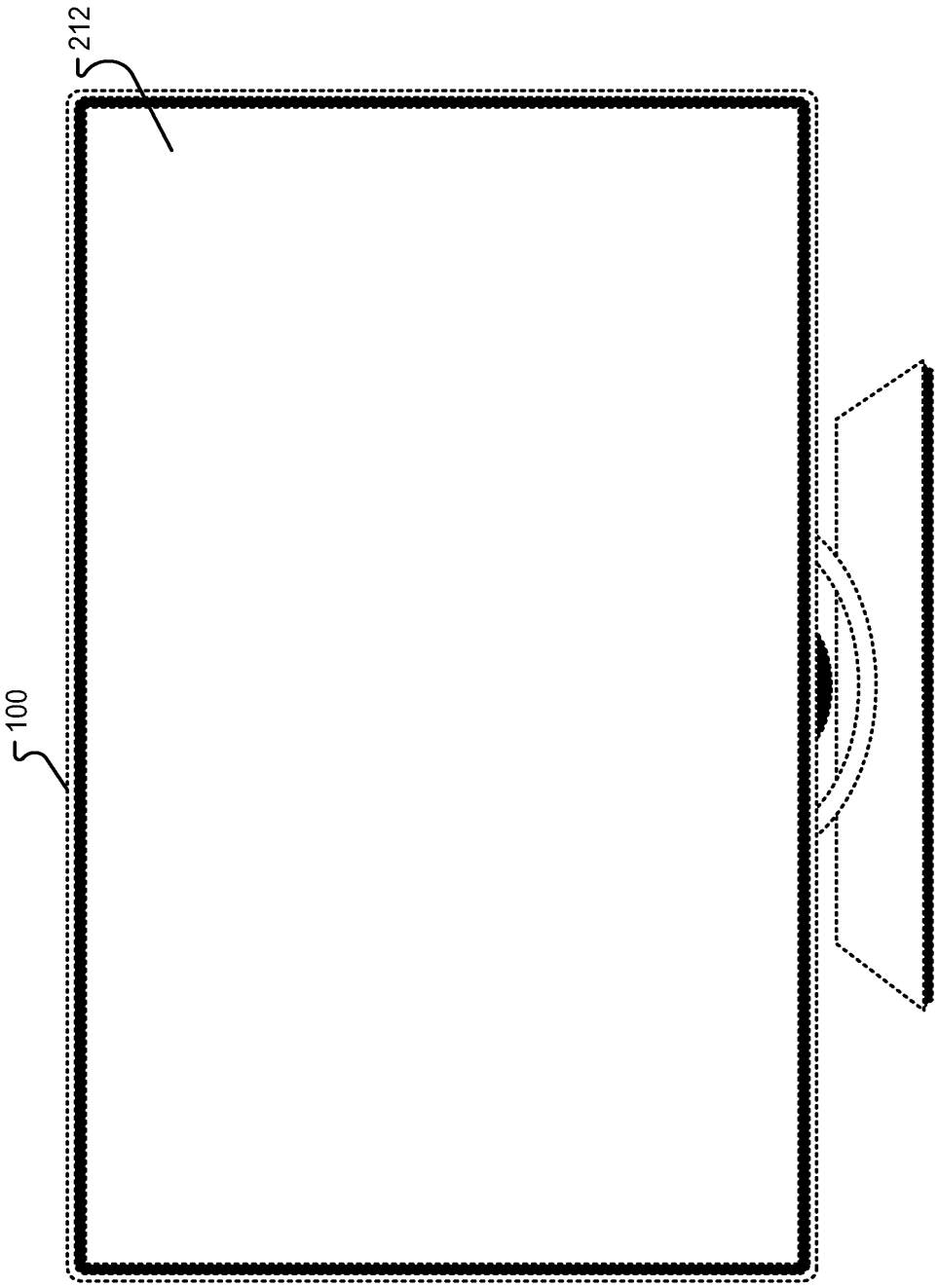


Fig. 11A

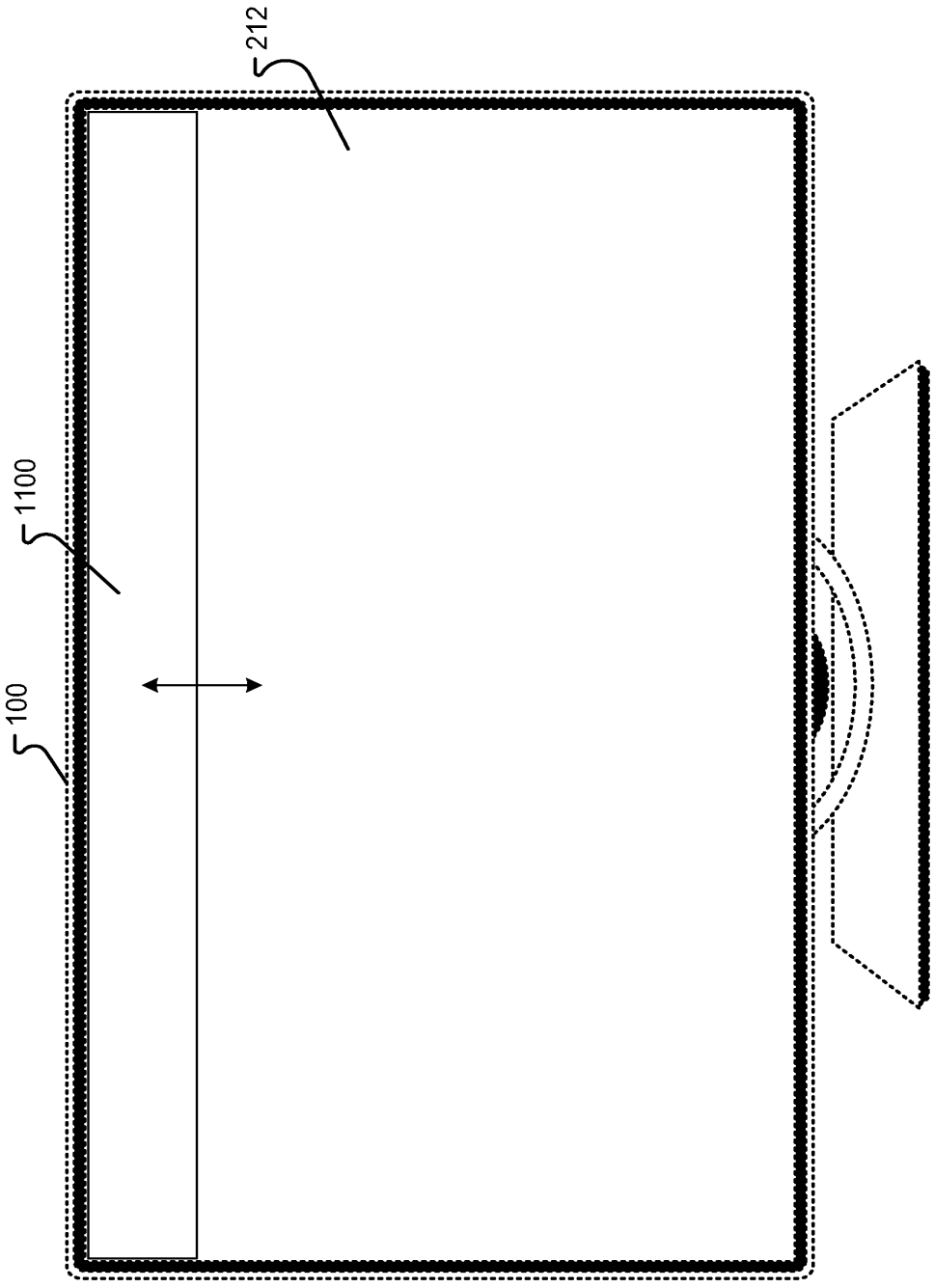


Fig. 11B

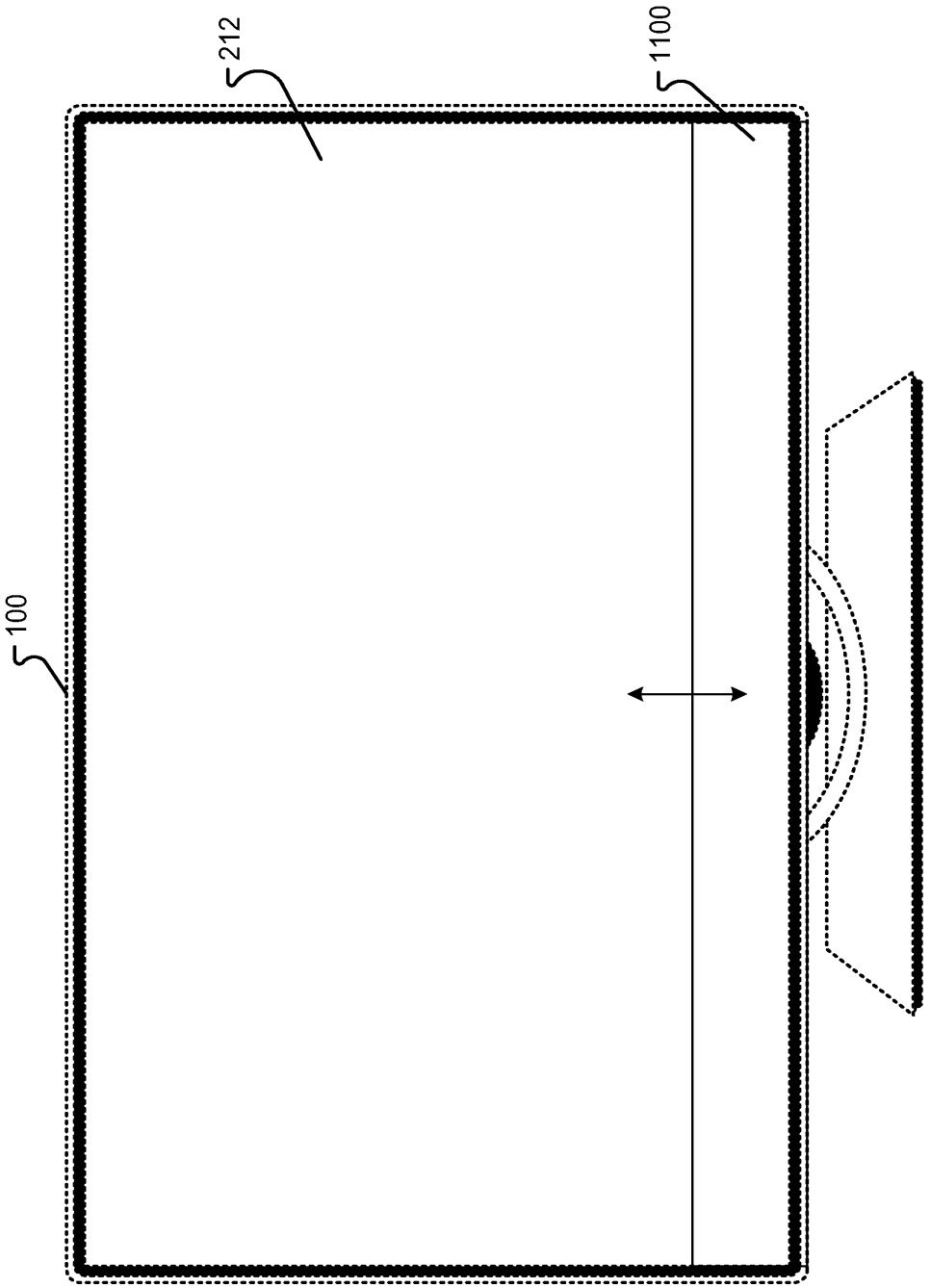


Fig. 11C

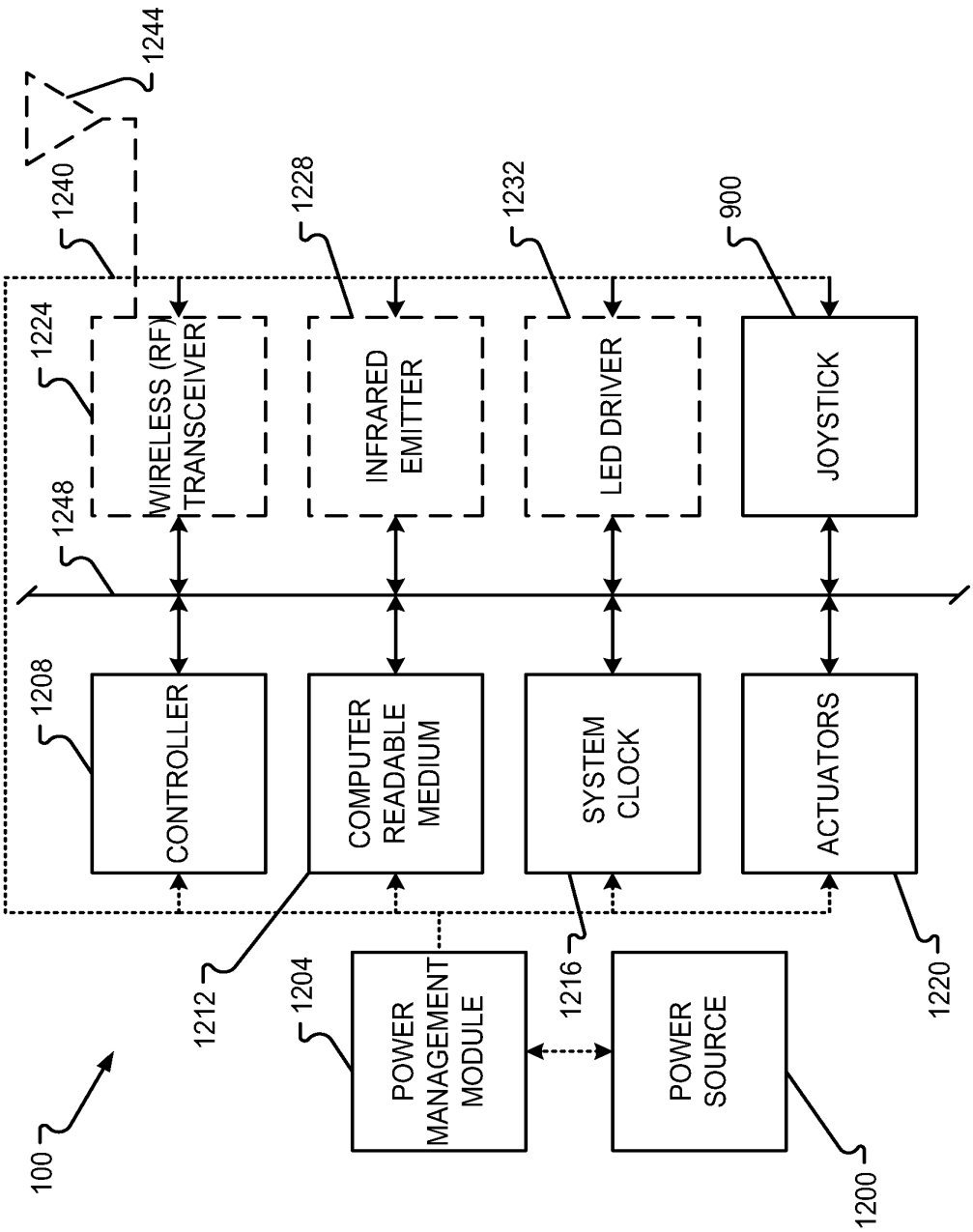

1244
1240
1228
1232
900
1224
WIRELESS (RF) TRANSCEIVER
INFRARED EMITTER
LED DRIVER
JOYSTICK
1248
1208
CONTROLLER
COMPUTER READABLE MEDIUM
SYSTEM CLOCK
ACTUATORS
1212
1204
POWER MANAGEMENT MODULE
1216
POWER SOURCE
1220
100
1200

Fig. 12

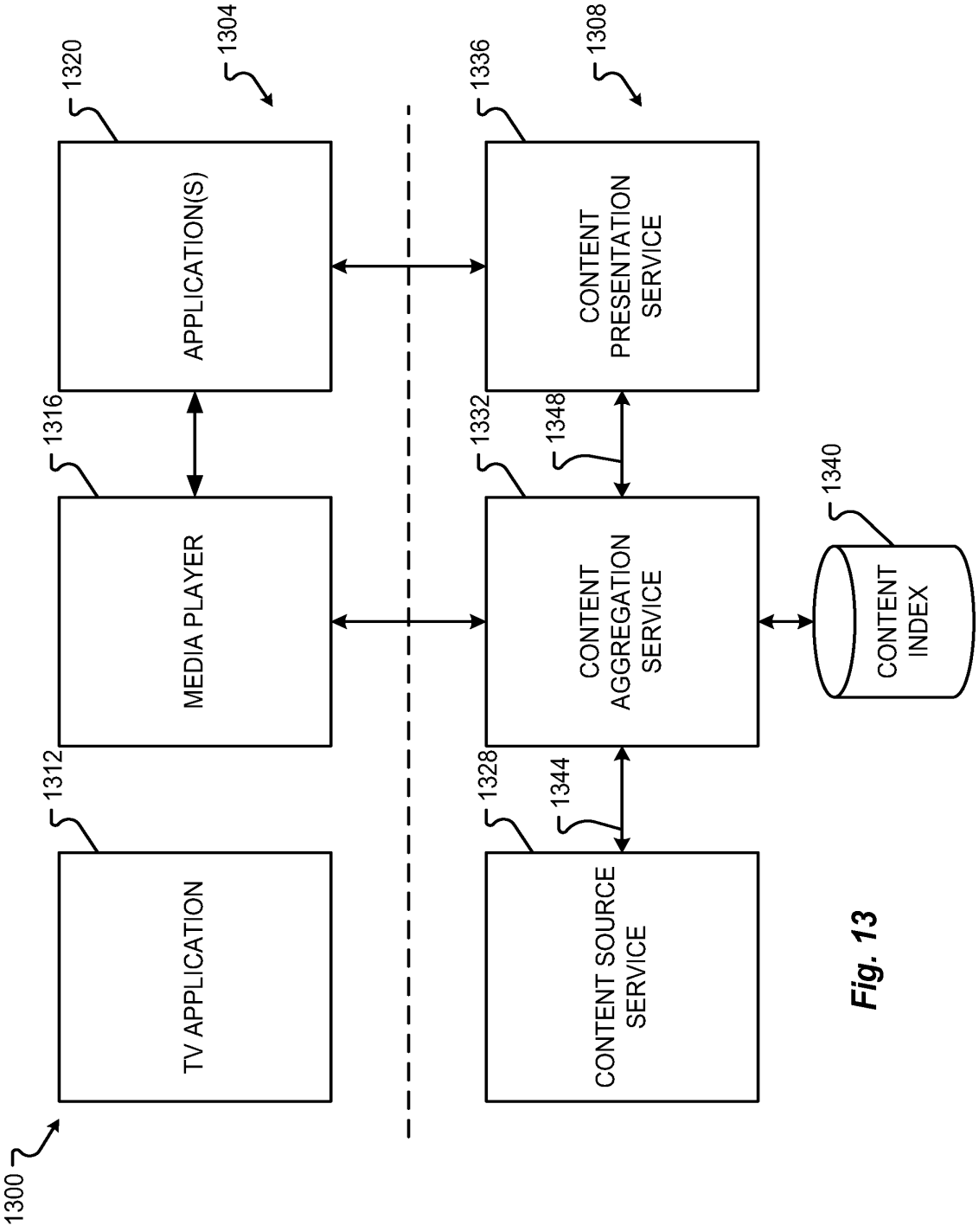

1300
1304
1320
APPLICATION(S)
1308
1336
CONTENT PRESENTATION SERVICE
1316
MEDIA PLAYER
1332
1348
CONTENT AGGREGATION SERVICE
1340
CONTENT INDEX
1312
TV APPLICATION
1328
1344
CONTENT SOURCE SERVICE

Fig. 13

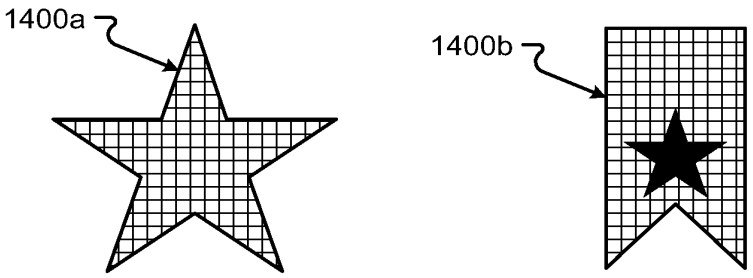


Fig. 14A

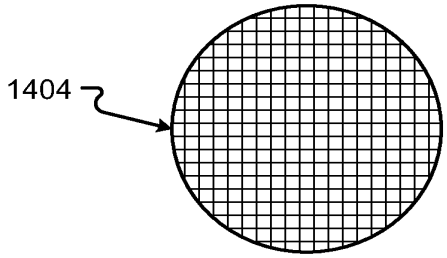


Fig. 14B

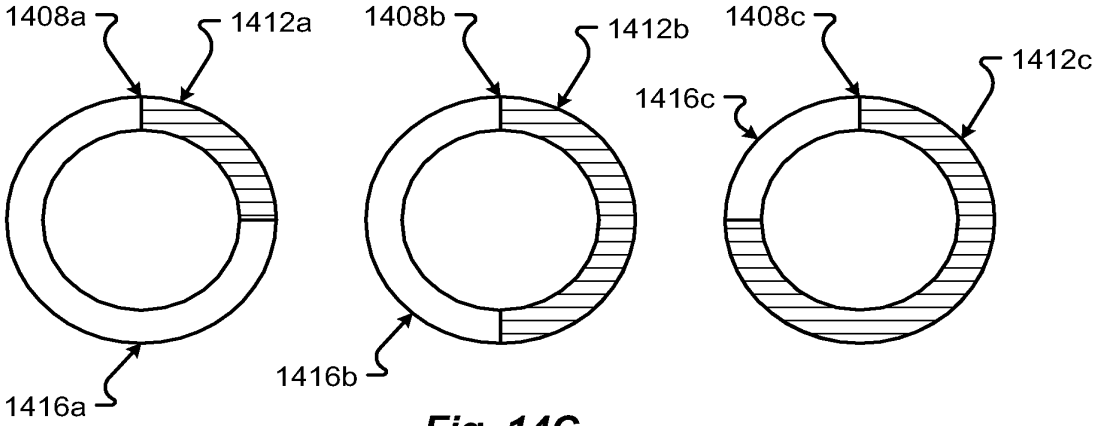


Fig. 14C

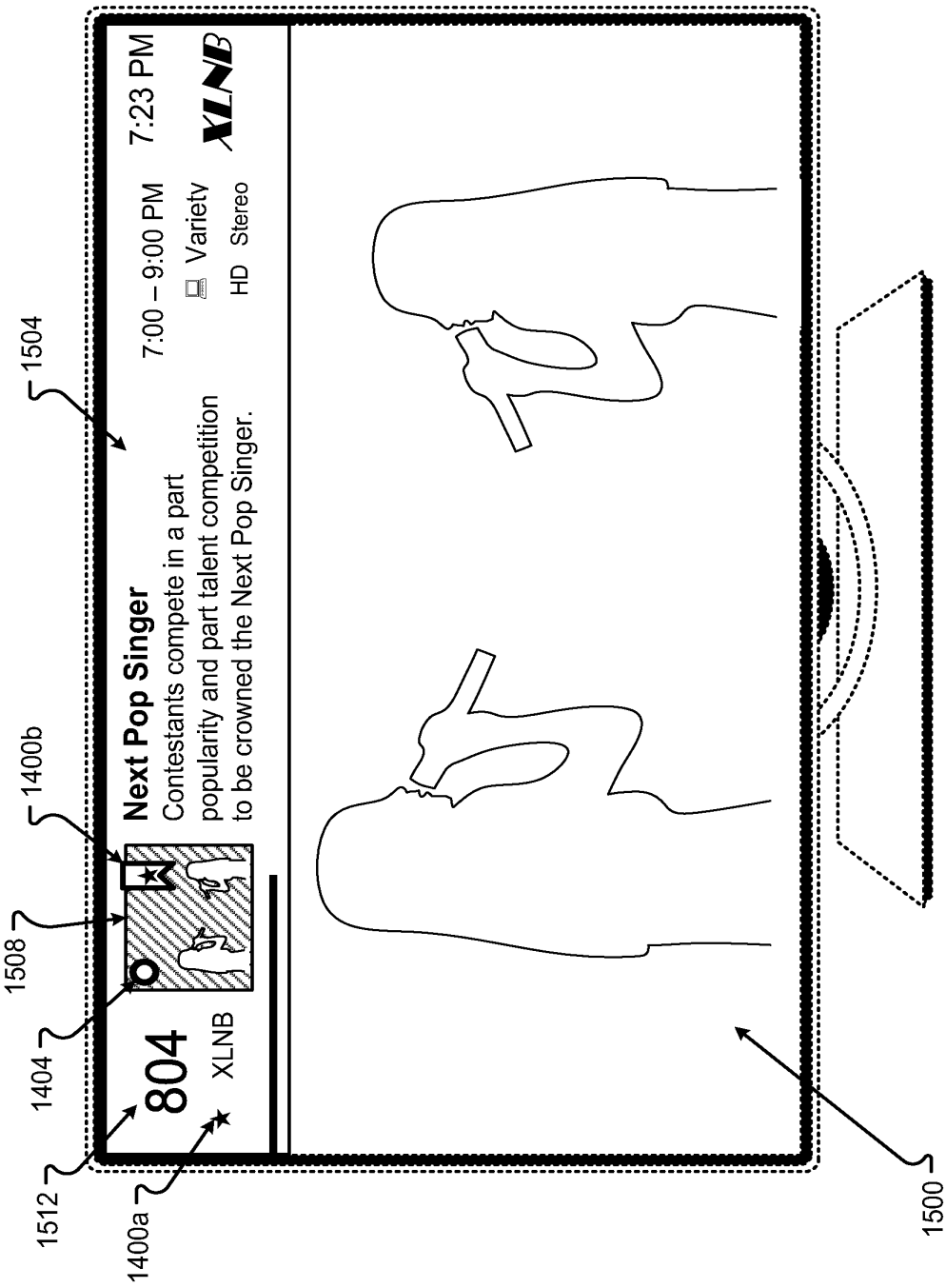

1504
1400b
1508
1404
1512
1400a
804
XLNB
Next Pop Singer
Contestants compete in a part popularity and part talent competition to be crowned the Next Pop Singer.
7:00 – 9:00 PM
Variety
HD Stereo
7:23 PM
XLNB
1500

Fig. 15

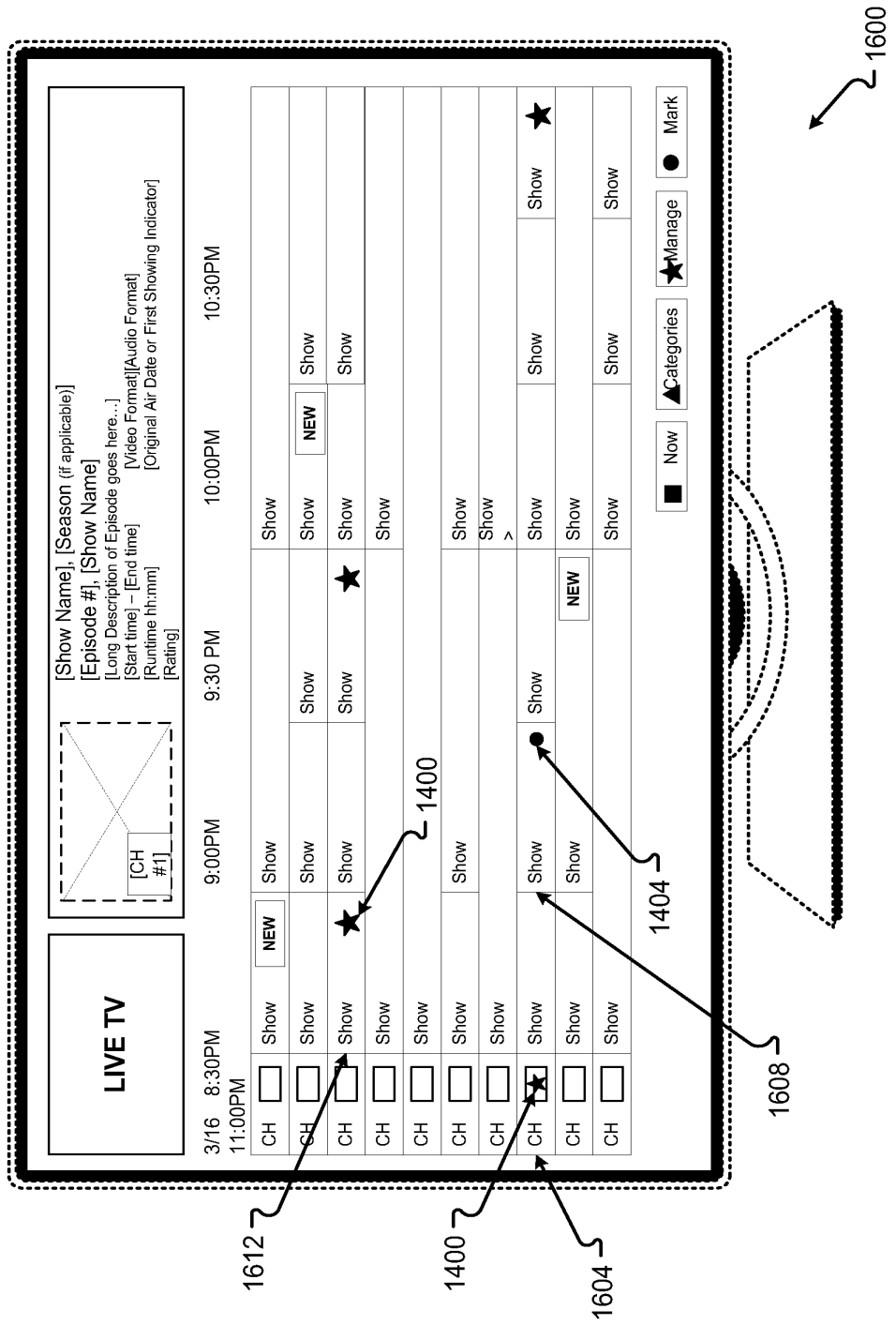

LIVE TV
[Show Name], [Season (if applicable)]
[Episode #], [Show Name]
[Long Description of Episode goes here…]
[Start time] – [End time]
[Video Format][Audio Format]
[Runtime hh:mm]
[Original Air Date or First Showing Indicator]
[Rating]
[CH #1]
3/16 8:30PM
11:00PM
9:00PM
9:30 PM
10:00PM
10:30PM
CH
Show
NEW
Now
Categories
Manage
Mark
1600
1400
1404
1608
1612
1400
1604

Fig. 16

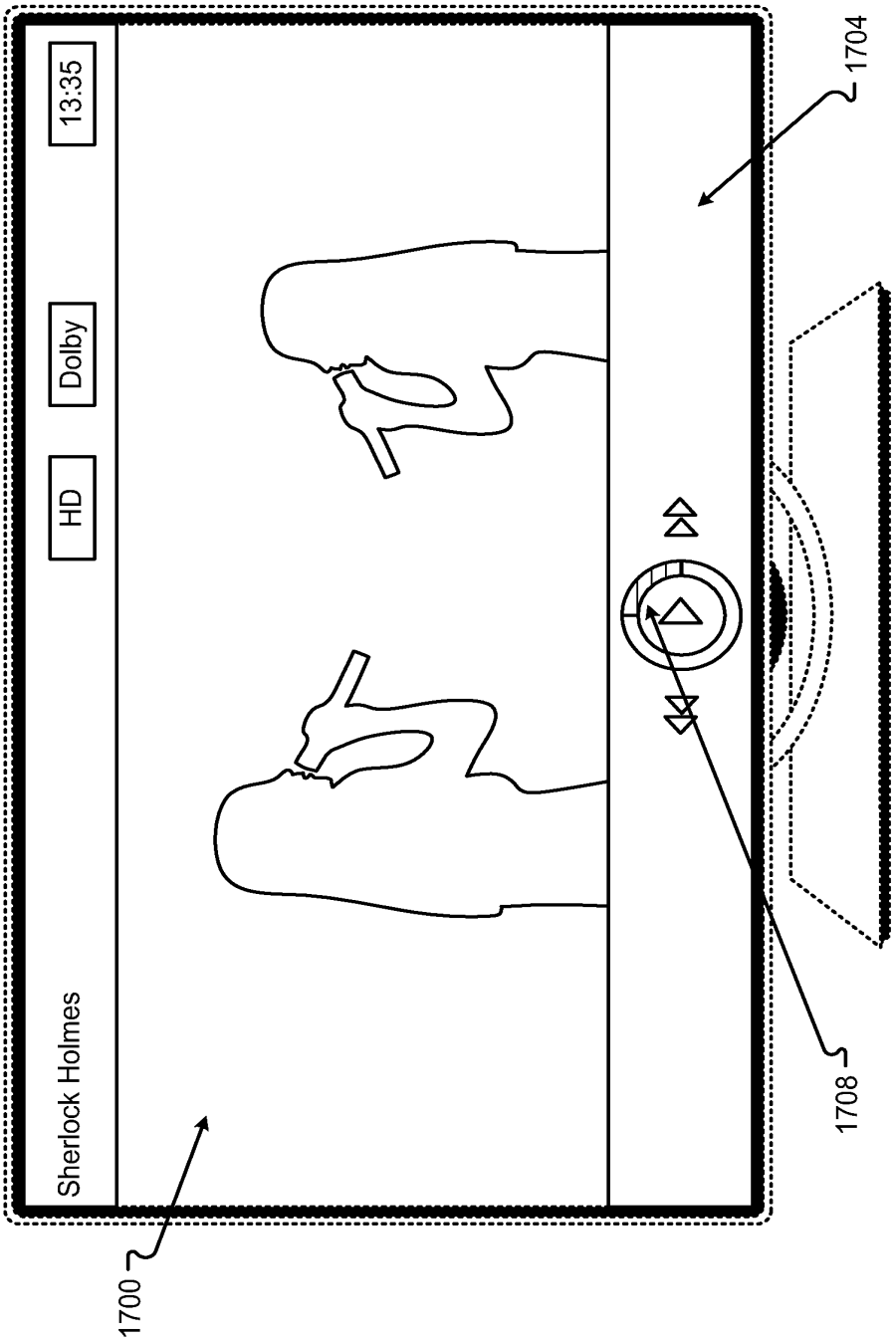


Fig. 17A

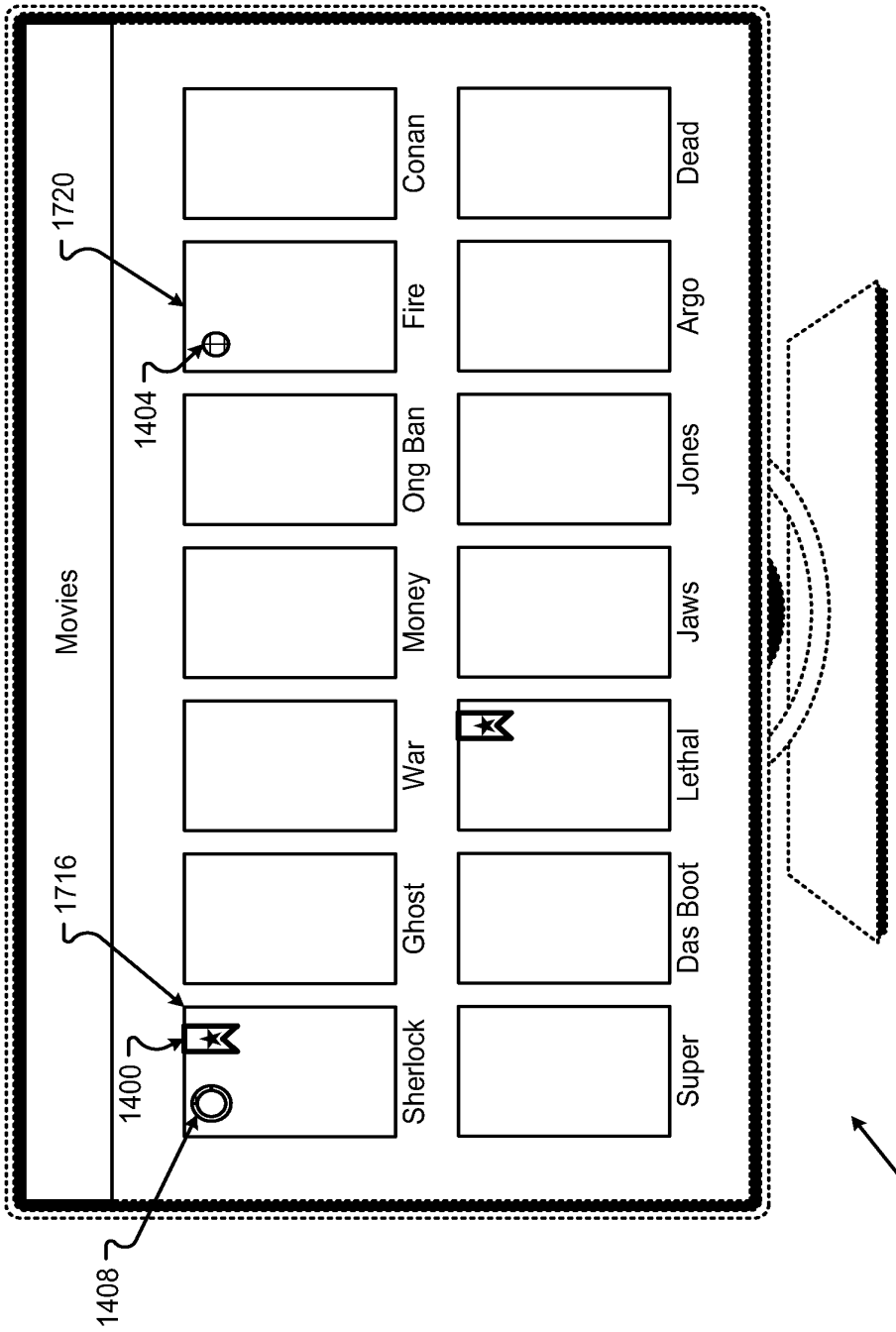

Movies
Sherlock
Ghost
War
Money
Ong Ban
Fire
Conan
Super
Das Boot
Lethal
Jaws
Jones
Argo
Dead
1400
1404
1408
1712
1716
1720

Fig. 17B

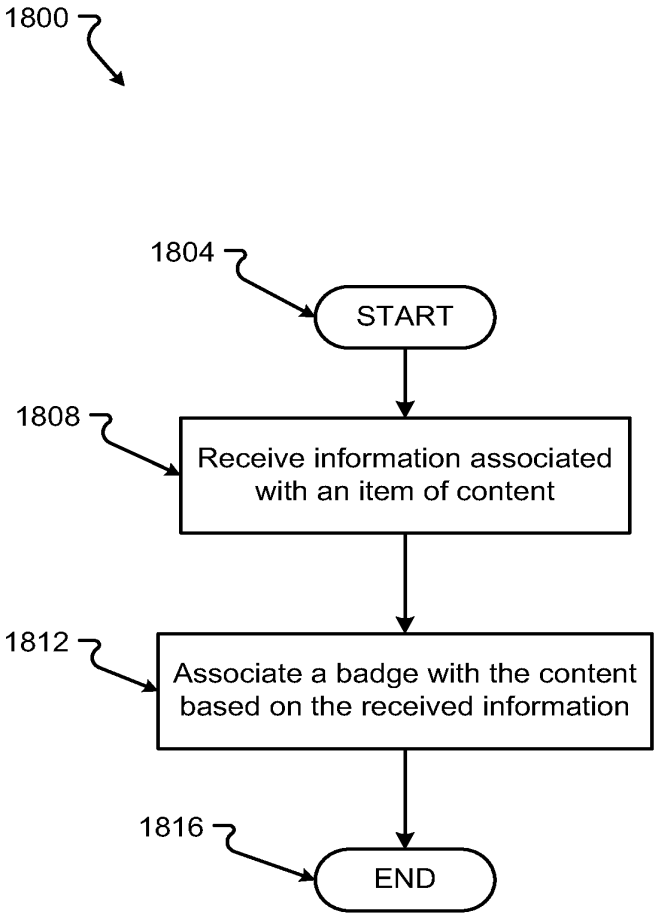

1800
1804
START
1808
Receive information associated with an item of content
1812
Associate a badge with the content based on the received information
1816
END

Fig. 18

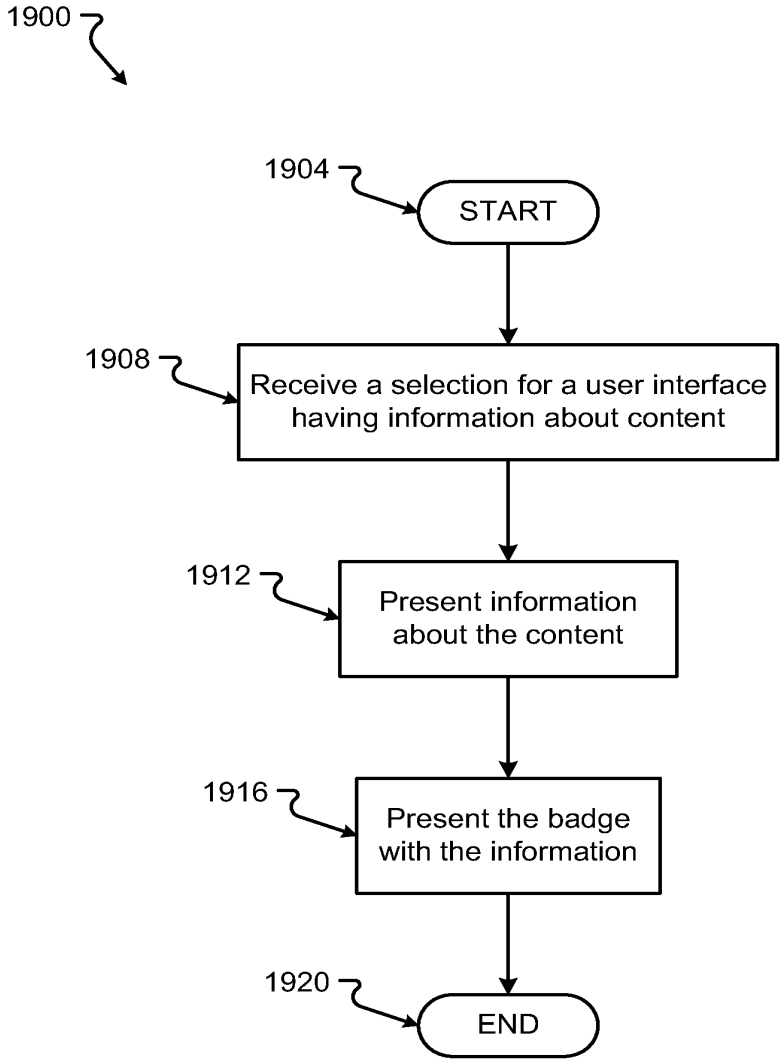

1900
1904
START
1908
Receive a selection for a user interface having information about content
1912
Present information about the content
1916
Present the badge with the information
1920
END

Fig. 19

INTERNATIONAL SEARCH REPORT

13/036826 17.06.2013

International application No.
PCT/US13/36826

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/44543; G06F 8/34 (2013.01)
USPC - 715/763; 725/39
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(8): H04L 29/08072; G06F 3/0481, 3/04817, 3/0482, 8/34; H04N 5/44543 (2013.01); USPC: 709/224; 715/835, 836, 763, 810; 725/39

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPro (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; Google Scholar; associate*, badge*, content, source, interface, indicia, feature, state, destination, select*, second, television

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 8,201,104 B2 (YAMAMOTO, R et al.) June 12, 2012, abstract, column 2, lines 32-35, column 9, lines 8-10	1-4, 9-12 and 16-17 --- 5-8, 13-15 and 18-20
Y	US 8,151,215 B2 (BAURMANN, T et al.) April 3, 2012, column 1, lines 29-34, column 4, lines 44-49, column 3, lines 46-50	5-8, 13-15 and 18-20
A	US 7,363,591 B2 (GOLDTHWAITE, F et al.) April 22, 2008, entire document	1

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
6 June 2013 (06.06.2013)	17 JUN 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
20 February 2014 (20.02.2014)

WIPO | PCT

(10) International Publication Number
WO 2014/028074 A1

(51) International Patent Classification:
G06F 17/30 (2006.01)

(21) International Application Number:
PCT/US2013/036844

(22) International Filing Date:
16 April 2013 (16.04.2013)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

61/684,672	17 August 2012 (17.08.2012)	US
61/697,710	6 September 2012 (06.09.2012)	US
61/700,182	12 September 2012 (12.09.2012)	US
61/702,650	18 September 2012 (18.09.2012)	US
61/736,692	13 December 2012 (13.12.2012)	US
61/798,821	15 March 2013 (15.03.2013)	US
61/805,030	25 March 2013 (25.03.2013)	US
61/805,038	25 March 2013 (25.03.2013)	US
61/805,003	25 March 2013 (25.03.2013)	US
61/804,942	25 March 2013 (25.03.2013)	US
61/804,990	25 March 2013 (25.03.2013)	US
61/805,027	25 March 2013 (25.03.2013)	US
61/804,998	25 March 2013 (25.03.2013)	US
61/805,053	25 March 2013 (25.03.2013)	US
61/804,971	25 March 2013 (25.03.2013)	US
61/805,042	25 March 2013 (25.03.2013)	US

(71) Applicant: **FLEXTRONICS AP, LLC** [US/US]; 6201 America Center Drive, San Jose, CA 95134 (US).

(72) Inventors: **SIRPAL, Sanjiv**; 3264 Stocksbridge Avenue, Oakville, ON L6M 0E3 (CA). **SELIM, Mohammed**; 2488 Oakhaven Drive, Oakville, ON L6M4B9 (CA). **DOURADO, Saulo, Correia**; 2420 Ravinebrook Crescent, Oakville, Ontario L6H 6Y2 (CA). **DE PAZ, Alexander**; 5444 Valleyhigh Drive, Burlington, Ontario L7L 6Z6 (CA).

(74) Agent: **LINDON, Brent, R.**; Sheridan Ross P.C., 1560 Broadway, Suite 1200, Denver, CO 80202 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ,

[Continued on next page]

(54) Title: INTELLIGENT TELEVISION

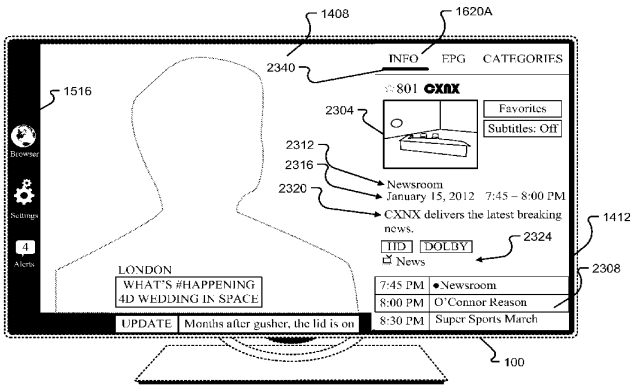


Fig. 23A

(57) Abstract: An intelligent television and methods for displaying content are disclosed. Specifically, a user may cause a global panel or application panel to be displayed; the global panel is independent of the currently viewed content and provides functionality at a system level. The application panel displays content based on the content being actively displayed on the intelligent television; that is, the layout, information, and content depends on the content being displayed by the intelligent television. For example, upon receiving a selection from the user, the intelligent television may display one or more items of information that are associated with the content currently being displayed in an active content window. Moreover, as the global and application panels are used to navig - ate through various screens in the intelligent television, the global panels themselves do not obstruct the user from viewing content displayed on the screen of the intelligent television.

WO 2014/028074 A1

UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *with international search report (Art. 21(3))*

INTELLIGENT TELEVISION

CROSS REFERENCE TO RELATED APPLICATION

[0001] The present application claims the benefits of and priority, under 35 U.S.C. § 119(e), to U.S. Provisional Application Serial Nos. 61/659,626 filed June 14, 2012, "Method and System for Customizing Televised Content"; 61/684,672 filed August 17, 2012, "Smart TV"; 61/702,650 filed September 18, 2012, "Smart TV"; 61/697,710 filed September 6, 2012, "Social TV"; 61/700,182 filed September 12, 2012, "Social TV Roadmap"; 61/736,692 filed December 13, 2012, "SmartTV"; 61/798,821 filed March 15, 2013, "SmartTV"; 61/804,942 filed March 25, 2013, "SmartTV"; 61/804,998 filed March 25, 2013, "SmartTV"; 61/804,971 filed March 25, 2013, "SmartTV"; 61/804,990 filed March 25, 2013, "SmartTV"; 61/805,003 filed March 25, 2013, "SmartTV"; 61/805,053 filed March 25, 2013, "SmartTV"; 61/805,030 filed March 25, 2013, "SmartTV"; 61/805,027 filed March 25, 2013, "SmartTV"; 61/805,042 filed March 25, 2013, "SmartTV"; 61/805,038 filed March 25, 2013, "SmartTV." Each of the aforementioned documents is incorporated herein by reference in their entirety for all that they teach and for all purposes.

BACKGROUND

[0002] Consolidation of device features or technological convergence is in an increasing trend. Technological convergence describes the tendency for different technological systems to evolve toward performing similar tasks. As people use more devices, the need to carry those devices, charge those devices, update software on those devices, etc. becomes more cumbersome. To compensate for these problems, technology companies have been integrating features from different devices into one or two multi-functional devices. For example, cellular phones are now capable of accessing the Internet, taking photographs, providing calendar functions, etc.

[0003] The consolidation trend is now affecting the design and functionality of devices generally used in the home. For example, audio receivers can access the Internet, digital video recorders can store or provide access to digital photographs, etc. The television in home audio/video systems remains a cornerstone device because the display function cannot be integrated into other devices. As such, consolidating home devices leads to integrating features and functionality into the television. The emergence of the Smart Television (Smart TV) is evidence of the trend to consolidate functionality into the television.

[0004] A Smart TV is generally conceived as a device that integrates access to the Internet and Web 2.0 features into television sets. The Smart TV represents the trend of technological convergence between computers and television sets. The Smart TV generally focuses on online interactive media, Internet TV, on-demand streaming media, and generally does not focus on traditional broadcast media. Unfortunately, most Smart TVs have yet to provide seamless and intuitive user interfaces for navigating and/or executing the various features of the Smart TV. As such, there are still issues with the consolidation of features and the presentation of these features in Smart TVs.

SUMMARY

[0005] There is a need for an Intelligent TV with intuitive user interfaces and with seamless user interaction capability. These and other needs are addressed by the various aspects, embodiments, and/or configurations of the present disclosure. Also, while the disclosure is presented in terms of exemplary embodiments, it should be appreciated that individual aspects of the disclosure can be separately claimed.

[0006] In embodiments, a method of displaying content on a television is provided, comprising: receiving an indication associated with a selection by a user; determining, based on the received indication, a content panel to display via the television; retrieving from memory, a first content information for display in the content panel; and displaying, via the television, the retrieved content information in the specified content panel. This method may further comprise: identifying at least one of a content source and a content information currently being displayed via a television; selecting a panel type based on the identified at least one of content source and content information currently being displayed via the television; retrieving, from memory, content information based on the selected panel type; and displaying, via the television, the retrieved content information in the content panel based on the selected panel type. Further yet, this method may further include: receiving a second indication associated with a selection by a user; selecting a panel type based on the second indication; retrieving, from memory, content information based on the selected panel type and the second indication; and displaying, via the television, the retrieved content information in the content panel, wherein the retrieved content information is one of information associated with content information marked as favorite and information associated with content information that has been recently viewed.

[0007] In another embodiment, a non-transitory computer readable information storage medium is provided, the non-transitory computer readable information storage medium

having stored thereon instructions that cause a computing system to execute a method of displaying content on a television, comprising: receiving an indication associated with a selection by a user;

[0008] determining, based on the received indication, a content panel to display via the television; retrieving from memory, a first content information for display in the content panel; and displaying, via the television, the retrieved content information in the specified content panel. These instruction may further comprise: identifying at least one of a content source and a content information currently being displayed via a television; selecting a panel type based on the identified at least one of content source and content information currently being displayed via the television; retrieving, from memory, content information based on the selected panel type; and displaying, via the television, the retrieved content information in the content panel based on the selected panel type. Further yet, these instruction may comprise: receiving a second indication associated with a selection by a user; selecting a panel type based on the second indication; retrieving, from memory, content information based on the selected panel type and the second indication; and displaying, via the television, the retrieved content information in the content panel, wherein the retrieved content information is one of information associated with content information marked as favorite and information associated with content information that has been recently viewed.

[0009] In yet another embodiment, a system for displaying content on a television is provided, comprising: an input device associated with the television; a memory; and a microprocessor operable to: receive an indication associated with a selection by a user; determine, based on the received indication, a content panel to display via the television; retrieve from the memory, a first content information for display in the content panel; and display, via the television, the retrieved content information in the specified content panel. Further yet, the microprocessor may further be operable to: identify at least one of a content source and a content information currently being displayed via a television; select a panel type based on the identified at least one of content source and content information currently being displayed via the television; retrieve, from the memory, content information based on the selected panel type; and display, via the television, the retrieved content information in the content panel based on the selected panel

[0010] The present disclosure can provide a number of advantages depending on the particular aspect, embodiment, and/or configuration. For example, the current disclosure provides a panel system that aides in the navigation of an intelligent television. For

example, a multi-panel system is provided that satisfies the following: allows a user to watch a primary program while surfing the internet, checking social media, and checking a system error etc.. Moreover, information may be displayed in one content area that specifically depends on or contextually dependent on the primary program or active content area. In one area, a global panel is used such that an anchor for all views is provided, consistent high level actions across all applications are provided, a same pattern of navigation is provided – all resulting in a unified experience for a user. In another area, an application panel is provided that allows quick access to core functionality, provides an unobtrusive design which allows for the active video to always be in view, that provides a consistent user experience across all applications, and provides focused contextual content.

[0011] These and other advantages will be apparent from the disclosure.

[0012] The phrases "at least one", "one or more", and "and/or" are open-ended expressions that are both conjunctive and disjunctive in operation. For example, each of the expressions "at least one of A, B and C", "at least one of A, B, or C", "one or more of A, B, and C", "one or more of A, B, or C" and "A, B, and/or C" means A alone, B alone, C alone, A and B together, A and C together, B and C together, or A, B and C together.

[0013] The term "a" or "an" entity refers to one or more of that entity. As such, the terms "a" (or "an"), "one or more" and "at least one" can be used interchangeably herein. It is also to be noted that the terms "comprising", "including", and "having" can be used interchangeably.

[0014] The term "automatic" and variations thereof, as used herein, refers to any process or operation done without material human input when the process or operation is performed. However, a process or operation can be automatic, even though performance of the process or operation uses material or immaterial human input, if the input is received before performance of the process or operation. Human input is deemed to be material if such input influences how the process or operation will be performed. Human input that consents to the performance of the process or operation is not deemed to be "material."

[0015] A "blog" (a blend of the term ***web log***) is a type of website or part of a website supposed to be updated with new content from time to time. Blogs are usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video. Entries are commonly displayed in reverse-chronological order.

[0016] A "blogging service" is a blog-publishing service that allows private or multi-user blogs with time-stamped entries.

[0017] The term "cable TV" refers to a system of distributing television programs to subscribers via radio frequency (RF) signals transmitted through coaxial cables or light pulses through fiber-optic cables. This contrasts with traditional broadcast television (terrestrial television) in which the television signal is transmitted over the air by radio waves and received by a television antenna attached to the television.

[0018] The term "channel" or "television channel," as used herein, can be a physical or virtual channel over which a television station or television network is distributed. A physical cannel in analog television can be an amount of bandwidth, typically 6, 7, or 8 MHz, that occupies a predetermine channel frequency. A virtual channel is a representation, in cable or satellite television, of a data stream for a particular television media provider (*e.g.*, CDS, TNT, HBO, etc.).

[0019] The term "computer-readable medium," as used herein, refers to any tangible storage and/or transmission medium that participate in providing instructions to a processor for execution. Such a medium may take many forms, including but not limited to, non-volatile media, volatile media, and transmission media. Non-volatile media includes, for example, NVRAM, or magnetic or optical disks. Volatile media includes dynamic memory, such as main memory. Common *form*s of computer-readable media include, for example, a floppy disk, a flexible disk, hard disk, magnetic tape, or any other magnetic medium, magneto-optical medium, a CD-ROM, any other optical medium, punch cards, paper tape, any other physical medium with patterns of holes, a RAM, a PROM, and EPROM, a FLASH-EPROM, a solid state medium like a memory card, any other memory chip or cartridge, a carrier wave as described hereinafter, or any other medium from which a computer can read. A digital file attachment to e-mail or other self-contained information archive or set of archives is considered a distribution medium equivalent to a tangible storage medium. When the computer-readable media is configured as a database, it is to be understood that the database may be any type of database, such as relational, hierarchical, object-oriented, and/or the like. Accordingly, the disclosure is considered to include a tangible storage medium or distribution medium and prior art-recognized equivalents and successor media, in which the software implementations of the present disclosure are stored.

[0020] The term" enhanced television" refers to a collection of specifications developed under the OpenCable project of CableLabs (Cable Television Laboratories, Inc.) that

define an ETV Application consisting of resources (files) adhering to the Enhanced TV Binary Interchange Format (EBIF) content format as well as PNG images, JPEG images, and PFR downloadable fonts. An ETV application is normally delivered through an MPEG transport stream and accompanies an MPEG program containing video and audio elementary streams. An "ETV Application" is a collection of resources (files) that include one or more EBIF resources that represent viewable information in the form of pages. Two forms of a given ETV Application may be distinguished: (1) an interchange form and (2) an execution form. The interchange form of an ETV Application consists of the resources (files) that represent the compiled application prior to its actual execution by an ETV User Agent. The execution form of an ETV Application consists of the stored, and possibly mutated forms of these resources while being decoded, presented, and executed by an ETV User Agent. An "ETV User Agent" is a software component that operates on a set-top box, a television, or any other computing environment capable of receiving, decoding, presenting, and processing an ETV Application. This component usually provides, along with its host hardware environment, one or more mechanisms for an end-user to navigate and interact with the multimedia content represented by ETV Applications.

[0021] The term "high-definition television" (HDTV) provides a resolution that is substantially higher than that of standard-definition television. HDTV may be transmitted in various formats, namely 1080p - 1920×1080p: 2,073,600 pixels (approximately 2.1 megapixels) per frame, 1080i (which is typically either 1920×1080i: 1,036,800 pixels (approximately 1 megapixel) per field or 2,073,600 pixels (approximately 2.1 megapixels) per frame or 1440×1080i:[1] 777,600 pixels (approximately 0.8 megapixels) per field or 1,555,200 pixels (approximately 1.6 megapixels) per frame), or 720p - 1280×720p: 921,600 pixels (approximately 0.9 megapixels) per frame. As will be appreciated, "frame size" in pixels is defined as number of horizontal pixels × number of vertical pixels, for example 1280 × 720 or 1920 × 1080. Often the number of horizontal pixels is implied from context and is omitted, as in the case of 720p and 1080p, "scanning system" is identified with the letter "p" for progressive scanning or "I" for interlaced scanning, and "frame rate" is identified as number of video frames per second. For interlaced systems an alternative form of specifying number of fields per second is often used. For purposes of this disclosure, high-definition television" is deemed to include other high-definition analog or digital video formats, including ultra high definition television.

[0022] The term "internet television" (otherwise known as Internet TV, Online Television, or Online TV) is the digital distribution of television content via the Internet. It should not be confused with Web television - short programs or videos created by a wide variety of companies and individuals, or Internet protocol television (IPTV) - an emerging internet technology standard for use by television broadcasters. Internet Television is a general term that covers the delivery of television shows and other video content over the internet by video streaming technology, typically by major traditional television broadcasters. It does not describe a technology used to deliver content (see Internet protocol television). Internet television has become very popular through services such as RTÉ Player in Ireland; BBC iPlayer, 4oD, ITV Player (also STV Player and UTV Player) and Demand Five in the United Kingdom; Hulu in the United States; Nederland 24 in the Netherlands; ABC iview and Australia Live TV in Australia; Tivibu in Turkey; iWanTV! in the Philippines.

[0023] The term "internet protocol television" (IPTV) refers to a system through which television services are delivered using the Internet protocol suite over a packet-switched network such as the Internet, instead of being delivered through traditional terrestrial, satellite signal, and cable television formats. IPTV services may be classified into three main groups, namely live television, with or without interactivity related to the current TV show; time-shifted television: catch-up TV (replays a TV show that was broadcast hours or days ago), start-over TV (replays the current TV show from its beginning); and video on demand (VOD): browse a catalog of videos, not related to TV programming. IPTV is distinguished from Internet television by its on-going standardization process (e.g., European Telecommunications Standards Institute) and preferential deployment scenarios in subscriber-based telecommunications networks with high-speed access channels into end-user premises via set-top boxes or other customer-premises equipment.

[0024] The term "silo," as used herein, can be a logical representation of an input, source, or application. An input can be a device or devices (*e.g.*, DVD, VCR, etc.) electrically connected to the television through a port (*e.g.*, HDMI, video/audio inputs, etc.) or through a network (*e.g.*, LAN WAN, etc.). Rather than a device or devices, the input could be configured as an electrical or physical connection to one or more devices. A source, particularly a content source, can be a data service that provides content, (*e.g.,* a media center, a file system, etc.). An application can be a software service that provides a particular type of function (*e.g.*, Live TV, Video on Demand, User Applications,

Photograph display, etc.). The silo, as a logical representation, can have an associated definition or property, such as a setting, feature, or other characteristic.

[0025] The term "panel ," as used herein, can mean a user interface displayed in at least a portion of the display. The panel may be interactive (*e.g.,* accepts user input) or informational (*e.g.,* does not accept user input). A panel may be translucent whereby the panel obscures but does not mask the underlying content being displayed in the display. Panels may be provided in response to a user input from a button or remote control interface.

[0026] The term "screen," as used herein, refers to a physical structure that includes one or more hardware components that provide the device with the ability to render a user interface and/or receive user input. A screen can encompass any combination of gesture capture region, a touch sensitive display, and/or a configurable area. The device can have one or more physical screens embedded in the hardware. However a screen may also include an external peripheral device that may be attached and detached from the device. In embodiments, multiple external devices may be attached to the device. For example, another screen may be included with a remote control unit that interfaces with the Intelligent TV.

[0027] The term "media" of "multimedia," as used herein, refers to content that may assume one of a combination of different content forms. Multimedia can include one or more of, but is not limited to, text, audio, still images, animation, video, or interactivity content forms.

[0028] A "smart TV", sometimes referred to as connected TV or hybrid TV, (not to be confused with IPTV, Internet TV, or with Web TV), describes a trend of integration of the Internet and Web 2.0 features into television sets and set-top boxes, as well as the technological convergence between computers and these television sets/set-top boxes. The devices have a higher focus on online interactive media, Internet TV, over-the-top content, as well as on-demand streaming media, and less focus on traditional broadcast media than traditional television sets and set-top boxes

[0029] The term "television" is a telecommunication medium, device (or set) or set of associated devices, programming, and/or transmission for transmitting and receiving moving images that can be monochrome (black-and-white) or colored, with or without accompanying sound. Different countries use one of the three main video standards for TVs, namely PAL, NTSC or SECAM. Television is most commonly used for displaying broadcast television signals. The broadcast television system is typically disseminated via

radio transmissions on designated channels in the 54–890 MHz frequency band. A common television set comprises multiple internal electronic circuits, including those for receiving and decoding broadcast signals. A visual display device which lacks a tuner is properly called a video monitor, rather than a television. A television may be different from other monitors or displays based on the distance maintained between the user and the television when the user watches the media and based on the inclusion of a tuner or other electronic circuit to receive the broadcast television signal.

[0030] The term "Live TV," as used herein, refers to a television production broadcast in real-time, as events happen, in the present.

[0031] The term "standard-definition television" (SDTV) is a television system that uses a resolution that is not considered to be either high-definition television (HDTV 720p and 1080p) or enhanced-definition television (EDTV 480p). The two common SDTV signal types are 576i, with 576 interlaced lines of resolution, derived from the European-developed PAL and SECAM systems; and 480i based on the American National Television System Committee NTSC system. In the US, digital SDTV is broadcast in the same 4:3 aspect ratio as NTSC signals. However, in other parts of the world that used the PAL or SECAM analog standards, standard-definition television is now usually shown with a 16:9 aspect ratio. Standards that support digital SDTV broadcast include DVB, ATSC and ISDB. Television signals are transmitted in digital form, and their pixels have a rectangular shape, as opposed to square pixels that are used in modern computer monitors and modern implementations of HDTV. The table below summarizes pixel aspect ratios for various kinds of SDTV video signal. Note that the actual image (be it 4:3 or 16:9) is always contained in the center 704 horizontal pixels of the digital frame, regardless of how many horizontal pixels (704 or 720) are used. In case of digital video signal having 720 horizontal pixels, only the center 704 pixels contain actual 4:3 or 16:9 image, and the 8 pixel wide stripes from either side are called nominal analogue blanking and should be discarded before displaying the image. Nominal analogue blanking should not be confused with overscan, as overscan areas are part of the actual 4:3 or 16:9 image.

[0032] The term "video on demand (VOD)," as used herein, refers to systems and processes which allow users to select and watch/listen to video or audio content on demand. VOD systems may stream content, to view the content in real time, or download the content to a storage medium for viewing at a later time.

[0033] The term "satellite positioning system receiver" refers to a wireless receiver or transceiver to receive and/or send location signals from and/or to a satellite positioning

system, such as the Global Positioning System ("GPS") (US), GLONASS (Russia), Galileo positioning system (EU), Compass navigation system (China), and Regional Navigational Satellite System (India).The term "display," as used herein, refers to at least a portion of a screen used to display the output of the television to a user. A single physical screen can include multiple displays that are managed as separate logical displays. Thus, different content can be displayed on the separate displays although part of the same physical screen.

[0034] The term "displayed image," as used herein, refers to an image produced on the display. A typical displayed image is a television broadcast or menu. The displayed image may occupy all or a portion of the display.

[0035] The term "display orientation," as used herein, refers to the way in which a rectangular display is oriented by a user for viewing. The two most common types of display orientation are portrait and landscape. In landscape mode, the display is oriented such that the width of the display is greater than the height of the display (such as a 4:3 ratio, which is 4 units wide and 3 units tall, or a 16:9 ratio, which is 16 units wide and 9 units tall). Stated differently, the longer dimension of the display is oriented substantially horizontal in landscape mode while the shorter dimension of the display is oriented substantially vertical. In the portrait mode, by contrast, the display is oriented such that the width of the display is less than the height of the display. Stated differently, the shorter dimension of the display is oriented substantially horizontal in the portrait mode while the longer dimension of the display is oriented substantially vertical.

[0036] The term "module," as used herein, refers to any known or later developed hardware, software, firmware, artificial intelligence, fuzzy logic, or combination of hardware and software that is capable of performing the functionality associated with that element.

[0037] The terms "determine," "calculate" and "compute," and variations thereof, as used herein, are used interchangeably and include any type of methodology, process, mathematical operation or technique.

[0038] The term "touch screen" or "touchscreen" refer to screen that can receive user contact or other tactile input, such as a stylus. The touch screen may sense user contact in a number of different ways, such as by a change in an electrical parameter (e.g., resistance or capacitance), acoustic wave variations, infrared radiation proximity detection, light variation detection, and the like. In a resistive touch screen, for example, normally separated conductive and resistive metallic layers in the screen pass an electrical current.

When a user touches the screen, the two layers make contact in the contacted location, whereby a change in electrical field is noted and the coordinates of the contacted location calculated. In a capacitive touch screen, a capacitive layer stores electrical charge, which is discharged to the user upon contact with the touch screen, causing a decrease in the charge of the capacitive layer. The decrease is measured, and the contacted location coordinates determined. In a surface acoustic wave touch screen, an acoustic wave is transmitted through the screen, and the acoustic wave is disturbed by user contact. A receiving transducer detects the user contact instance and determines the contacted location coordinates.

[0039] The term "web television" is original television content produced for broadcast via the World Wide Web. Some major distributors of web television are YouTube, Myspace, Newgrounds, Blip.tv, and Crackle.

[0040] The term "display" refers to a portion of one or more screens used to display the output of a computer to a user. A display may be a single-screen display or a multi-screen display, referred to as a composite display. A composite display can encompass the touch sensitive display of one or more screens. A single physical screen can include multiple displays that are managed as separate logical displays. Thus, different content can be displayed on the separate displays although part of the same physical screen.

[0041] The terms "instant message" and "instant messaging" refer to a form of real-time text communication between two or more people, typically based on typed text.

[0042] The term "internet search engine" refers to a web search engine designed to search for information on the World Wide Web and FTP servers. The search results are generally presented in a list of results often referred to as SERPS, or "search engine results pages". The information may consist of web pages, images, information and other types of files. Some search engines also mine data available in databases or open directories. Web search engines work by storing information about many web pages, which they retrieve from the html itself. These pages are retrieved by a Web crawler (sometimes also known as a spider) — an automated Web browser which follows every link on the site. The contents of each page are then analyzed to determine how it should be indexed (for example, words are extracted from the titles, headings, or special fields called meta tags). Data about web pages are stored in an index database for use in later queries. Some search engines, such as Google™, store all or part of the source page (referred to as a cache) as well as information about the web pages, whereas others, such as AltaVista™, store every word of every page they find.

[0043] The term "module" as used herein refers to any known or later developed hardware, software, firmware, artificial intelligence, fuzzy logic, or combination of hardware and software that is capable of performing the functionality associated with that element. Also, while the disclosure is presented in terms of exemplary embodiments, it should be appreciated that individual aspects of the disclosure can be separately claimed.

[0044] The terms "online community", "e-community", or "virtual community" mean a group of people that primarily interact via a computer network, rather than face to face, for social, professional, educational or other purposes. The interaction can use a variety of media formats, including wikis, blogs, chat rooms, Internet forums, instant messaging, email, and other forms of electronic media. Many media formats are used in social software separately or in combination, including text-based chatrooms and forums that use voice, video text or avatars.

[0045] The term "remote control" refers to a component of an electronics device, most commonly a television set, DVD player and/or home theater system for operating the device wirelessly, typically from a short line-of-sight distance. Remote control normally uses infrared and/or radio frequency (RF) signaling and can include WiFi, wireless USB, Bluetooth™ connectivity, motion sensor enabled capabilities and/or voice control. A touchscreen remote control is a handheld remote control device which uses a touchscreen user interface to replace most of the hard, built-in physical buttons used in normal remote control devices.

[0046] The term "satellite TV" refers to television programming delivered by the means of communications satellite and received by an outdoor antenna, usually a parabolic reflector generally referred to as a satellite dish, and as far as household usage is concerned, a satellite receiver either in the form of an external set-top box or a satellite tuner module built into a TV set.

[0047] The term "social network service" is a service provider that builds online communities of people, who share interests and/or activities, or who are interested in exploring the interests and activities of others. Most social network services are web-based and provide a variety of ways for users to interact, such as e-mail and instant messaging services.

[0048] The term "social network" refers to a web-based social network.

[0049] The term "gesture" refers to a user action that expresses an intended idea, action, meaning, result, and/or outcome. The user action can include manipulating a device (e.g., opening or closing a device, changing a device orientation, moving a trackball or wheel,

etc.), movement of a body part in relation to the device, movement of an implement or tool in relation to the device, audio inputs, etc. A gesture may be made on a device (such as on the screen) or with the device to interact with the device.

[0050] The term "gesture capture" refers to a sense or otherwise a detection of an instance and/or type of user gesture. The gesture capture can occur in one or more areas of the screen, A gesture region can be on the display, where it may be referred to as a touch sensitive display or off the display where it may be referred to as a gesture capture area.

[0051] The term "electronic address" refers to any contactable address, including a telephone number, instant message handle, e-mail address, Universal Resource Locator ("URL"), Universal Resource Identifier ("URI"), Address of Record ("AOR"), electronic alias in a database, like addresses, and combinations thereof.

[0052] It shall be understood that the term "means," as used herein, shall be given its broadest possible interpretation in accordance with 35 U.S.C., Section 112, Paragraph 6. Accordingly, a claim incorporating the term "means" shall cover all structures, materials, or acts set forth herein, and all of the equivalents thereof. Further, the structures, materials or acts and the equivalents thereof shall include all those described in the summary of the invention, brief description of the drawings, detailed description, abstract, and claims themselves.

[0053] The preceding is a simplified summary of the disclosure to provide an understanding of some aspects of the disclosure. This summary is neither an extensive nor exhaustive overview of the disclosure and its various aspects, embodiments, and/or configurations. It is intended neither to identify key or critical elements of the disclosure nor to delineate the scope of the disclosure but to present selected concepts of the disclosure in a simplified form as an introduction to the more detailed description presented below. As will be appreciated, other aspects, embodiments, and/or configurations of the disclosure are possible utilizing, alone or in combination, one or more of the features set forth above or described in detail below.

BRIEF DESCRIPTION OF THE DRAWINGS

[0054] FIG. 1A includes a first view of an embodiment of an environment or a intelligent television;

[0055] FIG. 1B includes a second view of an embodiment of an environment or a intelligent television;

[0056] FIG. 2A includes a first view of an embodiment of a intelligent television;

[0057] FIG. 2B includes a second view of an embodiment of a intelligent television;

[0058] FIG. 2C includes a third view of an embodiment of a intelligent television;

[0059] FIG. 2D includes a fourth view of an embodiment of a intelligent television;

[0060] FIG. 3 is a block diagram of an embodiment of the hardware of the intelligent television;

[0061] FIG. 4 is a block diagram of an embodiment of the intelligent television software and/or firmware;

[0062] FIG. 5 is a second block diagram of an embodiment of the intelligent television software and/or firmware;

[0063] FIG. 6 is a third block diagram of an embodiment of the intelligent television software and/or firmware;

[0064] FIG. 7 is a plan view of an embodiment of a handheld remote control;

[0065] Fig. 8 is a side view of an embodiment of a remote control;

[0066] Fig. 9A is a bottom view of an embodiment of a remote control with a joystick in a neutral position;

[0067] Fig. 9B is a bottom view of an embodiment of a remote control with the joystick in a lower position;

[0068] Fig. 9C is a bottom view of an embodiment of a remote control with the joystick in an upper position;

[0069] Fig. 10 is a plan view of another embodiment of a handheld remote control;

[0070] Fig. 11A is a front view of an embodiment of an Intelligent TV screen;

[0071] Fig. 11B is a front view of an embodiment of an Intelligent TV screen;

[0072] Fig. 11C is a front view of an embodiment of an Intelligent TV screen;

[0073] Fig. 12 is a block diagram of an embodiment of a handheld remote control of either Figs. 7 or 10;

[0074] Fig. 13 is a block diagram of an embodiment of a content data service;

[0075] Fig. 14 is a first panel view of an embodiment of an intelligent television;

[0076] Fig. 15A-Fig. 15C illustrate layouts consistent with at least one embodiment of the present disclosure;

[0077] Fig. 16 is a second panel view in accordance with embodiments of the present disclosure;

[0078] Fig. 17A-17B illustrates one or more panel types in accordance with embodiments of the present disclosure;

[0079] Fig. 18 illustrates a third panel view in accordance with embodiments of the present disclosure;

[0080] Fig. 19 illustrates a fourth panel view in accordance with embodiments of the present disclosure;

[0081] Fig. 20A-20B illustrate a layout and display of content in accordance with embodiments of the present disclosure;

[0082] Fig. 21illustrates a fifth panel view in accordance with embodiments of the present disclosure;

[0083] Fig. 22A-22B illustrate one or more panel views in accordance with embodiments of the present disclosure;

[0084] Fig. 23A-23F illustrate one or more content views in accordance with embodiments of the present disclosure;

[0085] Fig. 24 is a flow diagram depicting a content panel and panel type selection process in accordance with embodiments of the present disclosure;

[0086] In the appended figures, similar components and/or features may have the same reference label. Further, various components of the same type may be distinguished by following the reference label by a letter that distinguishes among the similar components. If only the first reference label is used in the specification, the description is applicable to any one of the similar components having the same first reference label irrespective of the second reference label.

DETAILED DESCRIPTION

[0087] Presented herein are embodiments of a device. The device can be a telecommunications device, such as a television, an electronic visual display device, or other smart device. The device can include one or more screens, or sections of a screen, that are configured to receive and present information from a number of sources. Further, the device can receive user input in unique ways. The overall design and functionality of the device provides for an enhanced user experience making the device more useful and more efficient.

[0088] Intelligent Television (TV) Environment:

[0089] Referring to Figs. 1A and 1B, an Intelligent TV, or device, 100 is shown. It is anticipated that the Intelligent TV 100 may be used for entertainment, business applications, social interaction, content creation and/or consumption, and to organize and control one or more other devices that are in communication with the Intelligent TV 100.

As can be appreciated, the Intelligent TV can be used to enhance the user interactive experience whether at home or at work.

[0090] In some embodiments, the Intelligent TV 100 may be configured to receive and understand a variety of user and/or device inputs. For example, a user may interface with the Intelligent TV 100 via one or more physical or electrical controls, such as buttons, switches, touch sensitive screens/regions (e.g., capacitive touch, resistive touch, etc.), and/or other controls associated with the Intelligent TV 100. In some cases, the Intelligent TV 100 may include the one or more interactive controls. Additionally or alternatively, the one or more controls may be associated with a remote control. The remote control may communicate with the Intelligent TV 100 via wired and/or wireless signals. As can be appreciated, the remote control may operate via radio frequency (RF), infrared (IR), and/or a specific wireless communications protocol (e.g., Bluetooth™, Wi-Fi, etc.). In some cases, the controls, whether physical or electrical, may be configured (e.g., programmed) to suit a user's preferences.

[0091] Additionally or alternatively, smart phones, tablets, computers, laptops, netbooks, and other smart devices may be used to control the Intelligent TV 100. For example, control of the Intelligent TV 100 may be achieved via an application running on a smart device. The application may be configured to present a user with various Intelligent TV 100 controls in an intuitive user interface (UI) on a screen associated with the device 100. The screen may be a touch sensitive, or touch screen, display. Selections input by a user via the UI may be configured to control the Intelligent TV 100 by the application accessing one or more communication features associated with the smart device.

[0092] It is anticipated that the Intelligent TV 100 can receive input via various input devices including, but in no way limited to, video, audio, radio, light, tactile, and combinations thereof. Among other things, these input devices may be configured to allow the Intelligent TV 100 to see, recognize, and react to user gestures. For instance, a user may talk to the Intelligent TV 100 in a conversational manner. The Intelligent TV 100 may hear and understand voice commands in a manner similar to a smart device's intelligent personal assistant and voice-controlled navigator application (*e.g.*, Apple's Siri, Android's Skyvi, Robin, Iris, and other applications).

[0093] The Intelligent TV 100 may also be a communications device which can establish network connections 104 through many alternate means, including wired 108 or wireless 112 means, over cellular networks 116, and by using a telephone line 120 to

connect to telephone networks operated by telephone companies. These connections 104 enable the Intelligent TV 100 to access one or more communication networks. The communication networks may comprise any type of known communication medium or collection of communication media and may use any type of protocols to transport messages or signals between endpoints. The communication networks may include wired and/or wireless communication technologies. The Internet is an example of the communication network 132 that constitutes an Internet Protocol (IP) network consisting of many computers, computing networks, and other communication devices located all over the world, which are connected through many telephone systems and other means.

[0094] Other examples of the communication network 132 include, without limitation, a standard Plain Old Telephone System (POTS), an Integrated Services Digital Network (ISDN), the Public Switched Telephone Network (PSTN), a Local Area Network (LAN), a Wide Area Network (WAN), a cellular network, and any other type of packet-switched or circuit-switched network known in the art. In addition, it can be appreciated that the communication network 132 need not be limited to any one network type, and instead may be comprised of a number of different networks and/or network types.

[0095] In some embodiments, the Intelligent TV 100 may be equipped with multiple communication means. The multiple communication means may allow the Intelligent TV 100 to communicate across Local Area Networks (LANs) 124, wireless local area networks (WLANs) 128, and other networks 132. The networks may be connected in a redundant manner to ensure network access. In other words, if one connection is interrupted, the intelligent TV 100 can use an alternate communications path to reestablish and/or maintain the network connection 104. Among other things, the intelligent TV 100 may use these network connections 104 to send and receive information, interact with an electronic program guide (EPG) 136, receive software updates 140, contact customer service 144 (e.g., to receive help or service, etc.), and/or access remotely stored digital media libraries 148. In addition, these connections can allow the Intelligent TV 100 to make phone calls, send and/or receive email messages, send and/or receive text messages (such as email and instant messages), surf the Internet using an internet search engine, post blogs by a blogging service, and connect/interact with social media sites and/or online community (e.g., Facebook, Twitter, LinkedIn, Pinterest, GooglePlus, MySpace, and the like) maintained by a social network service. In combination with other components of the Intelligent TV 100 described in more detail below, these network connections 104 also enable the Intelligent TV 100 to conduct video teleconferences, electronic meetings, and

other communications. The Intelligent TV 100 may capture and store images and sound, using associated cameras, microphones, and other sensors. Additionally or alternatively, the Intelligent TV 100 may create and save screen shots of media, images, and data displayed on a screen associated with the Intelligent TV 100.

[0096] Further, as shown in Fig. 1B, the Intelligent TV 100 can interact with other electronic devices 168 by either by the wired 108 and/or wireless 112 connections. As described herein, components of the Intelligent TV 100 allow the device 100 to be connected to devices 168 including, but not limited to, DVD players 168a, BluRay players 168b, portable digital media devices 168c, smart phones 168d, tablet devices 168e, personal computers 168f, external cable boxes 168g, keyboards 168h, pointing devices 168i, printers 168j, game controllers and/or game pads 168k, satellite dishes 168l, external display devices 168m, and other universal serial bus (USB), local area network (LAN), Bluetooth™, high-definition multimedia interface (HDMI) compliant devices, and/or wireless devices. When connected to an external cable box 168g or satellite dish 168l, the Intelligent TV 100 can access additional media content. Also, as further described below, the Intelligent TV 100 is capable of receiving digital and/or analog signals broadcast by TV stations. The Intelligent TV 100 can be configured as one or more of a standard-definition television, enhanced television, and high-definition television. It may operate as one or more of cable, Internet, Internet Protocol, satellite, web, and/or smart television. The Intelligent TV 100 may also be used to control the operation of, and may interface with, other smart components such as security systems 172, door/gate controllers 176, remote video cameras 180, lighting systems 184, thermostats 188, refrigerators 192, and other appliances.

[0097] Intelligent TV:

[0098] Figs. 2A-2D illustrate components of the Intelligent TV 100. In general, as shown by Fig. 2A, the Intelligent TV 100 can be supported by a removable base or stand 204 that is attached to a frame 208. The frame 208 surrounds edges of a display screen 212, leaving a front surface of the display screen 212 uncovered. The display screen 212 may comprise a Liquid Crystal Display (LCD) screen, a plasma screen, Light Emitting Diode (LED) screen, or other screen types. In embodiments, the entire front surface of the screen 212 may be touch sensitive and capable of receiving input by the user touching the front surface of the screen 212.

[0099] The Intelligent TV 100 may include integrated speakers 216 and at least one microphone 220. A first area of the frame 208 may comprise a horizontal gesture capture

region 224 and second areas comprise vertical gesture capture regions 228. The gesture capture regions 224, 228 may comprise areas or regions that are capable of receiving input by recognizing gestures made by the user, and in some examples, without the need for the user to actually touch the screen 212 surface of the Intelligent TV 100. However, the gesture capture regions 224, 228 may not include pixels that can perform a display function or capability.

[00100] One or more image capture devices 232, such as a camera, can be included for capturing still and/or video images. The image capture device 232 can include or be associated with additional elements, such as a flash or other light source 236 and a range finding device 240 to assist focusing of the image capture device. In addition, the microphone 220, gesture capture regions 224, 228, image capture devices 232, and the range finding device 240 may be used by the Intelligent TV 100 to recognize individual users. Additionally or alternatively, the Intelligent TV 100 may learn and remember preferences associated with the individual users. In some embodiments, the learning and remembering (i.e., identifying and recalling stored information) may be associated with the recognition of a user.

An IR transmitter and receiver 244 may also be provided to connect the Intelligent TV 100 with a remote control device (not shown) or other IR devices. Additionally or alternatively, the remote control device may transmit wireless signals via RF, light, and/or a means other than IR. Also shown in Fig. 2A is an audio jack 248, which may be hidden behind a panel that is hinged or removable. The audio jack 248 accommodates a tip, ring, sleeve (TRS) connector, for example, to allow the user to utilize headphones, a headset, or other external audio equipment.

[00101] The Intelligent TV 100 can also include a number of buttons 252. For example, Fig. 2A illustrates the buttons 252 on the top of the Intelligent TV 100, although the buttons could be placed at other locations. As shown, the Intelligent TV 100 includes six buttons 252a-f, which can be configured for specific inputs. For example, the first button 252a may be configured as an on/off button used to control overall system power to the Intelligent TV 100. The buttons 252 may be configured to, in combination or alone, control a number of aspects of the Intelligent TV 100. Some non-limiting examples include, but are not limited to, overall system volume, brightness, the image capture device, the microphone, and initiation/termination of a video conference. Instead of separate buttons, two of the buttons may be combined into a rocker button. This rocker button arrangement may be useful in situations where the buttons are configured to control

features such as volume or brightness. In some embodiments, one or more of the buttons 252 are capable of supporting different user commands. By way of example, a normal press has a duration commonly of less than about 1 second and resembles a quick input. A medium press has a duration commonly of 1 second or more but less than about 12 seconds. A long press has a duration commonly of about 12 seconds or more. The function of the buttons is normally specific to the application that is active on the Intelligent TV 100. In the video conference application for instance and depending on the particular button, a normal, medium, or long press can mean end the video conference, increase or decrease the volume, increase a rate speed associated with a response to an input, and toggle microphone mute. Depending on the particular button, a normal, medium, or long press can also control the image capture device 232 to increase zoom, decrease zoom, take a photograph, or record video.

[00102] In support of communications functions or capabilities, the Intelligent TV 100 can include one or more shared or dedicated antennae 256 and wired broadband connections 260 as shown in Fig. 2B. The antennae 256 also enable the Intelligent TV 100 to receive digital and/or analog broadcast TV channels. The wired broadband connections 260 are, for example, a Digital Subscriber Line (DSL), an optical line, an Ethernet port, an IEEE 1394 interface, or other interfaces. The Intelligent TV 100 also has a telephone line jack 262 to further provide communications capability.

[00103] In addition to the removable base 204, the Intelligent TV 100 may include hardware and mounting points 264 on a rear surface to facilitate mounting the Intelligent TV 100 to a surface, such as a wall. In one example, the Intelligent TV 100 may incorporate at least one Video Equipment Standards Association (VESA) mounting interface for attaching the device 100 to the surface.

[00104] As shown in Fig. 2C, the Intelligent TV 100 may include docking interfaces or ports 268. The docking ports 268 may include proprietary or universal ports to support the interconnection of the Intelligent TV 100 to other devices or components, which may or may not include additional or different capabilities from those integral to the Intelligent TV 100. In addition to supporting an exchange of communication signals between the Intelligent TV 100 and a connected device or component, the docking ports 268 can support the supply of power to the connected device or component. The docking ports 268 can also comprise an intelligent element that comprises a docking module for controlling communications or other interactions between the Intelligent TV 100 and the connected device or component.

[00105] The Intelligent TV 100 also includes a number of card slots 272 and network or peripheral interface ports 276. The card slots 272 may accommodate different types of cards including subscriber identity modules (SIM), secure digital (SD) cards, MiniSD cards, flash memory cards, and other cards. Ports 276 in embodiments may include input/output (I/O) ports, such as universal serial bus (USB) ports, parallel ports, game ports, and high-definition multimedia interface (HDMI) connectors.

[00106] An audio/video (A/V) I/O module 280 can be included to provide audio to an interconnected speaker or other device, and to receive audio input from a connected microphone or other device. As an example, the audio input/output interface 280 may comprise an associated amplifier and analog to digital converter.

[00107] Hardware Features:

[00108] Fig. 3 illustrates components of a Intelligent TV 100 in accordance with embodiments of the present disclosure. In general, the Intelligent TV 100 includes a primary screen 304. Screen 304 can be a touch sensitive screen and can include different operative areas.

[00109] For example, a first operative area, within the screen 304, may comprise a display 310. In some embodiments, the display 310 may be touch sensitive. In general, the display 310 may comprise a full color, display.

[0100] A second area within the screen 304 may comprise a gesture capture region 320. The gesture capture region 320 may comprise an area or region that is outside of the display 310 area, and that is capable of receiving input, for example in the form of gestures provided by a user. However, the gesture capture region 320 does not include pixels that can perform a display function or capability.

[0101] A third region of the screen 304 may comprise a configurable area 312. The configurable area 312 is capable of receiving input and has display or limited display capabilities. In embodiments, the configurable area 312 may present different input options to the user. For example, the configurable area 312 may display buttons or other relatable items. Moreover, the identity of displayed buttons, or whether any buttons are displayed at all within the configurable area 312 of a screen 304, may be determined from the context in which the Intelligent TV 100 is used and/or operated.

[0102] In an exemplary touch sensitive screen 304 embodiment, the touch sensitive screen 304 comprises a liquid crystal display extending across at least those regions of the touch sensitive screen 304 that are capable of providing visual output to a user, and a

capacitive input matrix over those regions of the touch sensitive screen 304 that are capable of receiving input from the user.

[0103] One or more display controllers 316 may be provided for controlling the operation of the screen 304. The display controller 316 may control the operation of the touch sensitive screen 304, including input (touch sensing) and output (display) functions. The display controller 316 may also control the operation of the screen 304 and may interface with other inputs, such as infrared and/or radio input signals (e.g., door/gate controllers, alarm system components, etc.). In accordance with still other embodiments, the functions of a display controller 316 may be incorporated into other components, such as a processor 364.

[0104] The processor 364 may comprise a general purpose programmable processor or controller for executing application programming or instructions. In accordance with at least some embodiments, the processor 364 may include multiple processor cores, and/or implement multiple virtual processors. In accordance with still other embodiments, the processor 364 may include multiple physical processors. As a particular example, the processor 364 may comprise a specially configured application specific integrated circuit (ASIC) or other integrated circuit, a digital signal processor, a controller, a hardwired electronic or logic circuit, a programmable logic device or gate array, a special purpose computer, or the like. The processor 364 generally functions to run programming code or instructions implementing various functions of the Intelligent TV 100.

[0105] In support of connectivity functions or capabilities, the Intelligent TV 100 can include a module for encoding/decoding and/or compression/decompression 366 for receiving and managing digital television information. Encoding/decoding compression/decompression module 366 enables decompression and/or decoding of analog and/or digital information dispatched by a public television chain or in a private television network and received across antenna 324, I/O module 348, wireless connectivity module 328, and/or other wireless communications module 332. The television information may be sent to screen 304 and/or attached speakers receiving analog or digital reception signals. Any encoding/decoding and compression/decompression is performable on the basis of various formats (e.g., audio, video, and data). Encrypting module 324 is in communication with encoding/decoding compression/decompression module 366 and enables the confidentiality of all the data received or transmitted by the user or supplier.

[0106] In support of communications functions or capabilities, the Intelligent TV 100 can include a wireless connectivity module 328. As examples, the wireless connectivity

module 328 can comprise a GSM, CDMA, FDMA and/or analog cellular telephony transceiver capable of supporting voice, multimedia and/or data transfers over a cellular network. Alternatively or in addition, the Intelligent TV 100 can include an additional or other wireless communications module 332. As examples, the other wireless communications module 332 can comprise a Wi-Fi, Blutooth™, WiMax, infrared, or other wireless communications link. The wireless connectivity module 328 and the other wireless communications module 332 can each be associated with a shared or a dedicated antenna 324 and a shared or dedicated I/O module 348.

[0107] An input/output module 348 and associated ports may be included to support communications over wired networks or links, for example with other communication devices, server devices, and/or peripheral devices. Examples of an input/output module 348 include an Ethernet port, a Universal Serial Bus (USB) port, Thunderbolt™ or Light Peak interface, Institute of Electrical and Electronics Engineers (IEEE) 1394 port, or other interface.

[0108] An audio input/output interface/device(s) 344 can be included to provide analog audio to an interconnected speaker or other device, and to receive analog audio input from a connected microphone or other device. As an example, the audio input/output interface/device(s) 344 may comprise an associated amplifier and analog-to-digital converter. Alternatively or in addition, the Intelligent TV 100 can include an integrated audio input/output device 356 and/or an audio jack for interconnecting an external speaker or microphone. For example, an integrated speaker and an integrated microphone can be provided, to support near talk or speaker phone operations.

[0109] A port interface 352 may be included. The port interface 352 may include proprietary or universal ports to support the interconnection of the device 100 to other devices or components, such as a dock, which may or may not include additional or different capabilities from those integral to the device 100. In addition to supporting an exchange of communication signals between the device 100 and another device or component, the docking port 136 and/or port interface 352 can support the supply of power to or from the device 100. The port interface 352 also comprises an intelligent element that comprises a docking module for controlling communications or other interactions between the Intelligent TV 100 and a connected device or component. The docking module may interface with software applications that allow for the remote control of other devices or components (e.g., media centers, media players, and computer systems).

[0110] An Intelligent TV 100 may also include memory 308 for use in connection with the execution of application programming or instructions by the processor 364, and for the temporary or long term storage of program instructions and/or data. As examples, the memory 308 may comprise RAM, DRAM, SDRAM, or other solid state memory. Alternatively or in addition, data storage 312 may be provided. Like the memory 308, the data storage 312 may comprise a solid state memory device or devices. Alternatively or in addition, the data storage 312 may comprise a hard disk drive or other random access memory.

[0111] Hardware buttons 358 can be included for example for use in connection with certain control operations. One or more image capture interfaces/devices 340, such as a camera, can be included for capturing still and/or video images. Alternatively or in addition, an image capture interface/device 340 can include a scanner, code reader, or motion sensor. An image capture interface/device 340 can include or be associated with additional elements, such as a flash or other light source. The image capture interfaces/devices 340 may interface with a user ID module 350 that assists in identifying users of the Intelligent TV 100.

[0112] The Intelligent TV 100 can also include a global positioning system (GPS) receiver 336. In accordance with embodiments of the present invention, the GPS receiver 336 may further comprise a GPS module that is capable of providing absolute location information to other components of the Intelligent TV 100. As will be appreciated, other satellite-positioning system receivers can be used in lieu of or in addition to GPS.

[0113] Power can be supplied to the components of the Intelligent TV 100 from a power source and/or power control module 360. The power control module 360 can, for example, include a battery, an AC to DC converter, power control logic, and/or ports for interconnecting the Intelligent TV 100 to an external source of power.

[0114] Firmware and Software:

[0115] An embodiment of the software system components and modules 400 is shown in Fig. 4. The software system 400 may comprise one or more layers including, but not limited to, an operating system kernel 404, one or more libraries 408, an application framework 412, and one or more applications 416. The one or more layers 404-416 can communicate with each other to perform functions for the Intelligent TV 100.

[0116] An operating system (OS) kernel 404 contains the primary functions that allow the software to interact with hardware associated with the Intelligent TV 100. Kernel 404 can include a collection of software that manages the computer hardware resources and

provides services for other computer programs or software code. The operating system kernel 404 is the main component of the operating system and acts as an intermediary between the applications and data processing done with the hardware components. Part of the operating system kernel 404 can include one or more device drivers 420. A device driver 420 can be any code within the operating system that helps operate or control a device or hardware attached to or associated with the Intelligent TV. The driver 420 can include code for operating video, audio, and/or other multimedia components of the Intelligent TV 100. Examples of drivers include display, camera, flash, binder (IPC), keypad, WiFi, and audio drivers.

[0117] Library 408 can contain code or other components that may be accessed and implemented during the operation of the software system 400. The library 408 may contain one or more of, but is not limited to, an operating system runtime library 424, a TV services hypertext application language (HAL) library 428, and/or a data service library 432. The OS runtime library 424 may contain the code required by the operating system kernel 404 or other operating system functions to be executed during the runtime of the software system 400. The library can include the code that is initiated during the running of the software system 400.

[0118] The TV services hypertext application language 428 can include code required by TV services either executed in the application framework 412 or an application 416. The TV services HAL library 428 is specific to the Intelligent TV 100 operations that control different functions of the Intelligent TV. The TV service HAL library 428 can also be formed from other types of application languages or embodiments of different types of code or formats for code beyond the hypertext application language.

[0119] The data services library 432 can include the one or more components or codes to implement components for the data services function. The data services function can be implemented in the application framework 412 and/or applications layer 416. An embodiment of a function of the data services and the type of components that may be included is shown in Fig. 6.

[0120] The application framework 412 can include a general abstraction for providing functionality that can be selected by one or more application 416 to provide specific application functions or software for those applications. Thus, the framework 412 can include one or more different services, or other applications, that can be accessed by the applications 416 to provide general functions across two or more applications. Such functions include, for example, management of one or more of windows or panels,

surfaces, activities, content, and resources, The application framework 412 can include one or more, but is not limited to, TV services 434, TV services framework 440, TV resources 444, and user interface component 448.

[0121] The TV services framework 440 can provide an additional abstraction for different TV services. TV services framework 440 allows for the general access and function of services that are associated with the TV functionality. The TV services 436 are general services provided within the TV services framework 440 that can be accessed by applications in the applications layer 416. The TV resources 444 provide code for accessing TV resources including any types of storage, video, audio, or other functionality provided with the Intelligent TV 100. The TV resources 444, TV services 436, and TV services framework 440 provide for the different implementations of TV functionality that may occur with the Intelligent TV 100.

[0122] One or more user interface components 448 can provide general components for display of the Intelligent TV 100. The user interface components 448 might be general components that may be accessed by different applications provided in the application framework 412. The user interface components 448 may be accessed to provide for panels and silos as described in conjunction with Fig. 5.

[0123] The applications layer 416 can both contain and execute applications associated with the Intelligent TV 100. Applications layer 416 may include one or more of, but is not limited to, a live TV application 452, a video on demand application 456, a media center application 460, an application center application 464, and a user interface application 468. The live TV application 452 can provide live TV over different signal sources. For example, the live TV application, 452, can provide TV from input from cable television, over air broadcasts, from satellite services, or other types of live TV services. Live TV application 452 may then present the multimedia presentation or video and audio presentation of the live television signal over the display of the Intelligent TV 100.

[0124] The video on demand application 456 can provide for video from different storage sources. Unlike Live TV application 452, video on demand 456 provides for display of videos that are accessed from some memory source. The sources of the video on demand can be associated with users or with the Intelligent TV or some other type of service. For example, the video on demand 456 may be provided from an iTunes library stored in a cloud, from a local disc storage that contains stored video programs, or from some other source.

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[0125] The media center application 460 can provide application for different types of media presentation. For example, the media center 460 can provide for displaying pictures or audio that is different from, but still accessible by the user and different from live TV or video on demand. The media center 460 allows for the access of different sources to obtain the media in the display of such media on the Intelligent TV 100.

[0126] The application center 464 allows for the provision, storage and use of applications. An application can be a game, a productivity application, or some other application generally associated with computer systems or other devices, but may be operated within the Intelligent TV. An application center 464 may obtain these applications from different sources, store them locally and then execute those types of applications for the user on the Intelligent TV 100.

[0127] User interface application 468 provides for the specific user interfaces associated with the Intelligent TV 100. These user interfaces can include the silos and panels that are described in Fig. 5. An embodiment of the user interface software 500 is shown in Fig. 5. Here the application framework 412 contains one or more code components which help control the user interface events while one or more applications in the applications layer 416 affects the user interface use for the Intelligent TV 100. The application framework 412 can include a silo transition controller 504 and/or an input event dispatcher 508. There may be more or fewer code components in the application framework 412 than those shown in Fig. 5. The silo transition controller 504 contains the code and language that manages the transitions between one or more silos. A silo can be a vertical user interface feature on the Intelligent TV that contains information for user. The transition controller 504 can manage the changes between two silos when an event occurs in the user interface. The input event dispatcher 508 can receive user interface events that may be received from the operating system and provided to the input even dispatcher 508. These events can include selections of buttons on a remote control or on the TV or other types of user interface inputs. The input even dispatcher may then send these events to a silo manager 532 or panel manager 536 depending on the type of the event. The silo transition controller 504 can interface with the silo manager 532 to affect changes in the silos.

[0128] The application framework 416 can include a user interface application 468 and/or a silo application 512. The application framework 416 can include more or fewer user interface applications as necessary to control the user interface of the Intelligent TV 100 than those shown in Fig. 5. The user interface application can include a silo manager 532, a panel manager 536, and one or more types of panels 516 through 528. The silo

manager 532 manages the display and/or features of silos. The silo manager 532 can receive or send information from the silo transition controller 504 or the input event dispatcher 508 to change the silos displayed and/or to determine types of input received in the silos.

[0129] A panel manager 536 is operable to display panels in the user interface to manage transitions between those panels or to affect user interface inputs received in the panel. The panel manager 536 may thus be in communication with different user interface panels such as a global panel 516, a volume panel 520, a settings panel 524, and/or a notification panel 528. The panel manager 536 can display these types of panels depending on the inputs received from the input event dispatcher 508. The global panel 516 may include information that is associated with the home screen or top level hierarchal information for the user. A volume panel 520 may display information about an audio volume control or other settings for volume. A settings panel 524 can include information displayed about the settings of the audio or video, or other settable characteristics of the Intelligent TV 100. A notification panel 528 can provide information about notifications to a user. These notifications can be associated with information, such as, video on demand displays, favorites, currently provided programs, or other information. Notifications can be associated with the media or with some type of setting, or operation or the Intelligent TV 100. The panel manager 536 may be in communication with the panel controller 552 of the silo application 512.

[0130] The panel controller 552 may operate to control portions of the panels of the types described previously. Thus, the panel controller 552 may be in communication with a top panel application 540, an application panel 544, and/or bottom panel 548. These types of panels may be differently displayed in the user interface of the Intelligent TV 100. The panel control thus may be based on the configuration of the system or the type of display being used currently, put the types of panels 516-528 into a certain display orientation governed by the top panel application 540, application panel 544, or bottom panel application 548.

[0131] An embodiment of the data service 432 and the operation of the data management is shown in Fig. 6. The data management 600 can include one or more code components that are associated with different types of data. For example, there may be code components within the data service 432that execute and are associated with video on demand, the electronic program guide, or media data. There may be more or fewer types of data service 432 components than those shown in Fig. 6. Each of the different types of

data may include a data model 604-612. The data models govern what information is to be stored and how that information will be stored by the data service. Thus, the data model can govern regardless of where the data comes from, how the data will be received or managed within the Intelligent TV system. Thus, the data model 604, 608, and/or 612, can provide a translation ability or affect the ability to translate data from one form to another to be used by the Intelligent TV 100.

[0132] The different types of data services (video on demand, electronic programming guide, media) each have a data subservice 620, 624, and/or 628 that is in communication with one or more internal and/or external content providers 616. The data subservices 620, 624, and 628 that communicate with the content providers 616 to obtain data that may then be stored in databases 632, 636, and 640. The subservices 620, 624, and 628 may communicate with and initiate or enable one or more source plug-ins 644, 648, and 652 to communicate with the content provider. For each content provider 616, there may be a different source plug-in 644, 648, and 652. Thus, if there is more than one source of content for the data, each of the data subservice 620, 624, and 628 may determine and then enable or initiate a different source plug-in 644, 648, and/or 652. The content providers 616 may also provide information to a resource arbitrator 656 and/or thumbnail cache manager 660. The resource arbitrator 656 may operate to communicate with resources 664 that are external to the data service 432. Thus, the resource arbitrator 656 may communicate with cloud based storage, network based storage, or other types of external storage in the resources 664. This information may then be provided through the content provider module 616 to the data subservices 620, 624, 628. Likewise, a thumbnail cache manager may obtain thumbnail information from one of the data subservices 620, 624, 628 and store that information in the thumbnail database 666. Further the thumbnail cache manager 660 may extract or retrieve that information from the thumbnails database 666 to provide to one of the data subservices 620, 624, 628.

[0133] An exemplary content aggregation architecture 1300 is shown in Fig. 13. The architecture can include a user interface and content aggregation layers 1304 and 1308. The user interface layer 1304 may include a TV application 1312, media player 1316, and application(s) 1320. The TV application 1312 enables the viewer to view channels received via an appropriate transmission medium, such as cable, satellite, and/or the Internet. The media player 1316 views other types of media received via an appropriate transmission medium, such as the Internet. The application(s) 1320 include other TV-related (pre-installed) applications, such as content viewing, content searching, device

viewing, and setup algorithms, and coordinates with the media player 1316 to provide information to the viewer.

[0134] The content source layer 1308 includes, as data services, a content source service 1328, a content aggregation service 1332 and a content presentation service 1336. The content source service 1328 can manage content source investigators, including local and/or network file system(s), digital network device manager (which discovers handheld and non-handheld devices (e.g., digital media servers, players, renderers, controllers, printers, uploaders, downloaders, network connectivity functions, and interoperability units) by known techniques, such as a multicast universal plug and play or UPnP discovery techniques, and, for each discovered device, retrieves, parses, and encodes device descriptors, notifies the content source service of the newly discovered device, and provides information, such as an index, on previously discovered devices), Internet Protocol Television or IPTV, digital television or DTV (including high definition and enhanced TV), third party services (such as those referenced above), and applications (such as Android applications).

[0135] Content source investigators can track content sources and are typically configured as binaries. The content source service 1328 starts content source investigators and maintains open and persistent channels for communications. The communications include query or command and response pairs. The content aggregation service 1332 can manage content metadata fetchers, such as for video, audio, and/or picture metadata. The content presentation service 1336 may provide interfaces to the content index, such as an Android application interface and digital device interfaces.

[0136] The content source service 1328 can send and receive communications 1344 to and from the content aggregation service 1332. The communications can include notifications regarding new and removed digital devices and/or content and search queries and results. The content aggregation service 1332 can send and receive communications 1348 to and from the content presentation service 1336 including device and/or content lookup notifications, content-of-interest advisories and notifications, and search queries and results.

[0137] When a search is performed, particularly when the user is searching or browsing content, a user request may be received from the user interface layer 1300, by the content presentation service 1336, which responsively opens a socket and sends the request to the content aggregation service 1332. The content aggregation service 1332 first returns results from the local database 1340. The local database 1340 includes an index or data

model and indexed metadata. The content source service 1328 further issues search and browse requests for all content source investigators and other data management systems. The results are forwarded to the content aggregation service 1332, which updates the database 1340 to reflect the further search results and provides the original content aggregation database search results and the data updates, reflecting the additional content source service search results, over the previously opened socket to the content presentation service 1336. The content presentation service 1336 then provides the results to one or more components in the user interface layer 1300 for presentation to the viewer. When the search session is over (e.g., the search session is terminated by the user or an action of the user), the user interface layer 1300 disconnects the socket. As shown, media can be provided directly by the content aggregation service 1332 to the media player 1316 for presentation to the user.

[0138] Remote Control:

[0139] A handheld remote control can be provided to enable user interaction with the Intelligent TV 100. An exemplary handheld remote control is shown in Figs.7-9. The remote control 700 can include one or more of, but is not limited to, top, side and bottom housings 704, 708, and 712, an (on/off) power button 716, an input source button 720 (to select input source such as Live TV, video on demand, media center, application center, high definition multimedia interface or HDMI, component or COMP, audio/Video or A/V, digital or analog television or DTV/ATV, and video graphics array (VGA)), a (volume) mute button 724, a Live TV button 728 (to activate or select the Live TV silo), a video on demand (VOD) button 732 (to activate or select the video on demand silo), a media center button 736 (to activate or select the media center application or silo, which access various types of media such as music, TV programming, videos, and the like), an application center button 740 (to activate or select the application center application or silo), a global panel button 744, an application panel button 748, a back button 752 (to select a prior user operation or Intelligent TV state and/or navigate up a hierarchy of any displayed image or object(s) (in which case the back button 752 does not navigate within application panels or across application silos), a play button 756 (to play or pause media), a D-pad 760 (which includes north, east, west, and south directional arrows to navigate among displayed images and/or move between levels of an application's or object's hierarchy such as application view navigation, panel navigation, and collection navigation), an OK (or select) button 764 (to select a highlighted displayed image (such as displayed speed control, rewind, forward, play, and pause objects and/or objects on menu bar or in a menu

box) and/or navigate down a hierarchy of any displayed image or object(s)), a rocker-type volume-up and volume-down button 768 (to adjust the volume), a menu/guide button 772 (to select for display a menu or guide of programming), a 0-9 (number) button 776 (to display a number pad on the TV screen), a settings button 780 (which launches an application to access current and change TV settings (such as channel settings and settings used to adjust picture and sound effects (e.g., image mode (e.g., standard, playground, game, cinema, concert, and studio), brightness, contrast, saturation, color temperature, energy savings, 3D noise reduction, hue, sharpness, zoom mode (e.g., full screen, standard, smart zoom, and dot-to-dot), picture position, 3D mode, for picture, and sound retrieval system or SRS TruSurround, sound mode (e.g., standard, live 1, live 2, theatre, music, speech, user equalizer mode, Left/Right speaker balance, auto volume control, Sony/Philips Interconnect Format or S/PDIF (off, auto, pulse code modulation or PCM) for sound) and system settings (such as system (e.g., selected language for graphical user interface, user geographical and/or geopolitical location information, input method, area settings, and sleep time), network (e.g., WiFi, WiFi hotspot, WiFi direct, Point-to-Point Protocol over Ethernet or PPPoE (asymmetric digital subscriber line or ADSL), Ethernet) settings (e.g., enabled and disabled and selected and non-selected) and information (e.g., network information (e.g., electronic address such as Internet Protocol or IP address, subnet mask, gateway, domain name server information, domain name, Media Access Control or MAC address, service set identification or SSID, security information, and password information) and inline status), manage applications (e.g., currently installed applications, currently executing applications, and internal and external computer readable medium usage), and view user information regarding the Intelligent TV 100)), a rocker-type channel-up and channel-down button 784 (to increment or decrement the selected channel), and first, second, third and fourth hotkeys 788, 792, 794, and 796, and/or a moveable joystick 900 on a bottom of the remote control 700. The first, second, third, and fourth hotkeys are generally assigned different colors, which color indexing is depicted as displayed images on a selected panel to show the currently assigned function, if any, for each hotkey. As can be seen, the actuator layout can provide a highly efficient, satisfactory, and easily usable experience to the end user.

[0140] Unlike the functional associations and functions of many of the actuators, those of some of the actuators are not readily apparent. A number of examples will now be discussed by way of illustration.

[0141] The media center button 736, when selected, can provide information regarding music, videos, photographs, collections or groupings of music, videos, and/or photographs, and internal and external computational devices (such as personal computers, laptops, tablet computers, wireless phones, removable computer readable media, and the like), which can be grouped in a selected manner (such as favorites, most recently viewed, most watched or viewed, and most recently added). The information can includes previews (which can include selected portions of the media content, duration, file size, date created, date last watched, times watched or viewed, and audio and/or video format information).

[0142] The application center button 740, when selected, may provide information regarding pre-installed and downloaded applications. Unlike downloaded applications, pre-installed applications cannot be removed by the user or manually updated. Exemplary pre-installed applications include web browser, settings control, and content search algorithms. By way of illustration, the application center button 740 can provide a scrollable graphical grid of icons (each icon being associated with an application) currently available in the application center.

[0143] The global panel button 744, when selected, can provide the user, via one or more panels or windows, with access to one or more of, but not limited to, silos, notifications, a web browser, system settings, and/or information associated therewith. For example, the global panel button 744 can enable the user to determine what external devices are currently connected to and/or disconnected from the Intelligent TV 100, determine what inputs (e.g., HDMI ports) are currently available for connecting to external devices, determine a connection and/or operational status of a selected external device and/or network (*e.g.,* WiFi connected, Ethernet connected, and offline), assign a custom (or user selected) name to each input source, determine what content is currently being offered on Live TV, on demand, the media center, and/or the application center, access vendor messages and notifications to the user (e.g., system and/or application updates are available), activate the Internet browser, and/or access shortcuts on a displayed shortcut bar to more frequently used and desired applications. Common shortcuts are Internet browser (e.g., Internet search engine), system settings, and notifications. The common types of panels are for information (which is typically information related to a currently displayed image and/or content (e.g., title, date/time, audio/visual indicator, rating, and genre), browse requests, and/or search requests (such as search term field)). Each of the panel types may include a panel navigation bar, detailed information or relevant content to

the panel function, operation and/or purpose, and a hotkey bar (defining currently enabled functional associations of hotkeys).

[0144] The application panel button 748, when selected, can display an application window or panel. One application panel may be an information panel regarding a selected (pre-installed or previously downloaded) application icon. The information panel can one or more of identify the selected application, provide a description of the functionality (including application developer and/or vendor, version, release, and/or last update date and a category or type of application based on the application's functionality) and user ratings and/or degree of other user downloading of the application (*e.g.,* a star rating assigned based on one or more of the foregoing inputs), provide the option to launch, remove, update, and add to favorites the identified application, and provide a listing of selectable links of other (not yet downloaded) recommended applications that provide similar functionality to the identified application. The latter listing can, in turn, provide a description of the functionality (including application developer and/or vendor, version, release, and/or last update date and a category or type of application based on the application's functionality) and user ratings and/or degree of other user downloading of the application (*e.g.,* a star rating assigned based on one or more of the foregoing inputs).

[0145] The functions of the first, second, third, and fourth hotkeys 788, 792, 794, and 796 can change depending on system state, context, and/or, within a selected screen and/or panel, based on a content or currently selected portion of (or relative cursor position on) the screen. Commonly, a currently assigned function of any of the first, second, third, and fourth hotkeys 788, 792, 794, and 796 depends on a currently accessed silo and/or panel (with which the user is currently interacting within the silo). In other words, a first function of one of the first, second, third, and fourth hotkeys 788, 792, 794, and 796 is activated by the respective hotkey in a first system state while a different second function is activated by the respective hotkey in a different second system state. In another example, a third function of one of the first, second, third, and fourth hotkeys 788, 792, 794, and 796 is activated by the respective hotkey when a user focus (or currently selected cursor position or screen portion) is at a first screen position while a different fourth function is activated by the respective hotkey when a user focus (or currently selected cursor position or screen portion) is at a different second screen position. The first screen position can, for instance, be within an icon while the second screen position is outside of the icon. Hotkey functionality that could be enabled when in the first screen position may be "configure" and "remove" and disabled is "add", and, when in the second position

hotkey functionality enabled can be "add" and disabled is "configure" and "remove". Generally, the states of hotkeys can include normal (for enabled actions or functions), disabled (when an action or function is temporarily disabled), pressed (when selected by a user to command an action or function to be performed), and unavailable (when no association between the hotkey and an action or function is currently available). While examples of hotkey functions are discussed below, it is to be understood that these are not intended to be exhaustive or limiting examples.

[0146] The first hotkey 788, when selected in a first system state, can enable the user to assign, change, or edit a name of an input source. It is typically enabled only when the input source of HDMI, Comp/YPbPr (e.g., component video cables), video output, and VGA is in focus. When selected in a second system state, the first hotkey 788 can return the user to a top of a scrollable collection of objects, such as application icons.

[0147] The second hotkey 792 may show all or less. In other words, the hotkey 792 can allow the user to show all inputs, including the unconnected/undetected ones and to hide the unconnected/undetected inputs, e.g., to expand and collapse the silo/input list. Each input source can have one of two states, namely connected/detected and unconnected/undetected. Some input sources, including Live TV, video on demand, media center, and application center are always connected/detected.

[0148] The moveable joystick 900 on the bottom of the remote control 700, when manipulated, can cause a displayed image on the Intelligent TV 100 screen to be displaced a proportional amount. In other words, the displayed image is displaced substantially simultaneously with displacement of the joystick 900 within the joystick aperture 904 in the bottom housing 712 of the remote control. As shown in Figs. 9B-C, the joystick 900 moves or slides between forward and reverse positions. Releasing the joystick 900 causes the joystick 900 to return to the center position of Fig. 9A, and the window to move or slide upwardly (when the joystick is released from the joystick position of Fig. 9B) or downwardly (when the joystick is released from the joystick position of Fig. 9C) until it disappears from view as shown in Fig. 11A . The effect on the screen of the Intelligent TV 100 is shown in Figs. 11A-C. In Fig. 11A, video content, such as TV programming, a video, movie, and the like, is being displayed by front surface of the screen 212. In Fig, 11B, the joystick 900 is moved or slid to the upper position of Fig. 9B, and a drop down window or panel 1100 moves or slides down (at the substantially the same rate of joystick 900 movement) at the top of the screen 212. In Fig, 11C, the joystick 900 is moved or slid to the lower position of Fig. 9C, and a drop up window or panel 1100 moves or slides up

(at the substantially the same rate of joystick 900 movement) at the bottom of the screen 212. The window 1100 partially covers the video content appearing on the remainder of the screen 212 and/or causes a portion of the screen 212 displaying video content to move and/or compress up or down the height of the window 1100.

[0149] The window 100 can include one or more of information (which is typically information related to a currently displayed image and/or content (e.g., panel navigation bar, detailed information (e.g., title, date/time, audio/visual indicator, rating, and genre), and hotkey bar (defining current functional associations of hotkeys)), browse requests, and/or search requests. Commonly, the window 1100 includes suitable information about the content (such as name, duration, and/or remaining viewing duration of content), settings information, TV or system control information, application (activation) icons (such as for pre-installed and/or downloaded applications such as application center, media center and WEB browser), and/or information about input source(s), When the joystick 900 is in either the forward or reverse position, the user can select an actuator on the front of the remote control, such as the OK button 764, and be taken, by displayed images on the screen 212, to another location in the user interface, such as a desktop. This can be done in an unintrusive manner and without affecting the flow of content that is pushed up or down. The joystick 900 could be moved, additionally or differently, from side-to-side to cause the window to appear at the left or right edge of the screen 212.

[0150] An alternative actuator configuration is shown in Fig. 10. The actuators are substantially the same as those of Figs. 7-9 except that the social network button 1000, when selected, can automatically select content and publish, via a social network service or other social media, the content to a social network or online community. User or viewer comments and/or other messages can be included in the outbound message. For example, all or one or frames or portions of media content (such as a video, music, a photograph, a picture, or text) can be provided automatically to a predetermined or selected group of people via Linked-In™, Myspace™, Twitter™, YouTube™, DailyMotion™, Facebook™, or Second Life™. The user, upon activating the button 1000 could, in response, select a social forum or media upon which the selected content (which is the content displayed to the user when the social network button 1000 is activated) is to be posted and/or a predetermined group within that social media to which the content is to be posted. Alternatively, these selections could be preconfigured or preselected by the user.

[0151] The social network button can also be used to "turn up" or "turn down" a social volume visualization. The Intelligent TV 100 can create dynamically a visualization of aggregated connections (and inbound and/or outbound messages) from a variety of social networks. The aggregation (and inbound and outbound messages) can be depicted graphically on the screen as a volume of connections to influence the viewer user. With a social volume visualization, selected contents of each linked social network profile of a social contact (and inbound and/or outbound messages from or to the linked social network contact and/or current activity of the social contact (such as watching the same programming or content the viewer is currently watching) can be presented in a separate tile (or visually displayed object). The size of the tile can be related to any number of criteria, including a relationship of the linked social contact (e.g., a relative degree of importance or type of relationship can determine the relative size of the tile, a degree of influence of the linked social contact to the current viewer, a geographic proximity of the linked social contact to the current viewer, a degree to which the currently provided media content is of interest to both the viewer and linked social contact (e.g., both parties enjoy war movies, murder mysteries, musicals, comedies, and the like), an assigned ranking of the linked viewer by the viewer, a type of social network type linking the viewer with the linked social contact, a current activity of the social network contact (e.g., currently watching the same content that the viewer is currently watching), a current online or offline status of the linked social contact, and a social network grouping type or category to which both the viewer and linked social contact belong (*e.g.,* work contact, best friend, family member, *etc.*).

[0152] The viewer can designate a portion of the screen to depict the social network aggregation. By turning the social volume up (+) or down (-), the viewer can increase the size and/or numbers of linked contact tiles provided to the viewer. In other words, by increasing the social volume the viewer can view, access, and/or push more social content from those of his or her social networks associated with him or her in a memory of the Intelligent TV. By decreasing the social volume, the viewer can view, access, and/or push less social content from his or her associated social networks. By selecting the mute button 724, the viewer can stop or pause any interactivity with his or her associated social networks (*e.g.,* inbound or outbound messages). Social volume and/or mute can be separated into two (or more) volume settings for outbound and inbound social network activity. By way of illustration, a first volume setting, control, and/or button can control the volume for outbound social network activity (e.g., outbound social messages) while a

second (different) volume setting, control, and/or button can control the volume for inbound social network activity (e.g., inbound social messages). By way of further illustration, a first mute setting, control, and/or button can stop or pause outbound social network activity (e.g., outbound social messages) while a second (different) mute setting, control, and/or button can stop or pause inbound social network activity (e.g., inbound social messages).

[0153] A functional block diagram of the remote control is shown in Fig. 12. The remote control 700 includes a controller 1208 to control and supervise remote control operations, optional wireless (RF) transceiver 1224 and antenna 1244 to send and receive wireless signals to and from the Intelligent TV 100 and other external components, optional infrared emitter 1228 to emit infrared signals to the Intelligent TV 100, optional light emitting diode or LED driver 1232 to control LED operation to provide video-enabled feedback to the user, actuators 1220 (including the various buttons and other actuators discussed above in connection with Figs. 7 and 10), and joystick 900, all interconnected via a bus 1248. An on board power source 1200 and power management module 1204 provide power to each of these components via power circuitry 1240. The infrared emitter 1228 and receiver (not shown) on the Intelligent TV system 100 can be used to determine a displayed object illuminated by the infrared signal and therefore adjust the displayed image, for example to indicate a focus of the user (e.g., illuminate a displayed object or show cursor position relative to displayed objects on the screen) and to determine and activate a desired command of the user. This can be done by tracking a position of the remote control in relation to infrared tracking reference points (e.g., a sensor bar or infrared LED's) positioned on or adjacent to the screen of the Intelligent TV 100. Motion tracking can further be augmented using position information received from a multi-axis gyroscope and/or accelerometer on board the remote control (not shown).

[0154] Referring now to Fig. 14, a panel configuration in accordance with embodiments of the present disclosure is illustrated. As previously discussed, the panel manager 536 is operable to display panels in the user interface to manage transitions between those panels or to affect user interface inputs received in the panel. The panel manager 536 may thus be in communication with different user interface panels such as a global panel 516, a volume panel 520, a settings panel 524, an applicant panel 544 and/or a notification panel 528. The panel manager 536 can display these types of panels depending on the inputs received from the input event dispatcher 508. The panel system is designed to provide a

quick access to extended functionality while still maintaining visibility into the main content view.

[0155] As illustrated in Fig. 14, an intelligent TV 100 may display a global panel 1404, active content view 1408, and the application panel 1412. The global panel 1404 may be the same or similar to global panel 516. The global panel 1404 may include information that is associated with the home screen or top level hierarchal information for the user. For instance, global panel 1404 may be used to contain and access functionality that exists at a system level; this functionality may be completely independent of the currently viewed content. The global panel 1404 may be displayed in such a manner as to not disrupt the content view area 1404; that is, the global panel 1404 may be displayed in such a manner as to provide a user the ability to view content displayed in the content view area 1408. For example, the global panel 1404 may be translucent in nature such that the content displayed in the content view area 1408 is displayed (i.e. still viewable to a user), behind the global panel 1404. The global panel 1404 may provide a consistent access to high level actions across all applications, an anchor for all views, a unified experience, and further may follow the same pattern as the application panel 1412. Moreover, and as previously discussed, global panel 1404 may be displayed by the intelligent TV 100 such that the active content in the content view area 1408 is always in view. In some embodiments, the global panel 1404 and the contents of the global panel 1404 may depend on the user; that is, the global panel 1404 may be specific to one or more users. Therefore, the global panel 1404 may also be thought of as a home panel.

[0156] As further illustrated in Fig. 14, an intelligent TV 100 may display an application panel 1412; the application panel may 1412 may be the same or similar to application panel 544. The application panel1412 may provide access to contextually relevant functionality based on the currently viewing/recently viewed material; similar to the global panel 1404, the application panel 1412 may provide such access without disrupting or the content view area 1408. That is, the application panel 1412 may be displayed in such a manner as to provide a user the ability to view content displayed in convent view area 1408. For example, the application panel 1412 may be translucent in nature such that the content displayed in the content view area 1408 is displayed (i.e. still viewable to a user), behind the application panel 1412. The application panel 1412 may provide quick access to core functionality of the intelligent TV 100 such that the active content in the content view area 1408 is always in view. Moreover, the application panel may provide a

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consistent user experience across all applications and may include focused contextual content.

[0157] Referring now to Fig. 15A, a global panel configuration in accordance with embodiments of the present disclosure is depicted. Specifically, intelligent TV 100 may display a global panel 1404 such that the global panel 1404 appears on the left side of the intelligent TV 100. However, intelligent TV 100 is not limited to displaying the global panel 1404 on the left; in some embodiments and consistent with the present disclosure, the global panel 1404 may be displayed on the right side of intelligent TV 100, near the top side of intelligent TV 100, near the bottom of intelligent TV 100, and also in the center of intelligent TV 100. Moreover, the intelligent TV 100 may display content in active content area 1408.

[0158] Referring now to Fig. 15B, a detailed global panel 1404 configuration of Fig. 15A is illustrated in accordance with embodiments of the present disclosure. The global panel 1404 may include one or more sources represented by icons and text, or shortcuts, 1504A-E. Of course, more or less icons and text 1504A-E may be displayed. As previously discussed, each icon and text 1504A-E may be associated with one or more sources of content. For example, icon and text 1504A may be associated with Live TV application 452; icon and text 1504B may be associated with video on demand 456; icon and text 1504C may be associated with media center application 460; icon and text 1504D may be associated with application center application 464; and icon and text 1504E may be associated with one or more sources of content, either internal or external. Moreover, icon and text 1504F may provide the ability for all sources of content to be displayed within global panel 1404. Global panel 1404 may additionally indicate a source that is selected or highlight using indicator 1512; for example, indicator 1512 may comprise a box positioned around Live TV – 801 CNXN. Although illustrated as a box, other methods or configurations which provide for icon selection and/or identification may be used. For example, instead of a box, indicator 1512 may comprise adjusting the background of an icon and text, such as 1504A for example, such that the color, shade, or hue is different. Alternatively, or in addition, indicator 1512 may comprise enlarging or magnifying the icon and text.

[0159] The text portion of icon and text 1504A-1504F may additional include the current application, source, or channel that is currently maintained, on hold, active, and/or associated with another content that is not currently displayed in content display area 1408. For example, active content area 1408, in reference to Fig. 15B, is currently

displaying a Live TV view (specifically 801 CNXN). The other icons and text, 1504B-1504E, may display the previously active content, or content that was previously displayed in active area 1408, at one time, but is now currently in a hold, inactive, or paused stated. For example, icon and text 1504B displays "On Demand – Skyfalls"; that is on demand application 456 may have previously been displaying some form of content – video, image, TV shows, etc.; the text of icon 1504B includes a title of the content that was previously displayed - "Skyfalls" . Similarly, the text portion of icon and text 1504D displays a previously displayed, or active, application – for example, "Bubble Bird". The application "Bubble Bird" may still reside in some form of application memory associated with application center application 464. As another example, the text portion of icon and text 1504E includes HDMI 1 – YBOX 720; source content on the HDMI 1 port from a YBOX 720 was previously displayed in content area 1408.

[0160] Additionally, global panel 1404 may include a shortcut area 1516. The shortcut area 1516 may provide access to frequently used applications, sources, or areas of intelligent TV 100. Moreover, shortcut area 1516 may be user configurable; that is a user may be able to decide what applications or sources are displayed. As illustrated in Fig. 15B, shortcut area 1516 displays an icon for browser 1520A, an icon for a settings menu 1520B, and an icon for alerts 1520C. The settings 1520B may provide a user access to one or more intelligent TV 100 configurations. Additionally, the Alerts icon 1520C, may indicate a number of alerts, or messages, a user has. The alert messages may be messages involving the operation and configuration of intelligent TV 100, messages received from one or more users, indications that new content has arrived, or the like.

[0161] In addition, the global panel 1404 may be displayed such that the actively displayed content is displayed in active content area 1408 and is further visible behind global panel 1404. For example, the content currently displayed on the intelligent TV 100 is of a desk; the global panel 1404 may be translucent such that the content is displayed below or behind the global panel 1404, as represented by the dotted lines in Fig. 15B.

[0162] As illustrated in Fig. 15C, and in accordance with embodiments of the present disclosure, as the indicator 1512 is moved to a different source, the content or a preview of the content may be displayed in active content area 1408. For example, Fig. 15C illustrates an image or video associated with Skyfalls being displayed in content area 1408. Similar to Fig. 15B, the content is displayed such that a user can view content even though global panel 1404 may reside over the actively displayed content.

[0163] As previously discussed, intelligent TV 100 may further include an application panel 1412 as shown in Fig. 16. The content displayed in the application panel 1412 depends on the content displayed in content view area 1412. Stated another, application panel 1412 is contextually dependent upon the source of content and the content itself in content view area 1412. This is significantly different from global panel 1404, in which the content displayed in global panel 1404 contains functionality that exists at a system level and is completely independent of the currently viewed content in content view area 1408. The application panel 1412 also provides customized information for each application. The application panel 1412 may comprise application panel elements comprising an application panel navigation bar 1604, a content area 1608, and a hotkey legend 1612. The application panel navigation bar 1604 is presented such that the navigation pattern and content remain consistent across all applications. That is, the navigation bar 1604 may include the same or similar elements such that an ease of navigation is maintained not matter which applications and/or sources are selected and displayed. For example, the navigation panel navigation bar 1604 may include fixed tab regions 1620A-1620E corresponding to navigable menus and further comprising Info, New, Recommended, Favorites, and Search. Although, Info, New, Recommended, Favorites, and Search are illustrated in Fig. 16, additional or fewer tab regions may be displayed.

[0164] The content area 1608 is panel view specific; that is, depending on a panel view focus, the content are 1608 may update, as further described below. Moreover, application panel 1612 may include a hotkey legend 1612 corresponding to one or more hotkeys. The hot key legend is positioned at the bottom of the panel across all applications. The function of the hot keys is context sensitive and may vary depending on the application selected and/or displayed in content view area 1408. However, generally speaking, some hot keys are generally navigation based while others are action based – for example, based on shortcuts such as marking a series as a favorite.

[0165] As illustrated in Figs. 17A-17B, multiple content area panels are provided in accordance with embodiments of the present disclosure. Each panel may be provided based on the context of a navigation. For example, if the navigation panel and navigation bar 1604 indicates that the focus is upon the "Info" fixed tab region 1620A, a panel based on the Info Views 1704 category, such as "Series Info" 1704A, may display content related to the current active view. As another example, when the focus of the navigation panel and navigation bar 1604 is upon the "Favorites" fixed tab region 1620D, a panel

based on the Favorites 1716 category, such as "Videos" 1716B, may display content related to the current active view. The categories of panels may include, but are not limited to, "Info Views" 1704 having panel types corresponding to 1704A-17-4J; "Browse" 1708 having panel types corresponding to 1708A-1708K; "Search" 1712 having panel types 1712A-1712B; "Favorites" 1716 having panel types 1716A-1716D; and "Global" 1720 having a panel type of 1720A. More or less panel categories and panel types may be provided.

[0166] Fig. 18 depicts an example where the "Last Viewed" fixed tab region has a focus in accordance with some embodiments of the present disclosure. When a "Last Viewed" fixed tab region has a focus, a browse category 1708 having a panel type 1708F may be utilized to display information regarding last viewed content items. For example Fig. 18 illustrates an example application panel 1408 when "Last Viewed" is selected. In such an instance, the last viewed panel 1708F provides a list of recommendations based on the last viewed media where the last viewed media is media agnostic. The last viewed panel 1708F may provide a rich chronological list of viewed content, including episode number, series name, and runtime information. For example, one or more content areas 1804 may be displayed containing information relating to content that was viewed last. The content areas 1804 may be arranged chronologically by date last viewed, alphabetically, or by some other means. The content areas 1804 may include a thumbnail displaying one or more images associated with the last viewed content. Additionally, where the content displayed includes episode information, the content area 1804 may include an episode number, an episode name, a series name, and runtime information. Additionally, the content area 1804 may include a favorite button 1808 to added some aspect (for example, an entire series, an episode etc..) to a favorites list.

[0167] Fig. 19 depicts an example where the "Favorites" fixed tab region, such as 1620 D, has a focus in accordance with some embodiments of the present disclosure. When a "Favorites" fixed tab region has a focus, a favorites category 1716 having a panel type corresponding to one of 1716A-1716D may be utilized to display information regarding content items marked as Favorite. The Favorites Panel displayed in application panel 1412, may provide a running list of a user's favorite content and allows for an easy viewing, date checking, share and the like of content items marked as favorite. For example Fig. 19 illustrates an example application panel 1408 when "Favorites" is selected. In such an instance, one of the favorites panel corresponding to 1716A-1716D provides a list recommendations based on content that a user has marked as special or

favorite. The content items, for example 1904, may be media agnostic. That is, the favorite content as illustrated in Fig. 19 may include TV shows, movies, applications, etc.. The content area 1904 associated with favorite content, generally includes an image thumbnail of the favorite item, and additional information, such as a series name, and a short description of the favorite content. Moreover, the content area 1904 may include a favorites button 1908 to mark or unmark favorite content.

[0168] Fig. 20A depicts an example when the info fixed tab region 1620A has a focus in accordance with some embodiments of the present disclosure. When info fixed tab region 1620A has a focus, an Info Panel Type, such as Panel type 1704A may be presented. Panel type 1704A may be presented when the content displayed in the content active area 1408 is associated with content having series information. The series panel type 1704A may include series information 2004A and 2004B, a view button 2012, a favorite button 2016, and a thumbnail display of the series information 2008. The series information 2004A and 2004B may comprise information related to or associated with content having series information, such as a TV series, a Movie series, or the like. The series information 2002A and 2004B may include the series name, a season, an episode number, and episode name, a long description of the series, video format, audio format, rating, and series number. Of course additional information relating to a series may be displayed.

[0169] Moreover, a content area 2020 may provide "Next Episode" information 2020. "Next episode information 2020 may comprise content areas 2024 corresponding to the next episodes, if any, of a selected episode. Content area 2024 may include a thumbnail of the next episode and/or additional episode information, such as episode number, episode name, and runtime information.

[0170] Fig. 20B depicts another example of the info fixed tab region 1620A having a focus in accordance with some embodiments of the present disclosure. When info fixed tab region 1620A has a focus, an Info Panel Type, such as Panel type 1704A may be presented. Panel type 1704A may be presented when the content displayed in the content active area 1408 is associated with content having series information. The series panel type 1704A may include series information 2034A and 2034B, a view button 2012, a favorite button 2016, and a thumbnail display of the series information 2008. The series information 2034A and 2034B may comprise information related to or associated with content having series information, such as a TV series, a Movie series, or the like. The series information 2032A and 2034B may include the series name, a season, an episode

number, a long description of the series, video format, audio format, rating, and series number. Of course additional information relating to a series may be displayed.

[0171] Moreover, a content area 2032 may provide "Recommended" information 2032. Recommended information 2028 may comprise content areas 2032 corresponding to the recommended episodes or content, if any, based on a selected content. Content area 2032 may include a thumbnail of the name of a series and a short description of the series.

[0172] In accordance with some embodiments of the present disclosure, application panel 1412 may display recommended content when the fixed tab region 1620C has the focus, as illustrated in Fig. 21. For example, based on one or more content that has been viewed by a user and/or based on content currently being viewed in the active content area 1408, recommended content may be displayed in application panel 1412. The recommended content may include content area 2104 containing an image thumbnail 2108, and information associated with the content, such as a series name and a short description.

[0173] In accordance with some embodiments of the present disclosure, application panel 1412 may display content resulting from a user search when the fixed tab region 1620E has the focus, as illustrated in Fig. 22A. For example, based on a search term or terms entered into a search box 2204, content matching the search term or terms may be returned to a user. Prior to searching however, a content panel, such as content panel 1712A, may first be displayed. Content panel 1712A may contain a one or more previous search terms 2208 and display each specific search term 2212 for a user to navigate to and select. Therefore, if a user decides to select a previously searched term based on the previous searches 2208, search results matching the previously searched term may be displayed. Alternatively, or in addition, a user may enter one or more search terms into the term box 2204. The results of the search, either based on the search terms, or based on the previous search, may then be displayed to a user using a content panel 1712B, for example, as illustrated in Fig. 22B. Fig. 22B may include one or more content areas 2216 embodying the results of the previous search. Content areas 2216 may include associated content, such as an image thumbnail, a series name, a description of the content, an episode number and the like.

[0174] In accordance with some embodiments of the present invention and as previously described, a user may select a fixed tab region 1620A corresponding to info, as illustrated in Fig. 23A. An indicator, such as indicator 2340 may display which fixed tab region is selected or has the current focus. Application panel 1412 may then display context

specific information corresponding to the Active Content Area 1408. For example, application panel 1412 may include information specific to Live TV – for example channel 801 corresponding to the network CXNX. Additionally, a thumbnail image 2304 corresponding to the channel 801 may be displayed in the application panel 1412. Moreover, the application panel 1412 may utilize one or more panel content types discussed in Figs. 17A-17B. For example, a mini-electronic program guide 2308 displaying program scheduling pertaining to the active content area 1408 may be displayed in the application panel 1412. Moreover, additional information pertaining to the active content area 1408 may be presented to a user. Information such as the title of the program 2312, the scheduling of the program 2316, a description of the program 2320, and characteristics of the program (for example HD, Dolby, and category) 2324 may also be displayed. Moreover, upon the display of the application panel 1412, the shortcut area 1516 may also be displayed.

[0175] In some embodiments, a user may select the EPG fixed tab region 2328 to display an Electronic Program Guide (EPG) as illustrated in Fig. 23B. The application panel 1412 may initially display the EPG without the additional content window 2332. The application panel 1412 may utilize panel content types 1708A for displaying content associated with one or more sources. As a user scrolls through the EPG, the user may stop on a specific scheduled program, for instance Newsroom on channel 801 corresponding to reference character 2336. After an amount of time has passed, an additional content window 2332 may display next to the EPG. This amount of time may be configured or set by a user.

[0176] In accordance with some embodiments of the present invention, a user may select the Categories fixed tab region 2344 to display one or more categories of content as illustrated in Fig. 23C. Upon selecting a specific category, such as the sports category 2348, content specific to the selected category may be displayed, as illustrated in Fig. 23D. For example, a mini-electronic program guide 2352 may be displayed in the application panel 1412 corresponding to the category selected by a user.

[0177] In accordance with at least some embodiments of the present invention and as illustrated in Fig. 23E, if a user selects a media center source, such as 1504C, the application panel 1412 may display content associated with the media center utilizing a panel type of Figs. 17A-17B. For example, the application panel 1412 may display an info panel pertaining to a photo panel or global info panel. The active content area 1408

may display the photo. Moreover, the application panel 1412 may include additional information pertaining to the image displayed in the active content area 1408.

[0178] As another example illustrating the contextual relationship between the application panel 1412 and the active content area 1408, suppose a user selects Applications 1504D from the Global Panel 1404. The active content window may display an application, such as Bubble Birds, in the content display area 1408, as illustrated in Fig. 23F. Upon invoking the application panel 1412, the application panel 1412 may utilize an info content panel type corresponding to at least one of the panel types illustrated in FIGS 17A-17B. In such an instance, the content displayed in the application panel 1412 depends on the content displayed in the active content window 1408.

[0179] FIG. 24 is a flow diagram of an embodiment of a method 2400 for selecting and displaying one or more panels for viewing by a user. Method 240 is in embodiments performed by a device, such as device 100. More specifically, one or more hardware and software components may be involved in performing method 2400. In one embodiment, one or more of the previously described modules perform one or more of the steps of method 2400. The method 2400 may be executed as a set of computer-executable instructions executed by a computer system and encoded or stored on a computer-readable medium. Hereinafter, the method 2400 shall be explained with reference to the systems, components, modules, software, etc. described in conjunction with Figs. 1-23F.

[0180] Method 2400 may continuously flow in a loop, flow according to a timed event, or flow according to a change in an operating or status parameter. Method 2400 is initiated at step 2404. Step 2404 may start with an intelligent television 100 receiving input from a remote or channel changer associated with a user. Based on the remote or channel changer input, the step 2404 may flow to step 2408, where the input received is analyzed. At step 2312, if it is determined that the analyzed communication is associated with displaying a global panel, such as panel 1404, then method 2400 proceeds to step 2416 where the user, or a user profile associated with the user is identified. Because the content information is not specific to the content displayed in the active content area 1408, once the user or user profile associated with a user has been identified, the method then proceeds to step 2420 to retrieve content information to display in the global panel 1404. At step 2424 the retrieved content is then displayed in the global pane 1404.

[0181] At step 2428 additional focus information indicating a specific icon and text, or shortcuts, corresponding to icon and text 1504A-F may be received from a user. The specific icon and/or text with focus information may then be used to identify a specific

application to select such that content is displayed in the active content area 1404 at step 2432. The method 2400 may then end at step 2436 or repeat step 2404.

[0182] If, at step 2412, it is determined that the analyzed input corresponds to the display of an application panel, such as application panel 1412, then, at step 2440, the content displayed in the active content area 1408 and/or the source is analyzed. At step 2444, a panel type is selected; the panel type may correspond to one or more panel types as described with reference to Figs 17A-17B. At step 2448, content information to populate the panel type is retrieved, and the content is then displayed at step 2452 in the application panel. After step 2452, additional focus information may be received at step 2456. Upon receiving additional focus information, the method 2400 may repeat at step 2440, where the content in the active content area and/or the source is analyzed. Alternatively, or in addition, the method 2400 may end at 2436.

[0183] The exemplary systems and methods of this disclosure have been described in relation to one or more embodiments of a panel described with respect to a global panel and an application panel. However, to avoid unnecessarily obscuring the present disclosure, the preceding description omits a number of known structures and devices. This omission is not to be construed as a limitation of the scopes of the claims. Specific details are set forth to provide an understanding of the present disclosure. It should however be appreciated that the present disclosure may be practiced in a variety of ways beyond the specific detail set forth herein.

[0184] Furthermore, while the exemplary aspects, embodiments, and/or configurations illustrated herein show the various components of the system collocated, certain components of the system can be located remotely, at distant portions of a distributed network, such as a LAN and/or the Internet, or within a dedicated system. Thus, it should be appreciated, that the components of the system can be combined in to one or more devices, such as a cable box or other set top box used to provide content to a television, a smart device used to watch streamed shows, and or other smart devices used to watch content, or collocated on a particular node of a distributed network, such as an analog and/or digital telecommunications network, a packet-switch network, or a circuit-switched network. It will be appreciated from the preceding description, and for reasons of computational efficiency, that the components of the system can be arranged at any location within a distributed network of components without affecting the operation of the system. For example, the various components can be located in a switch such as a PBX and media server, gateway, in one or more communications devices, at one or more users'

premises, or some combination thereof. Similarly, one or more functional portions of the system could be distributed between a telecommunications device(s) and an associated computing device.

[0185] Furthermore, it should be appreciated that the various links connecting the elements can be wired or wireless links, or any combination thereof, or any other known or later developed element(s) that is capable of supplying and/or communicating data to and from the connected elements. These wired or wireless links can also be secure links and may be capable of communicating encrypted information. Transmission media used as links, for example, can be any suitable carrier for electrical signals, including coaxial cables, copper wire and fiber optics, and may take the form of acoustic or light waves, such as those generated during radio-wave and infra-red data communications.

[0186] Also, while the flowcharts have been discussed and illustrated in relation to a particular sequence of events, it should be appreciated that changes, additions, and omissions to this sequence can occur without materially affecting the operation of the disclosed embodiments, configuration, and aspects.

[0187] A number of variations and modifications of the disclosure can be used. It would be possible to provide for some features of the disclosure without providing others.

[0188] For example in one alternative embodiment, the panel displayed to a user may comprise one or more combinations of the global panel and the application panel. In yet another embodiment, only the global panel is display. In a further alternative embodiment, on the application panel is display. In some alternative embodiments, the translucency and position of each panel is user configurable such that each panel may vary in transparency.

[0189] In yet another embodiment, the systems and methods of this disclosure can be implemented in conjunction with a special purpose computer, a programmed microprocessor or microcontroller and peripheral integrated circuit element(s), an ASIC or other integrated circuit, a digital signal processor, a hard-wired electronic or logic circuit such as discrete element circuit, a programmable logic device or gate array such as PLD, PLA, FPGA, PAL, special purpose computer, any comparable means, or the like. In general, any device(s) or means capable of implementing the methodology illustrated herein can be used to implement the various aspects of this disclosure. Exemplary hardware that can be used for the disclosed embodiments, configurations and aspects includes computers, handheld devices, telephones (e.g., cellular, Internet enabled, digital, analog, hybrids, and others), and other hardware known in the art. Some of these devices

include processors (e.g., a single or multiple microprocessors), memory, nonvolatile storage, input devices, and output devices. Furthermore, alternative software implementations including, but not limited to, distributed processing or component/object distributed processing, parallel processing, or virtual machine processing can also be constructed to implement the methods described herein.

[0190] In yet another embodiment, the disclosed methods may be readily implemented in conjunction with software using object or object-oriented software development environments that provide portable source code that can be used on a variety of computer or workstation platforms. Alternatively, the disclosed system may be implemented partially or fully in hardware using standard logic circuits or VLSI design. Whether software or hardware is used to implement the systems in accordance with this disclosure is dependent on the speed and/or efficiency requirements of the system, the particular function, and the particular software or hardware systems or microprocessor or microcomputer systems being utilized.

[0191] In yet another embodiment, the disclosed methods may be partially implemented in software that can be stored on a storage medium, executed on programmed general-purpose computer with the cooperation of a controller and memory, a special purpose computer, a microprocessor, or the like. In these instances, the systems and methods of this disclosure can be implemented as program embedded on personal computer such as an applet, JAVA® or CGI script, as a resource residing on a server or computer workstation, as a routine embedded in a dedicated measurement system, system component, or the like. The system can also be implemented by physically incorporating the system and/or method into a software and/or hardware system.

[0192] Although the present disclosure describes components and functions implemented in the aspects, embodiments, and/or configurations with reference to particular standards and protocols, the aspects, embodiments, and/or configurations are not limited to such standards and protocols. Other similar standards and protocols not mentioned herein are in existence and are considered to be included in the present disclosure. Moreover, the standards and protocols mentioned herein and other similar standards and protocols not mentioned herein are periodically superseded by faster or more effective equivalents having essentially the same functions. Such replacement standards and protocols having the same functions are considered equivalents included in the present disclosure.

[0193] The present disclosure, in various aspects, embodiments, and/or configurations, includes components, methods, processes, systems and/or apparatus substantially as depicted and described herein, including various aspects, embodiments, configurations embodiments, subcombinations, and/or subsets thereof. Those of skill in the art will understand how to make and use the disclosed aspects, embodiments, and/or configurations after understanding the present disclosure. The present disclosure, in various aspects, embodiments, and/or configurations, includes providing devices and processes in the absence of items not depicted and/or described herein or in various aspects, embodiments, and/or configurations hereof, including in the absence of such items as may have been used in previous devices or processes, e.g., for improving performance, achieving ease and\or reducing cost of implementation.

[0194] The foregoing discussion has been presented for purposes of illustration and description. The foregoing is not intended to limit the disclosure to the form or forms disclosed herein. In the foregoing Detailed Description for example, various features of the disclosure are grouped together in one or more aspects, embodiments, and/or configurations for the purpose of streamlining the disclosure. The features of the aspects, embodiments, and/or configurations of the disclosure may be combined in alternate aspects, embodiments, and/or configurations other than those discussed above. This method of disclosure is not to be interpreted as reflecting an intention that the claims require more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing disclosed aspect, embodiment, and/or configuration. Thus, the following claims are hereby incorporated into this Detailed Description, with each claim standing on its own as a separate preferred embodiment of the disclosure.

[0195] Moreover, though the description has included description of one or more aspects, embodiments, and/or configurations and certain variations and modifications, other variations, combinations, and modifications are within the scope of the disclosure, e.g., as may be within the skill and knowledge of those in the art, after understanding the present disclosure. It is intended to obtain rights which include alternative aspects, embodiments, and/or configurations to the extent permitted, including alternate, interchangeable and/or equivalent structures, functions, ranges or steps to those claimed, whether or not such alternate, interchangeable and/or equivalent structures, functions, ranges or steps are disclosed herein, and without intending to publicly dedicate any patentable subject matter.

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What is claimed is:

1. A method of displaying content on a television, comprising:

receiving an indication associated with a selection by a user;

determining, based on the received indication, a content panel to display via the television;

retrieving from memory, a first content information for display in the content panel; and

displaying, via the television, the retrieved content information in the specified content panel.

2. The method of claim 1, further comprising:

identifying a user associated with the received indication;

retrieving one or more settings associated with the identified user;

retrieving, from memory, content information associated with the identified user; and

displaying, via the television, the retrieved content information in the specified content panel.

3. The method of claim 1, further comprising:

identifying a user associated with the received indication;

retrieving, from memory, one or more settings associated with the identified user;

retrieving, from memory, content information associated with the identified user and the one or more settings associated with the user; and

displaying, via the television, the retrieved content information in the specified content panel.

4. The method of claim 1, further comprising:

receiving a second indication associated with a selection by a user;

determining, based on the second indication, a source of content information to be displayed in the content panel based;

retrieving at least a portion of content information from the determined source; and

displaying, via the television, the content information associated with the determined source.

5. The method of claim 1, wherein the content panel is a global panel.

6. The method of claim 1, further comprising:

identifying at least one of a content source and a content information currently being displayed via a television;

selecting a panel type based on the identified at least one of content source and content information currently being displayed via the television;

retrieving, from memory, content information based on the selected panel type; and

displaying, via the television, the retrieved content information in the content panel based on the selected panel type.

7. The method of claim 6, further comprising:

receiving a second indication associated with a selection by a user;

selecting a panel type based on the second indication;

retrieving, from memory, content information based on the selected panel type and the second indication; and

displaying, via the television, the retrieved content information in the content panel.

8. The method of claim 7, wherein the retrieved content information comprises information associated with content information marked as favorite.

9. The method of claim 7, wherein the retrieved content information comprises information associated with content information recently viewed.

10. The method of claim 7, wherein the content panel is an application panel.

11. A non-transitory computer readable information storage medium having stored thereon instructions that cause a computing system to execute a method of displaying content on a television, comprising:

receiving an indication associated with a selection by a user;

determining, based on the received indication, a content panel to display via the television;

retrieving from memory, a first content information for display in the content panel; and

displaying, via the television, the retrieved content information in the specified content panel.

12. The non-transitory computer-readable medium of claim 11, wherein the instructions further comprise:

identifying a user associated with the received indication;

retrieving one or more settings associated with the identified user;

retrieving, from memory, content information associated with the identified user; and

displaying, via the television, the retrieved content information in the specified content panel.

13. The non-transitory computer-readable medium of claim 11, wherein the instructions further comprise:

identifying a user associated with the received indication;

retrieving, from memory, one or more settings associated with the identified user;

retrieving, from memory, content information associated with the identified user and the one or more settings associated with the user; and

displaying, via the television, the retrieved content information in the specified content panel.

14. The non-transitory computer-readable medium of claim 11, wherein the instructions further comprise:

receiving a second indication associated with a selection by a user;

determining, based on the second indication, a source of content information to be displayed in the content panel based;

retrieving at least a portion of content information from the determined source; and

displaying, via the television, the content information associated with the determined source .

15. The non-transitory computer-readable medium of claim 11, wherein the content panel is a global panel.

16. The method of claim 1, further comprising:

identifying at least one of a content source and a content information currently being displayed via a television;

selecting a panel type based on the identified at least one of content source and content information currently being displayed via the television;

retrieving, from memory, content information based on the selected panel type; and

displaying, via the television, the retrieved content information in the content panel based on the selected panel type.

17. The non-transitory computer-readable medium of claim 16, wherein the instructions further comprise:

receiving a second indication associated with a selection by a user;

selecting a panel type based on the second indication;

retrieving, from memory, content information based on the selected panel type and the second indication; and

displaying, via the television, the retrieved content information in the content panel.

18. The non-transitory computer-readable medium of claim 17, wherein the retrieved content information comprises information associated with content information marked as favorite.

19. The non-transitory computer-readable medium of claim 17, wherein the retrieved content information comprises information associated with content information recently viewed.

20. The non-transitory computer-readable medium of claim 17, wherein the content panel is an application panel.

21. A system for displaying content on a television, comprising:

an input device associated with the television;

a memory; and

a microprocessor operable to:

receive an indication associated with a selection by a user;

determine, based on the received indication, a content panel to display via the television;

retrieve from the memory, a first content information for display in the content panel; and

display, via the television, the retrieved content information in the specified content panel.

22. The system of claim 21, wherein the microprocessor is further operable to:

identify at least one of a content source and a content information currently being displayed via a television;

select a panel type based on the identified at least one of content source and content information currently being displayed via the television;

retrieve, from the memory, content information based on the selected panel type; and

display, via the television, the retrieved content information in the content panel based on the selected panel type.

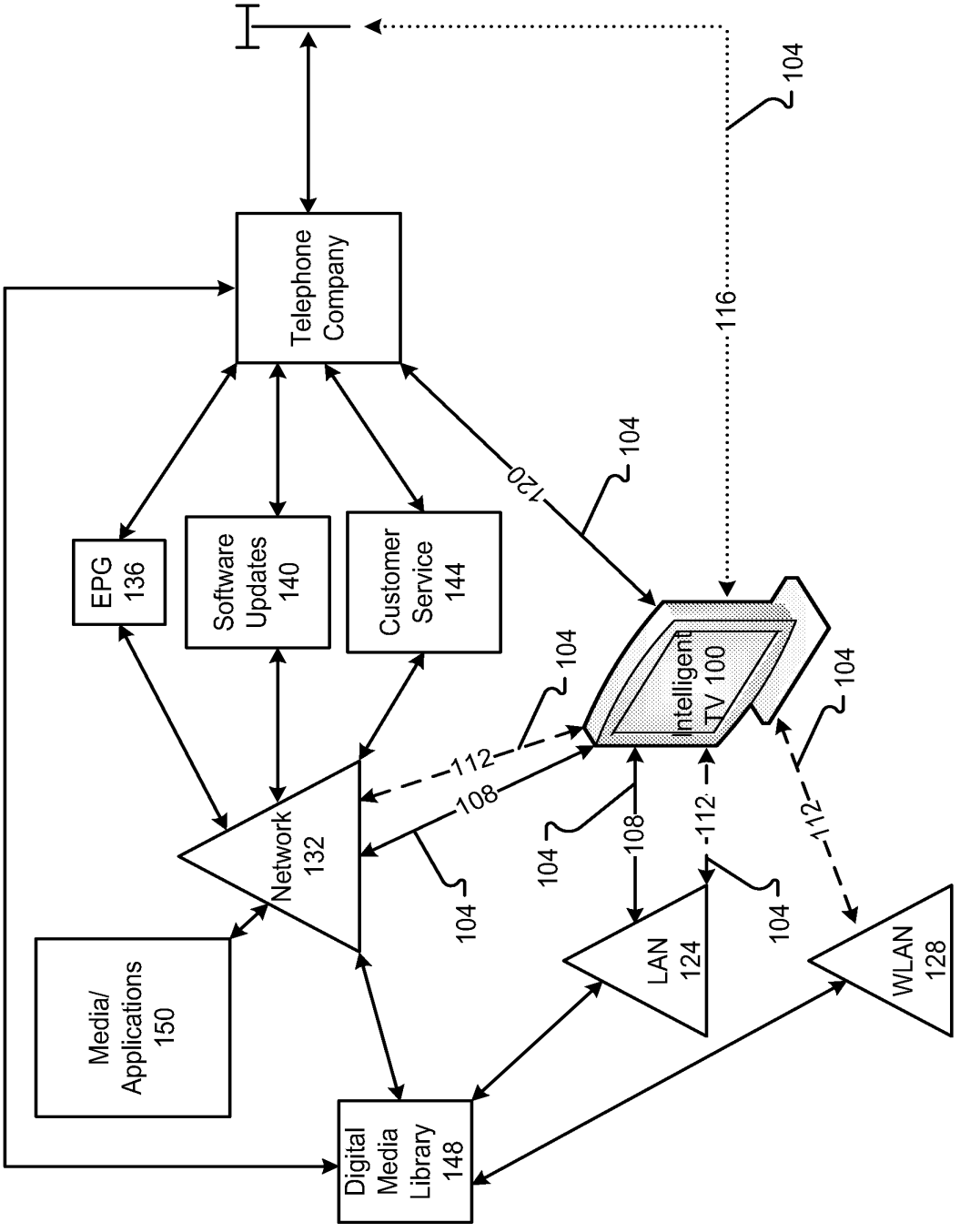

Telephone Company
104
116
120
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EPG 136
Software Updates 140
Customer Service 144
Intelligent TV 100
104
104
112
108
Network 132
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108
112
112
104
104
Media/ Applications 150
LAN 124
WLAN 128
Digital Media Library 148

Fig. 1A

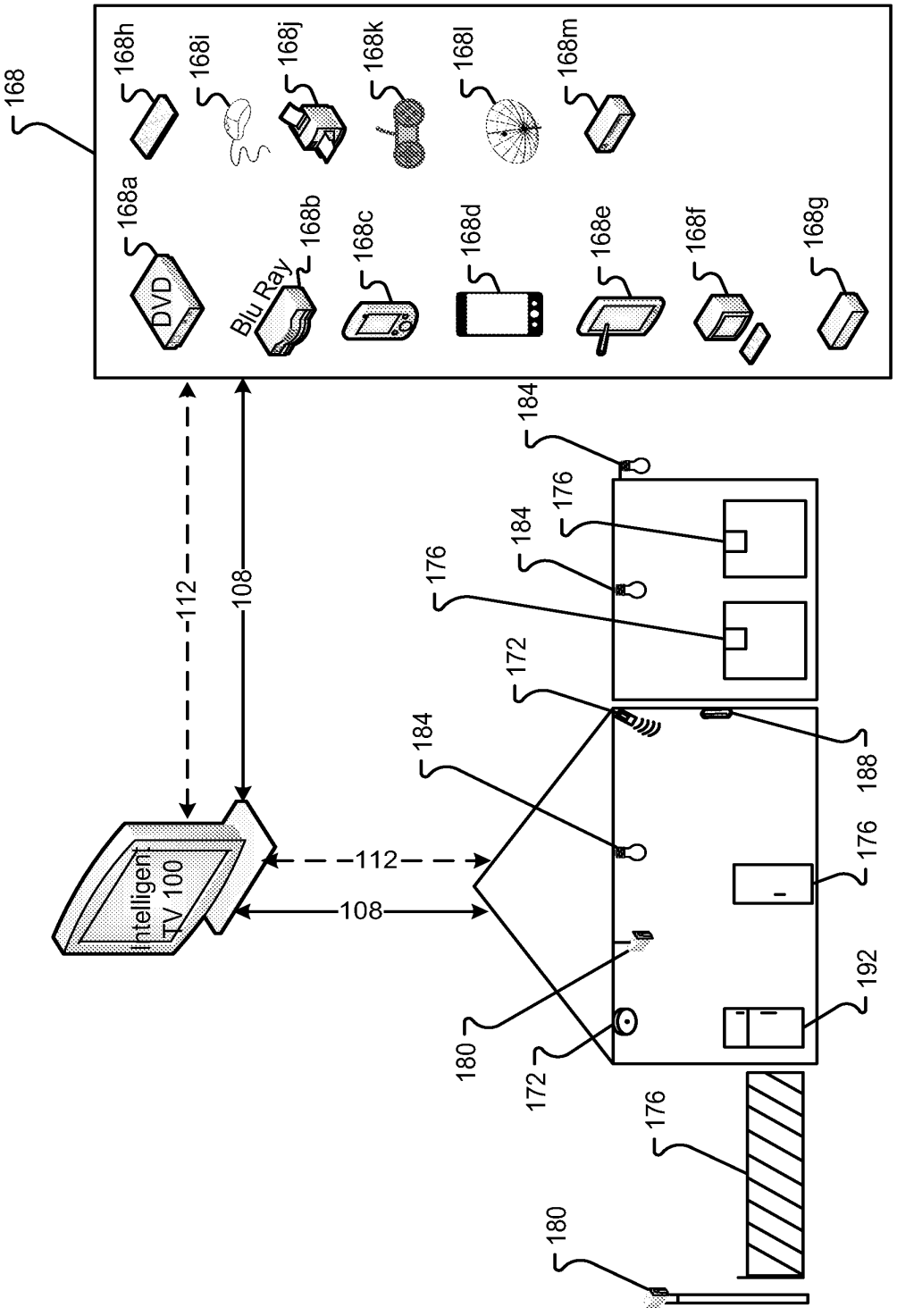

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168h
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168k
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DVD
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Blu Ray
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180
192
Intelligent TV 100

Fig. 1B

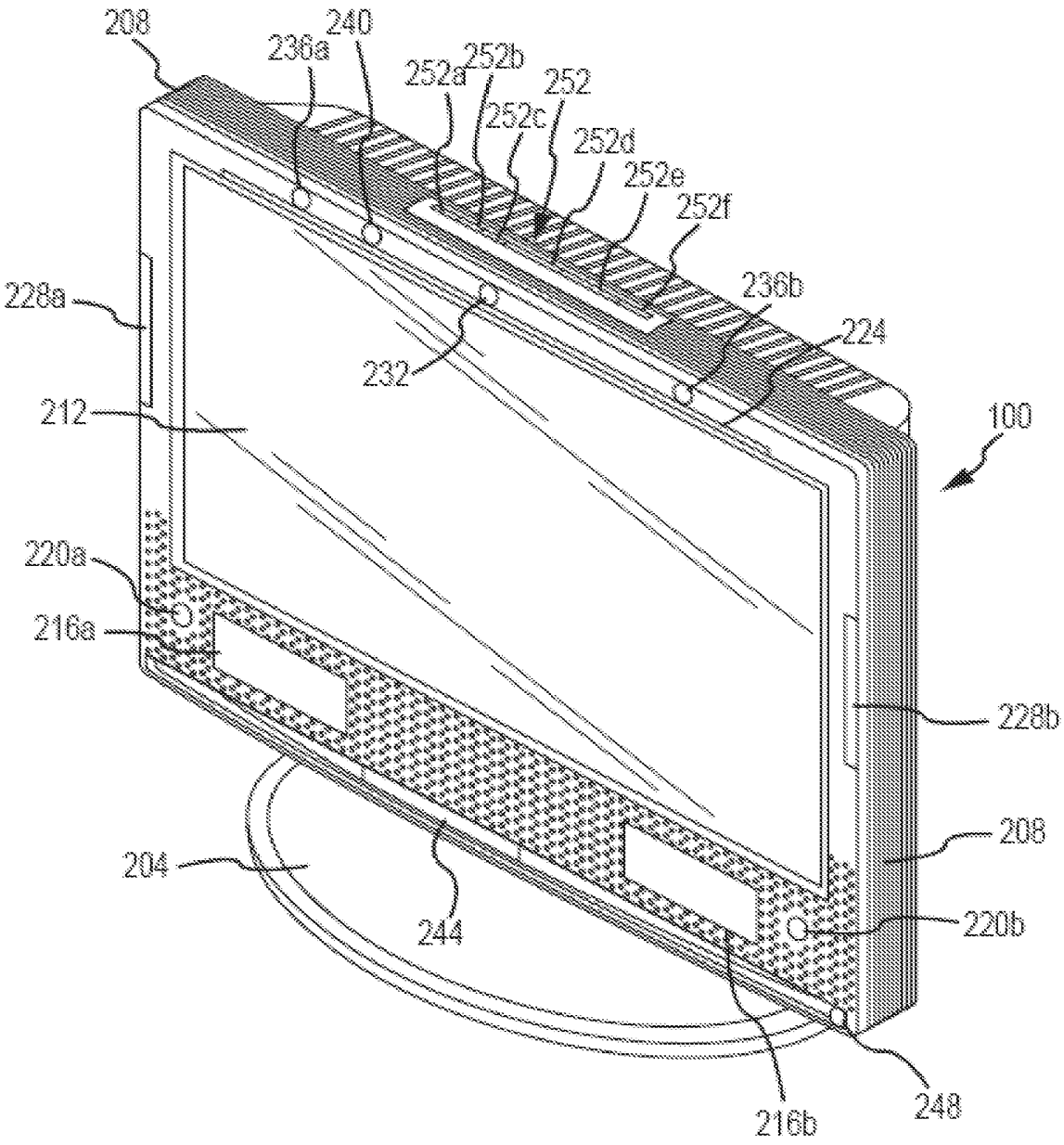

208
240
236a
252a
252b
252
252c
252d
252e
252f
236b
224
228a
232
212
100
220a
216a
228b
208
204
244
220b
248
216b

Fig. 2A

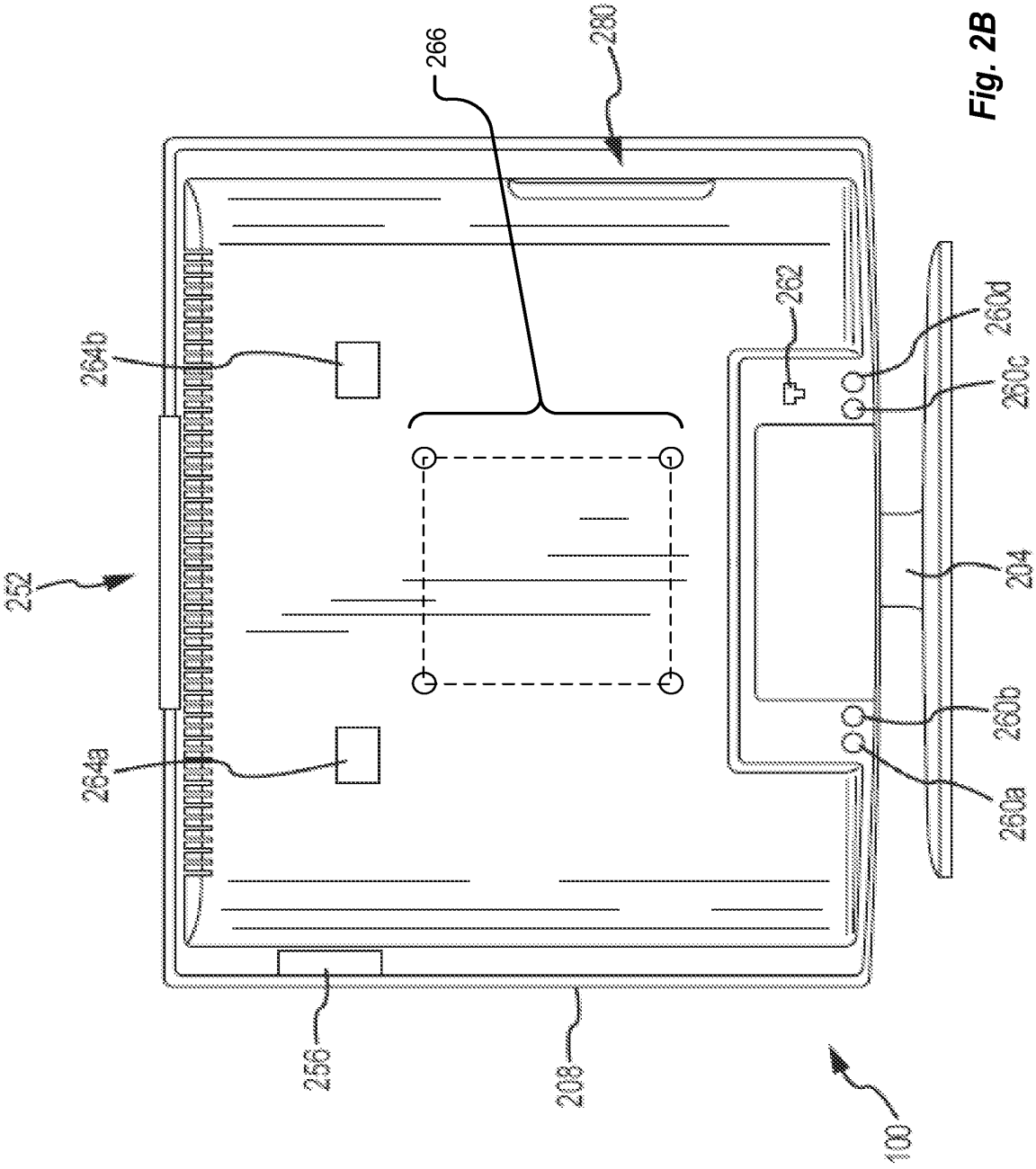


Fig. 2B

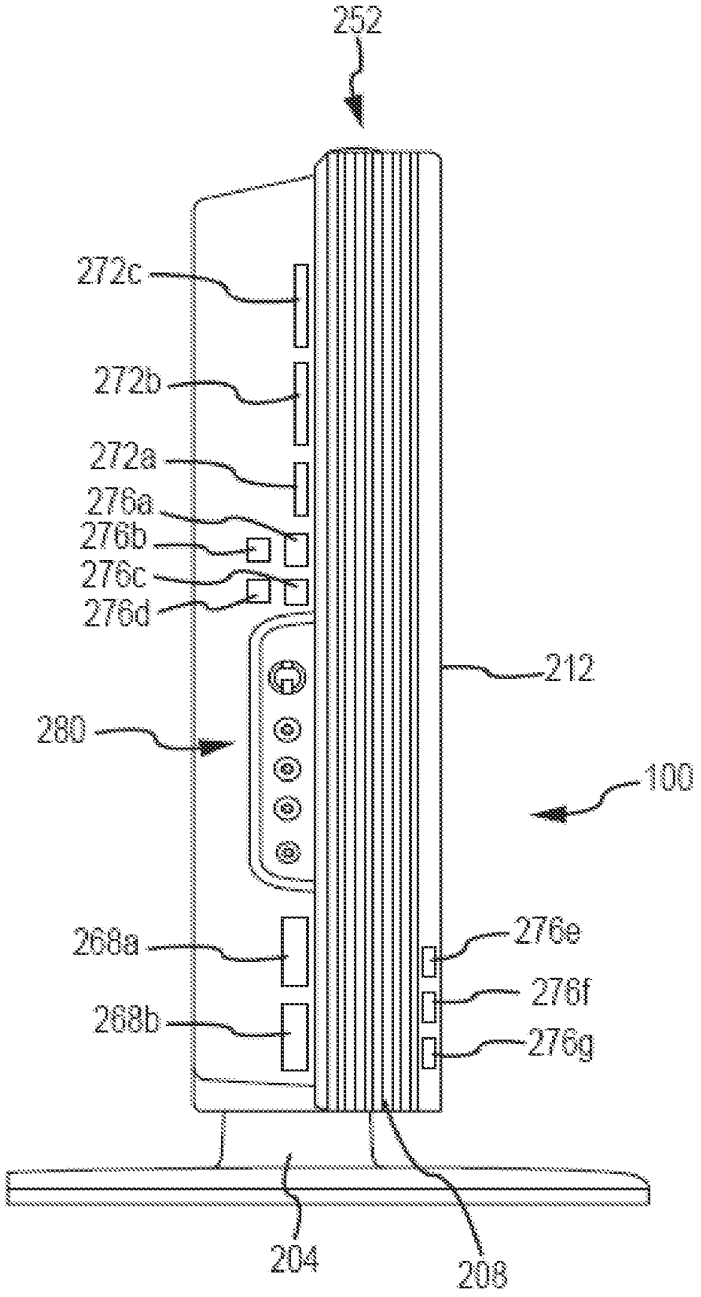

252
272c
272b
272a
276a
276b
276c
276d
212
280
100
268a
268b
276e
276f
276g
204
208

Fig. 2C

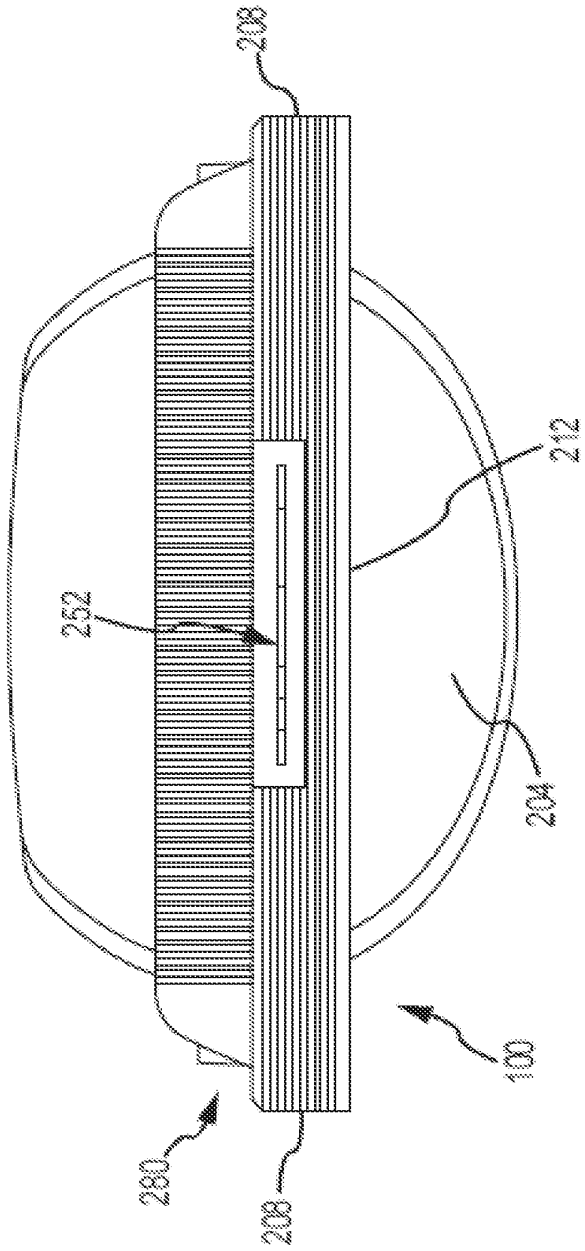


Fig. 2D

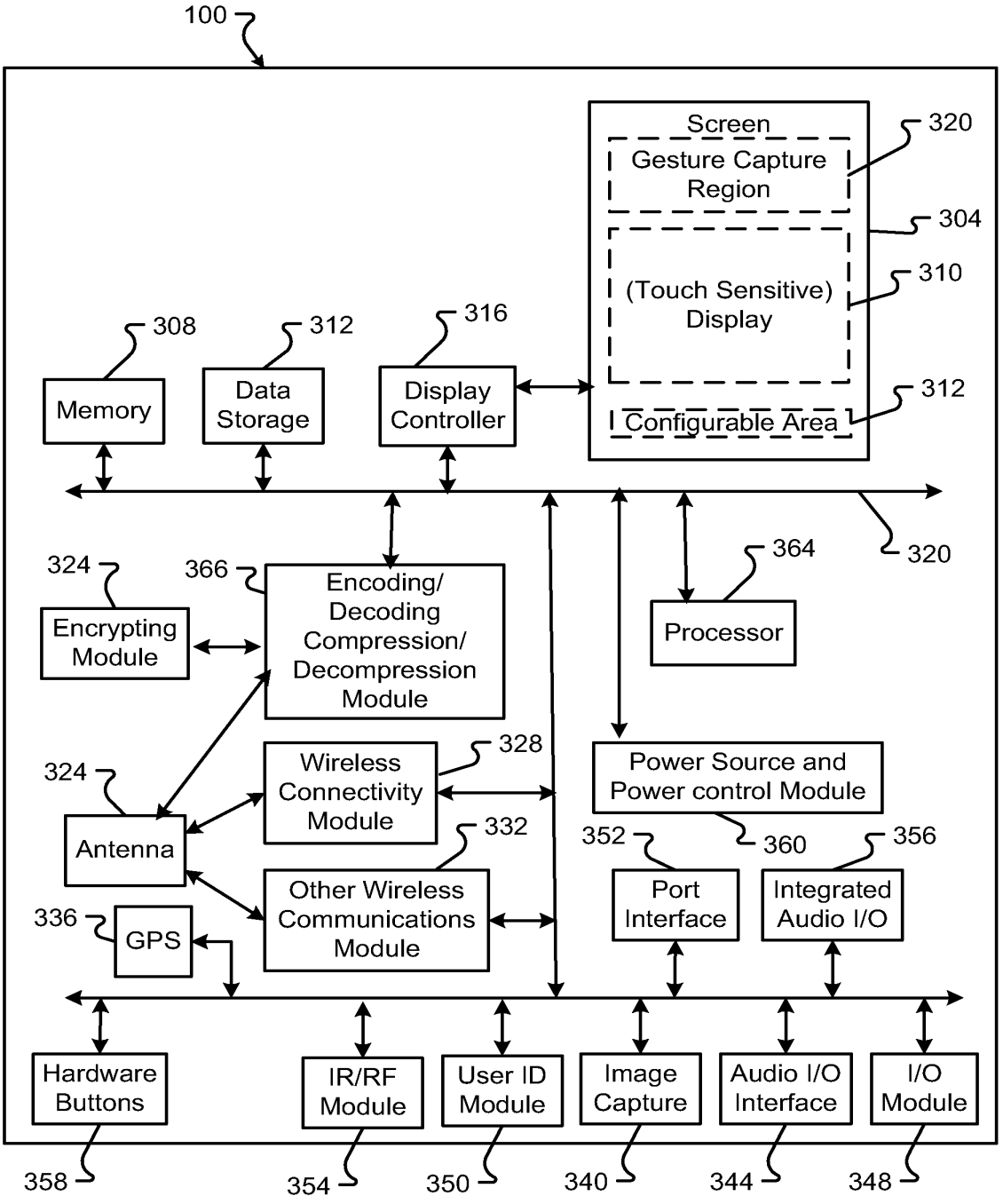

100
Screen
Gesture Capture Region
320
304
(Touch Sensitive) Display
310
312
Configurable Area
308
Memory
312
Data Storage
316
Display Controller
320
364
Processor
324
Encrypting Module
366
Encoding/ Decoding Compression/ Decompression Module
328
Wireless Connectivity Module
Power Source and Power control Module
324
Antenna
332
Other Wireless Communications Module
352
Port Interface
360
356
Integrated Audio I/O
336
GPS
Hardware Buttons
IR/RF Module
User ID Module
Image Capture
Audio I/O Interface
I/O Module
358
354
350
340
344
348

FIG. 3

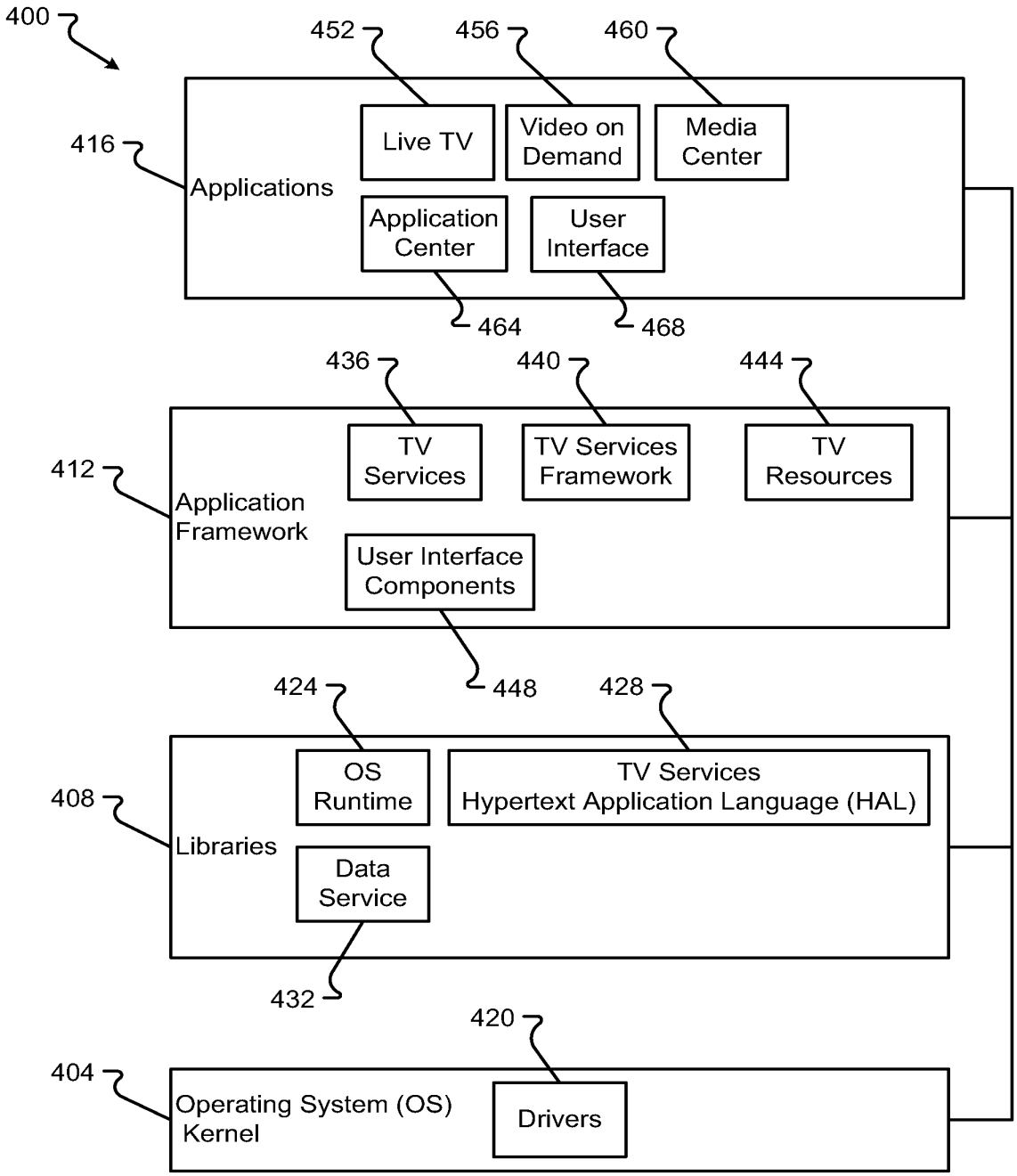

400
452
456
460
416
Applications
Live TV
Video on Demand
Media Center
Application Center
User Interface
464
468
436
440
444
412
Application Framework
TV Services
TV Services Framework
TV Resources
User Interface Components
448
424
428
408
Libraries
OS Runtime
TV Services Hypertext Application Language (HAL)
Data Service
432
420
404
Operating System (OS) Kernel
Drivers

FIG. 4

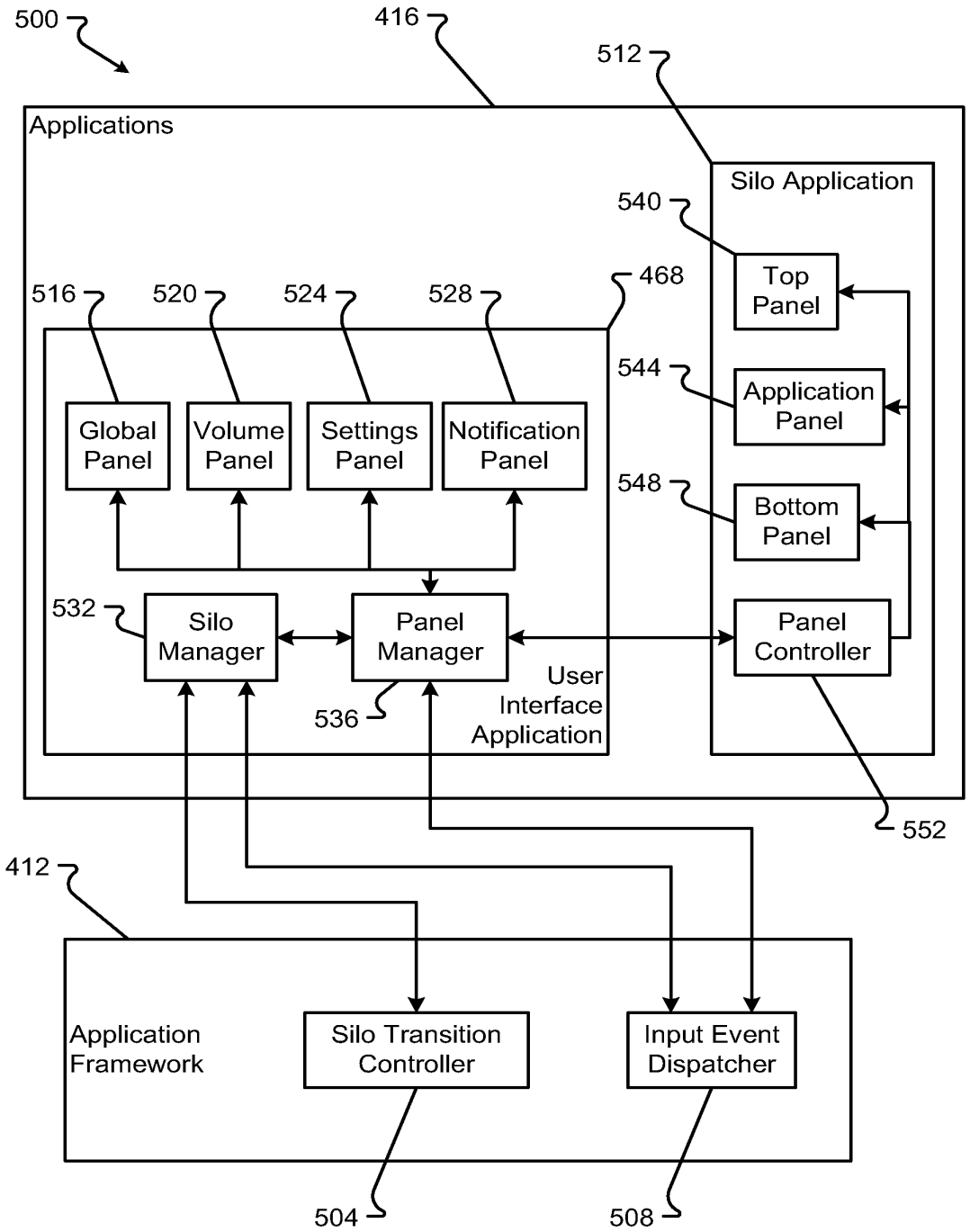

500
416
512
Applications
Silo Application
540
Top Panel
516
520
524
528
468
544
Application Panel
Global Panel
Volume Panel
Settings Panel
Notification Panel
548
Bottom Panel
532
Silo Manager
Panel Manager
Panel Controller
User Interface Application
536
552
412
Application Framework
Silo Transition Controller
Input Event Dispatcher
504
508

FIG. 5

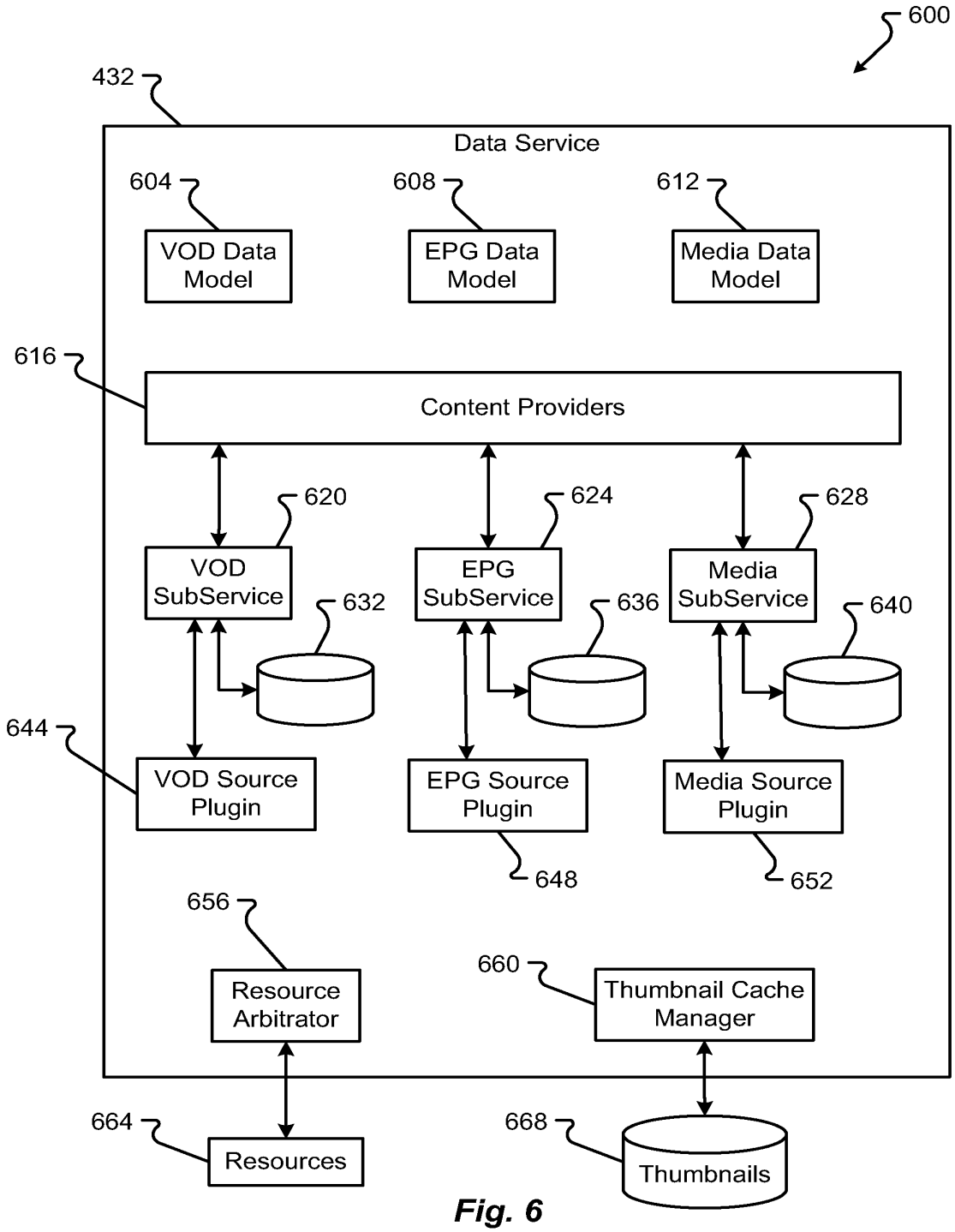

600
432
Data Service
604
VOD Data Model
608
EPG Data Model
612
Media Data Model
616
Content Providers
620
VOD SubService
624
EPG SubService
628
Media SubService
632
636
640
644
VOD Source Plugin
EPG Source Plugin
Media Source Plugin
648
652
656
Resource Arbitrator
660
Thumbnail Cache Manager
664
Resources
668
Thumbnails

Fig. 6

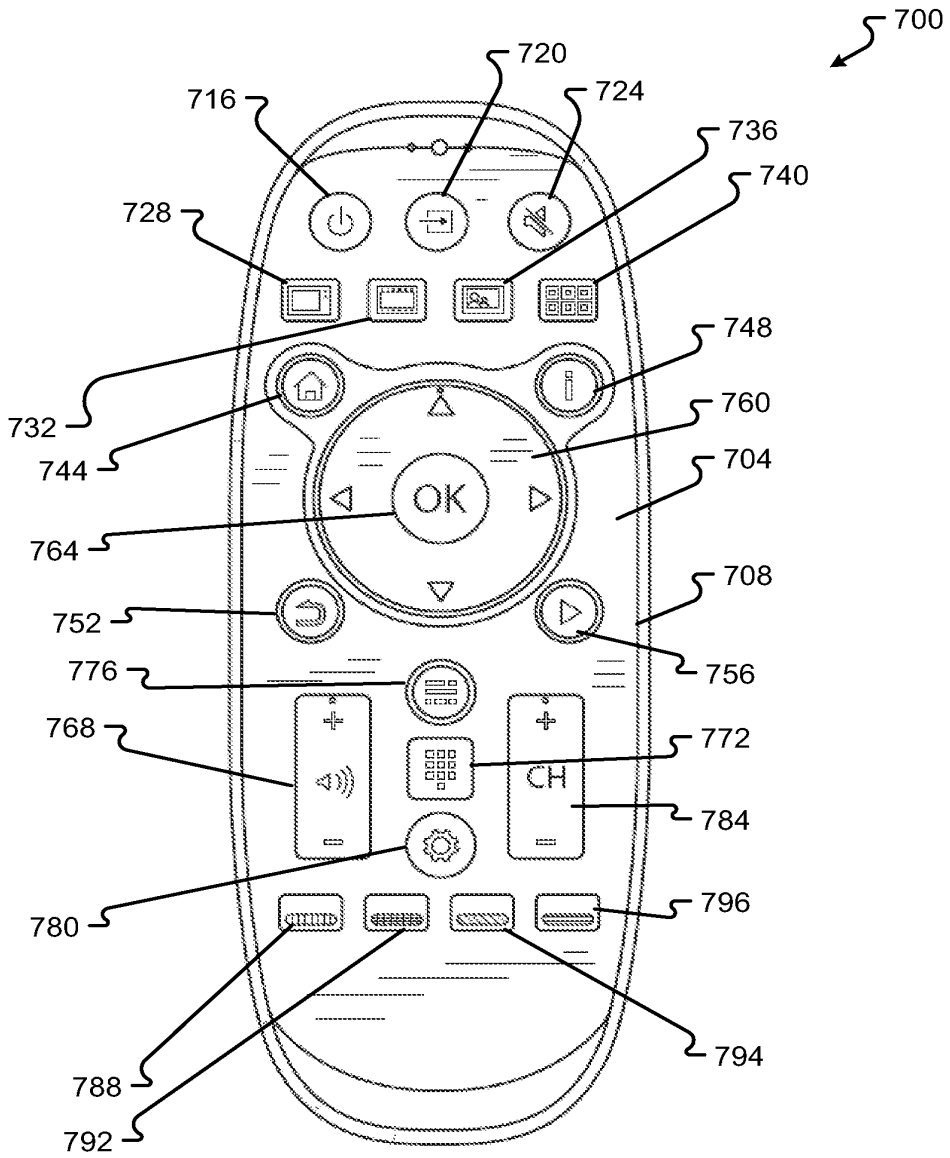

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Fig. 7

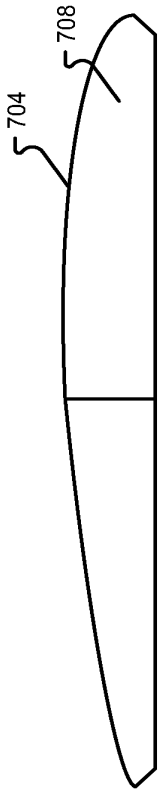


Fig. 8

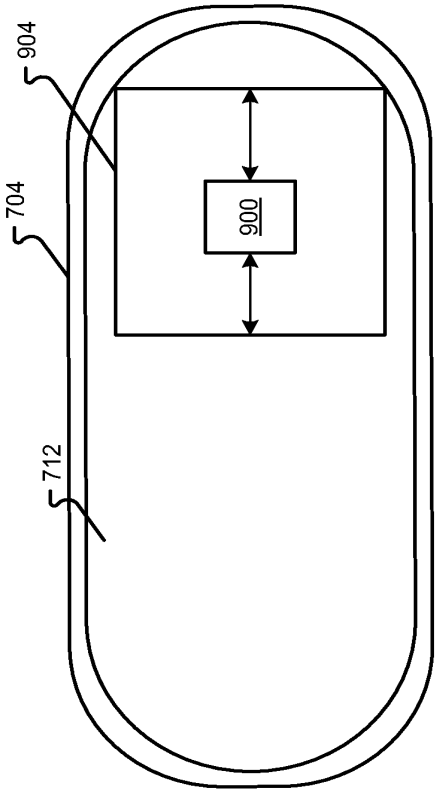


Fig. 9A

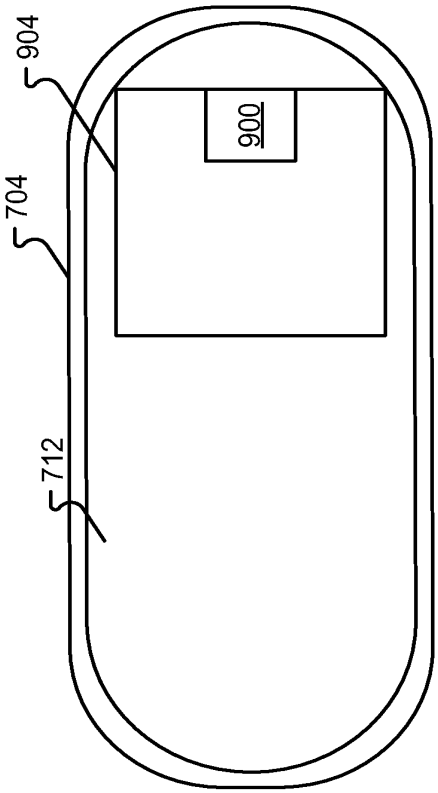


Fig. 9B

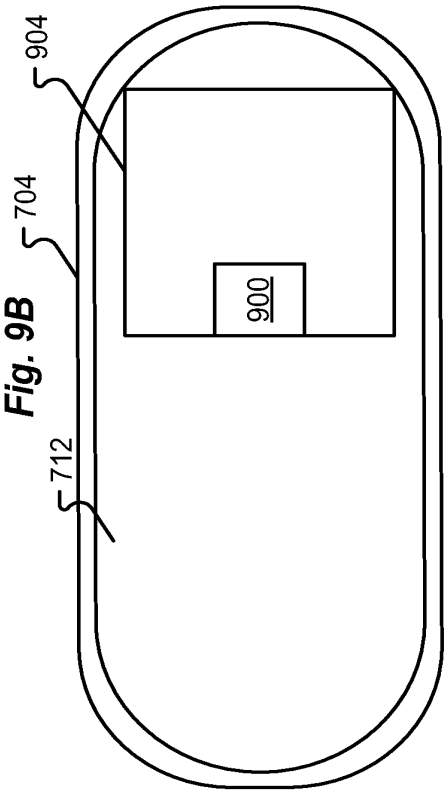


Fig. 9C

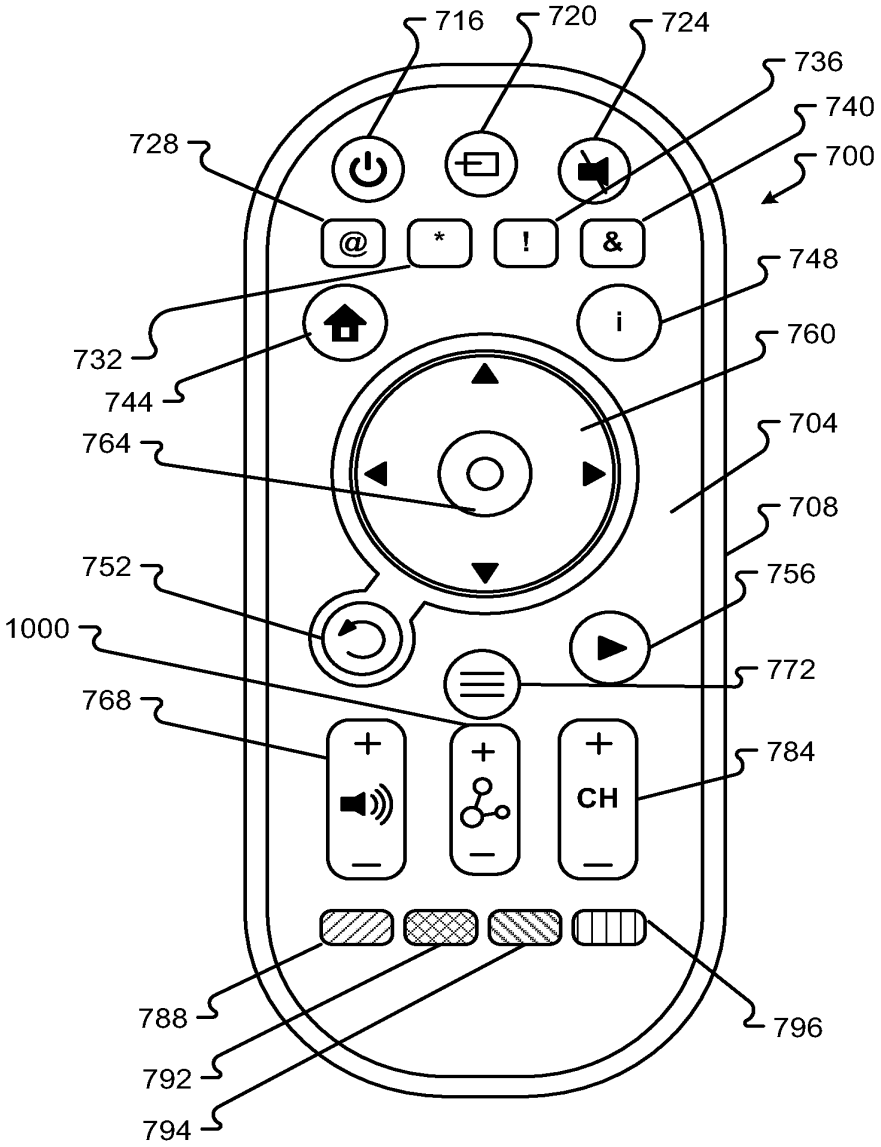

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Fig. 10

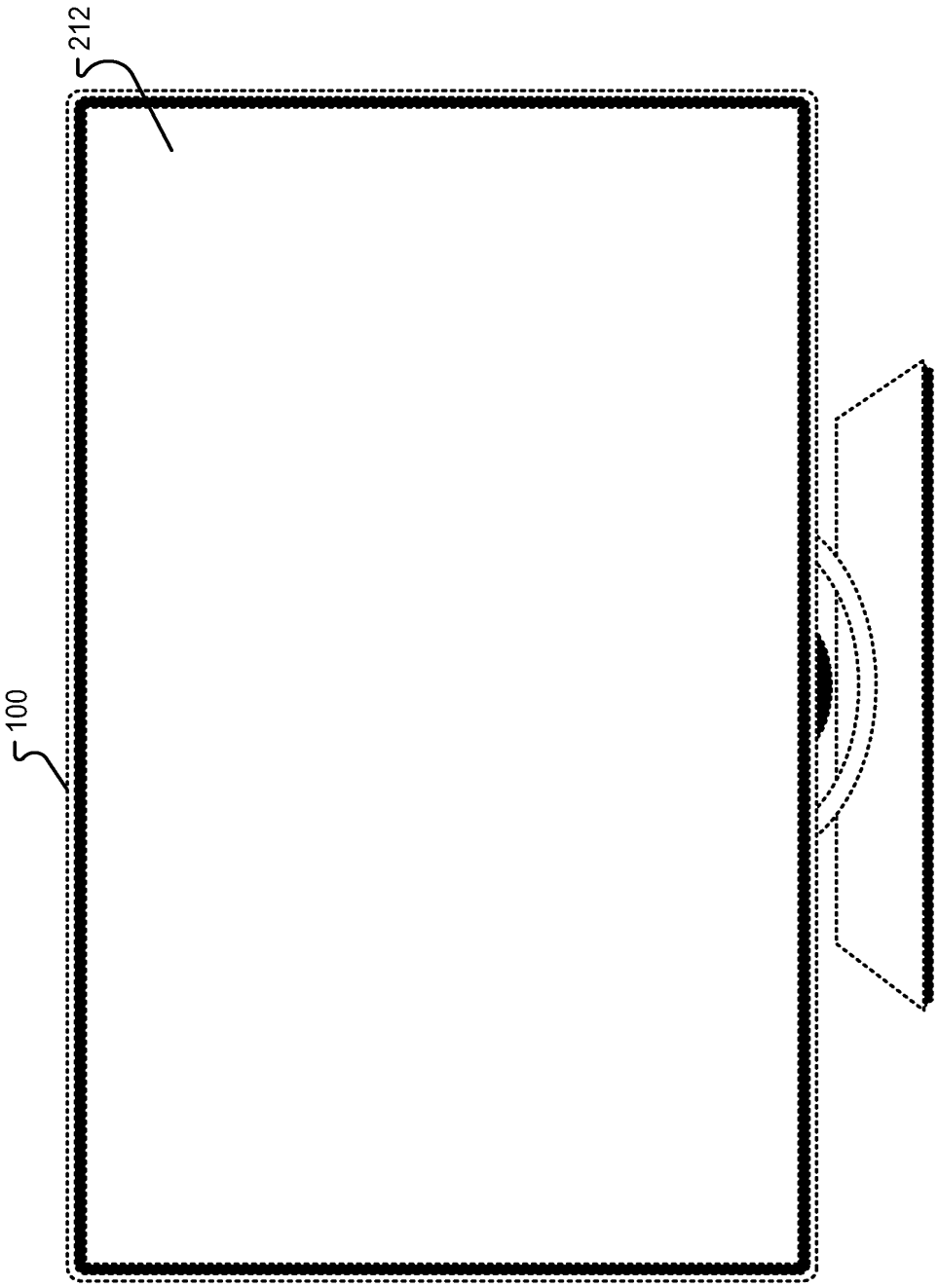


Fig. 11A

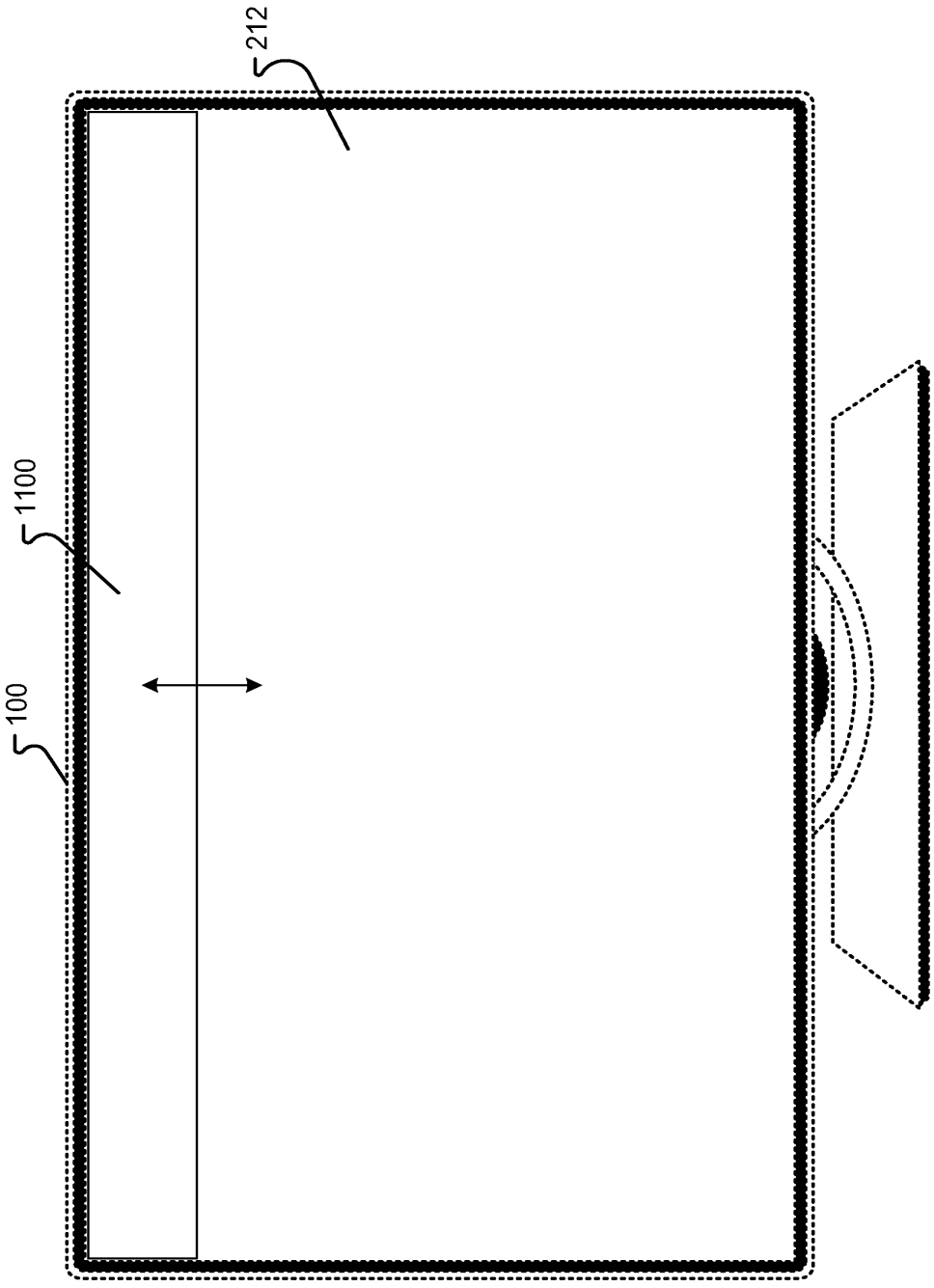


Fig. 11B

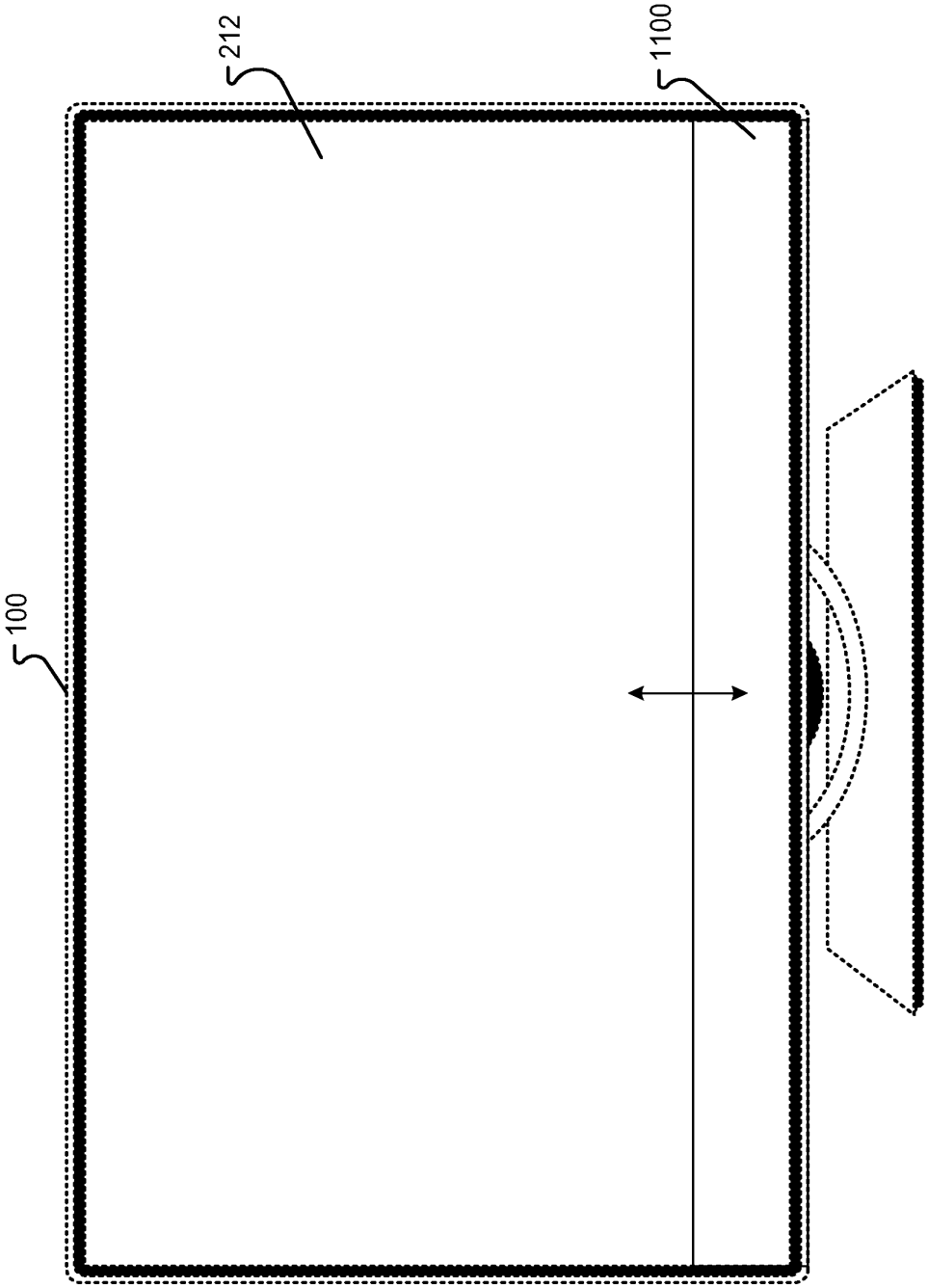


Fig. 11C

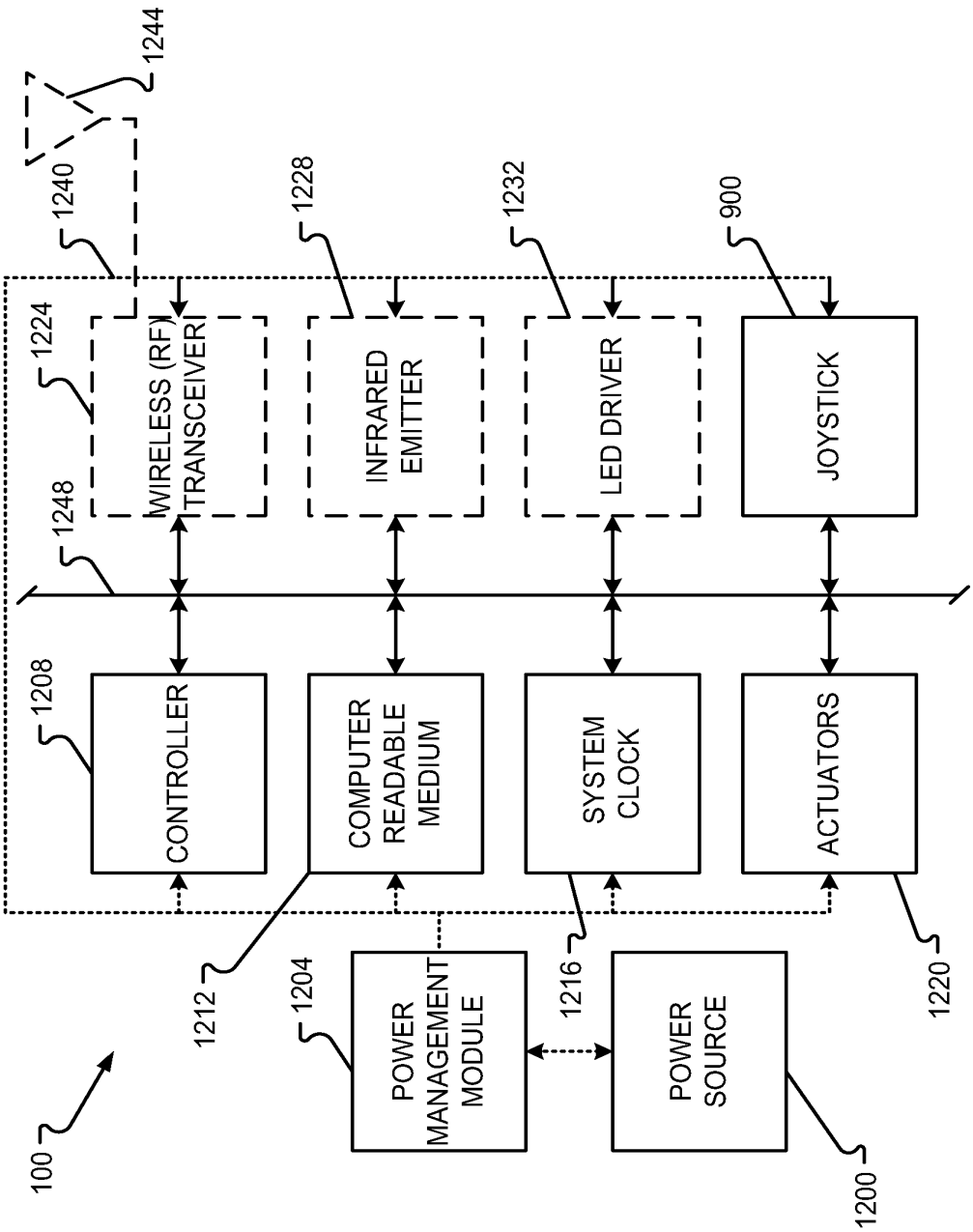

1244
1240
1228
1232
900
1224
WIRELESS (RF) TRANSCEIVER
INFRARED EMITTER
LED DRIVER
JOYSTICK
1248
1208
CONTROLLER
COMPUTER READABLE MEDIUM
SYSTEM CLOCK
ACTUATORS
1212
1204
POWER MANAGEMENT MODULE
1216
POWER SOURCE
1220
100
1200

Fig. 12

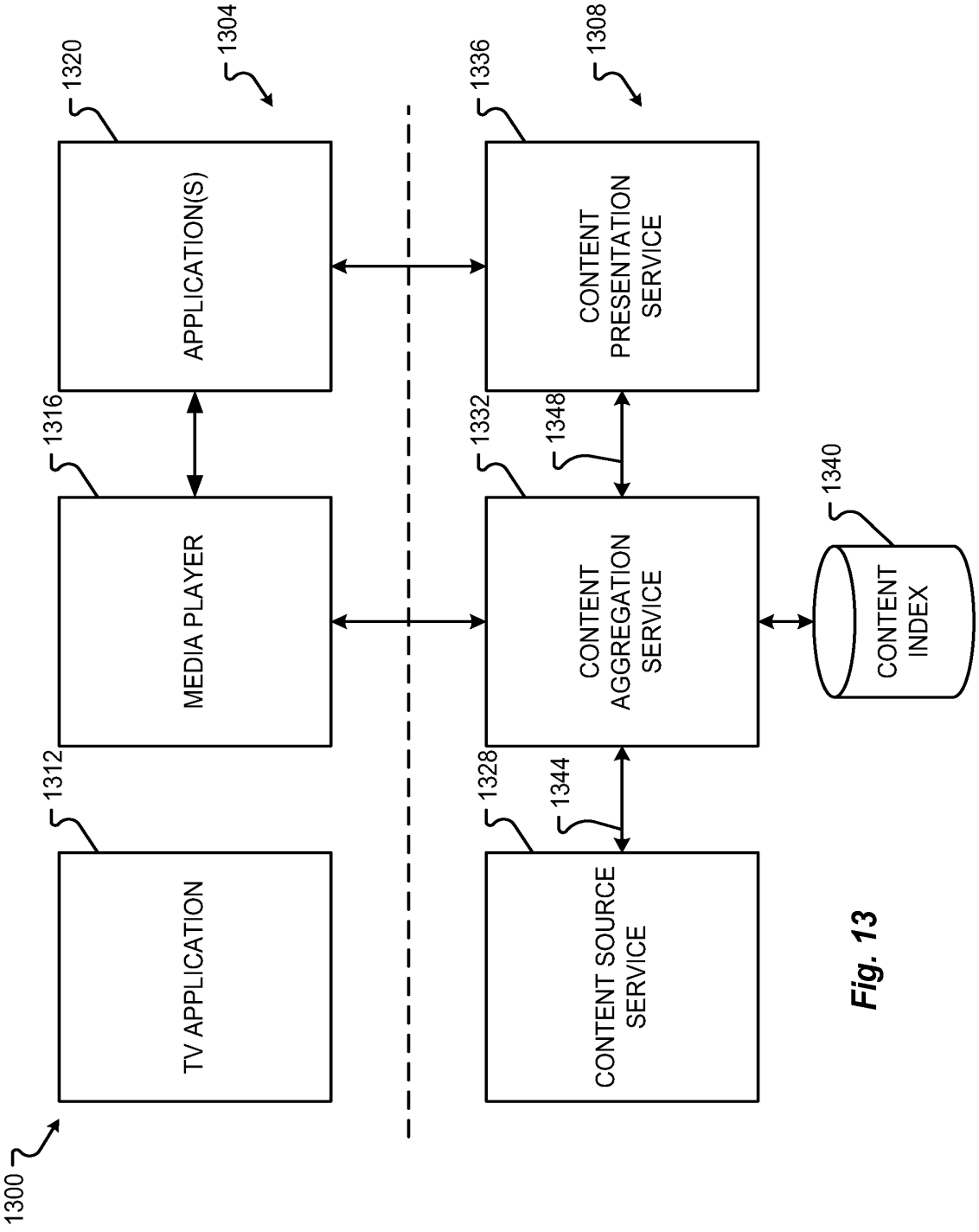

1300
1304
1320
APPLICATION(S)
1316
MEDIA PLAYER
1312
TV APPLICATION
1308
1336
CONTENT PRESENTATION SERVICE
1332
1348
CONTENT AGGREGATION SERVICE
1340
CONTENT INDEX
1328
1344
CONTENT SOURCE SERVICE

Fig. 13

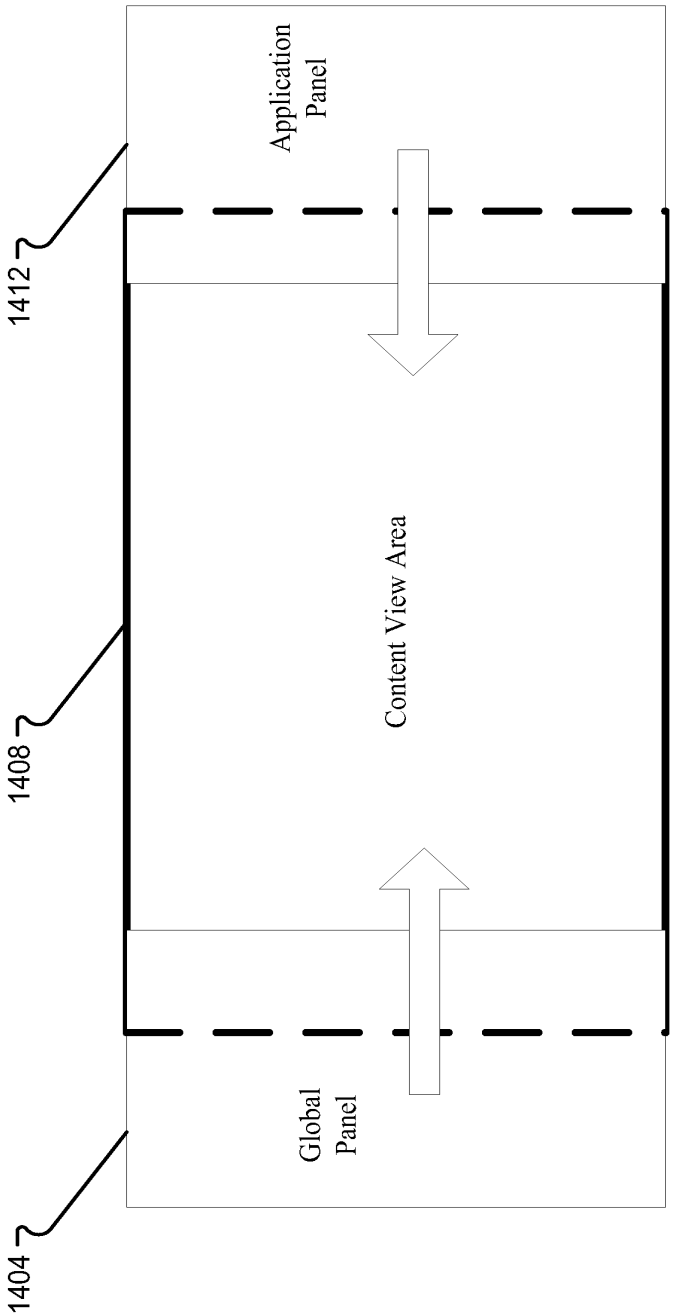

Application Panel
1412
Content View Area
1408
Global Panel
1404

Fig. 14

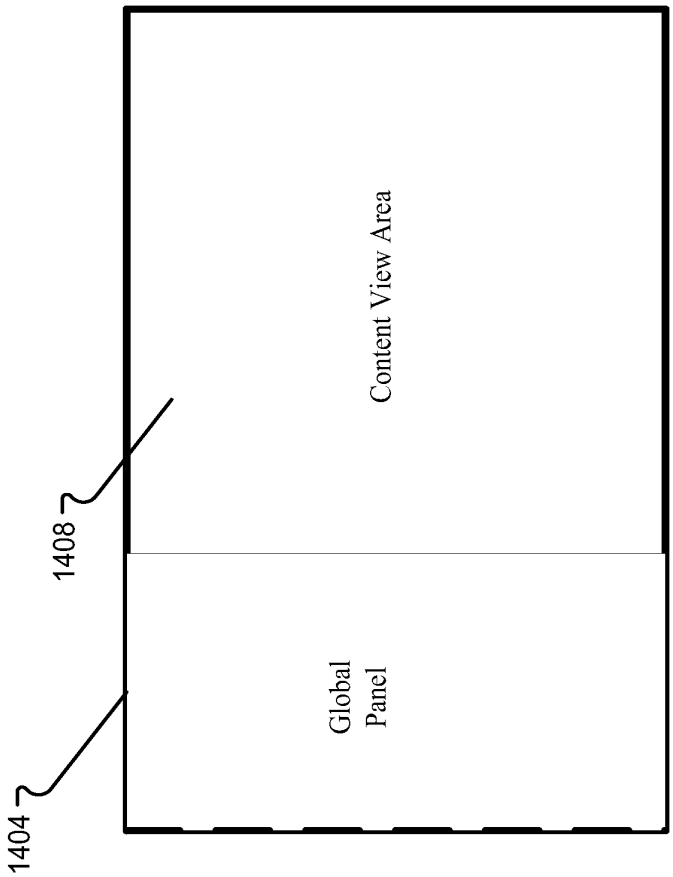


Fig. 15A

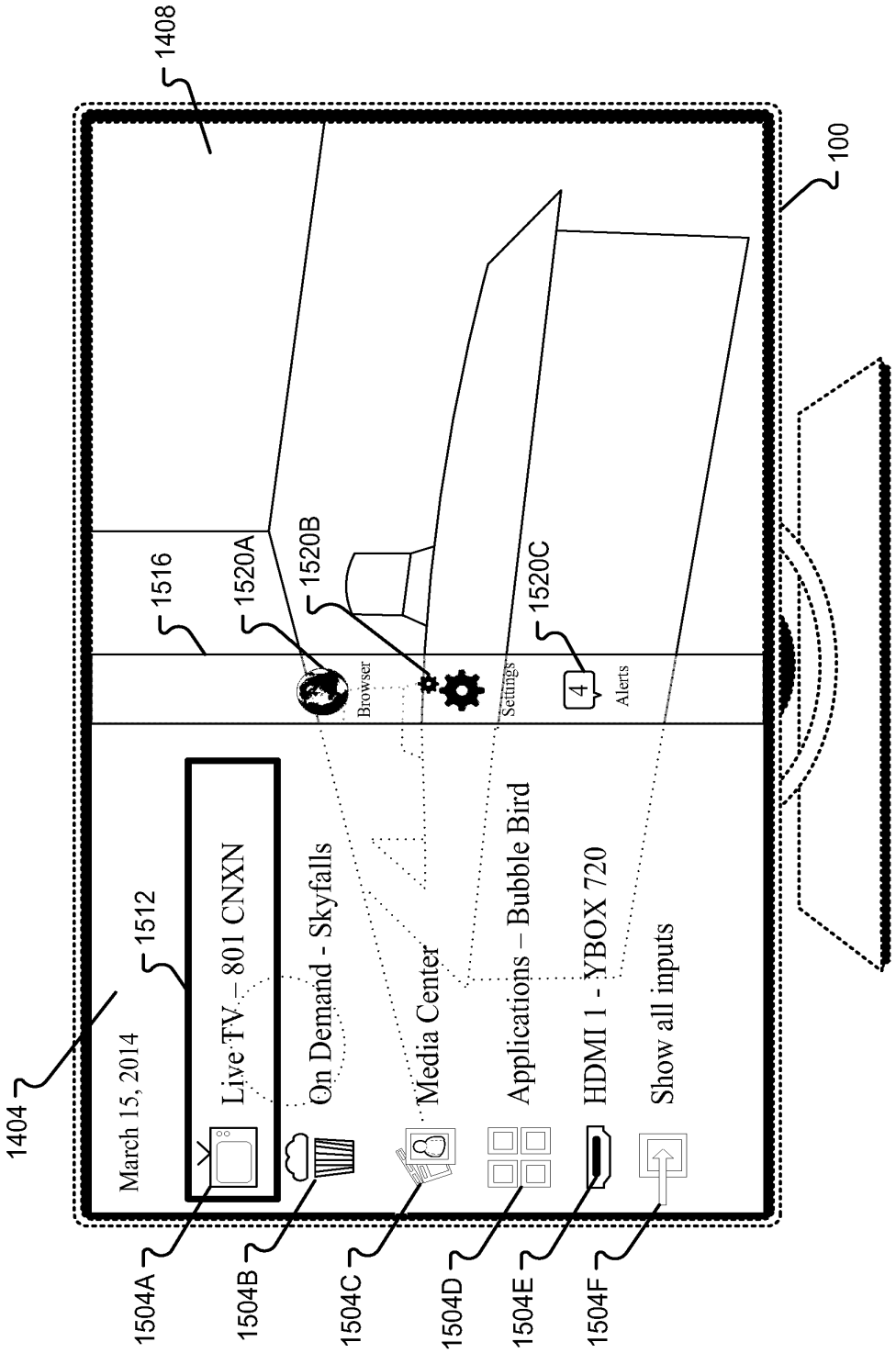

1408
100
1516
1520A
1520B
1520C
Browser
Settings
4
Alerts
1512
March 15, 2014
Live TV – 801 CNXN
On Demand - Skyfalls
Media Center
Applications – Bubble Bird
HDMI 1 - YBOX 720
Show all inputs
1404
1504A
1504B
1504C
1504D
1504E
1504F

Fig. 15B

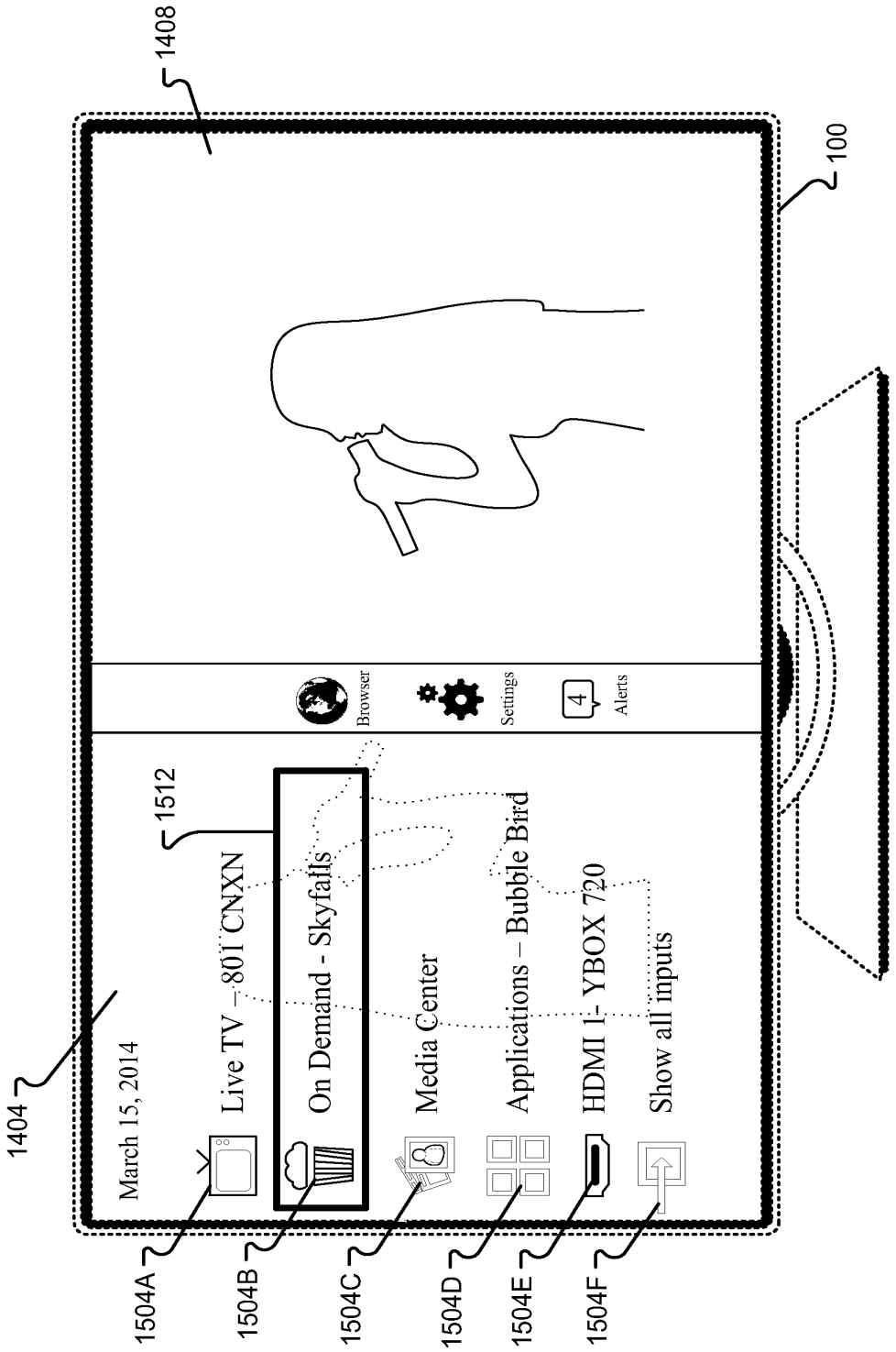

1408
100
1404
March 15, 2014
Live TV – 801 CNXN
On Demand - Skyfalls
Media Center
Applications – Bubble Bird
HDMI 1- YBOX 720
Show all inputs
1512
Browser
Settings
4
Alerts
1504A
1504B
1504C
1504D
1504E
1504F

Fig. 15C

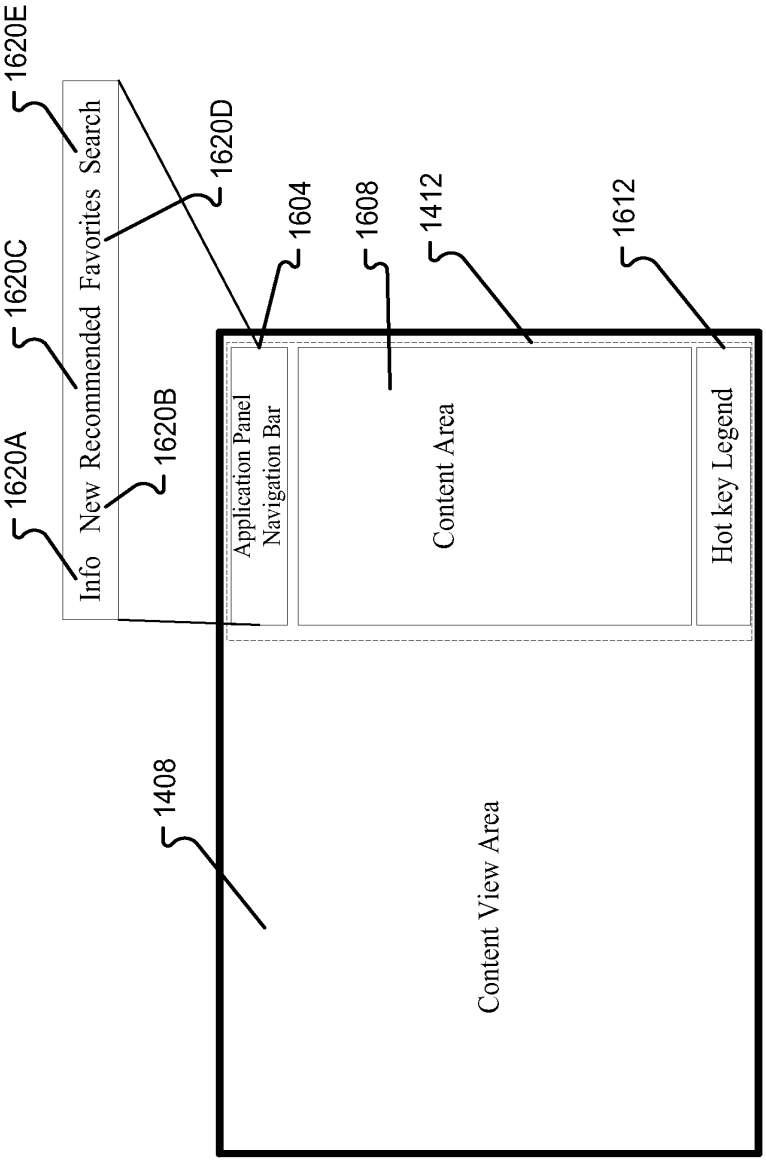

1620E
1620D
1620C
1620B
1620A
Search
Favorites
Recommended
New
Info
1604
1608
1412
1612
Application Panel Navigation Bar
Content Area
Hot key Legend
1408
Content View Area

Fig. 16

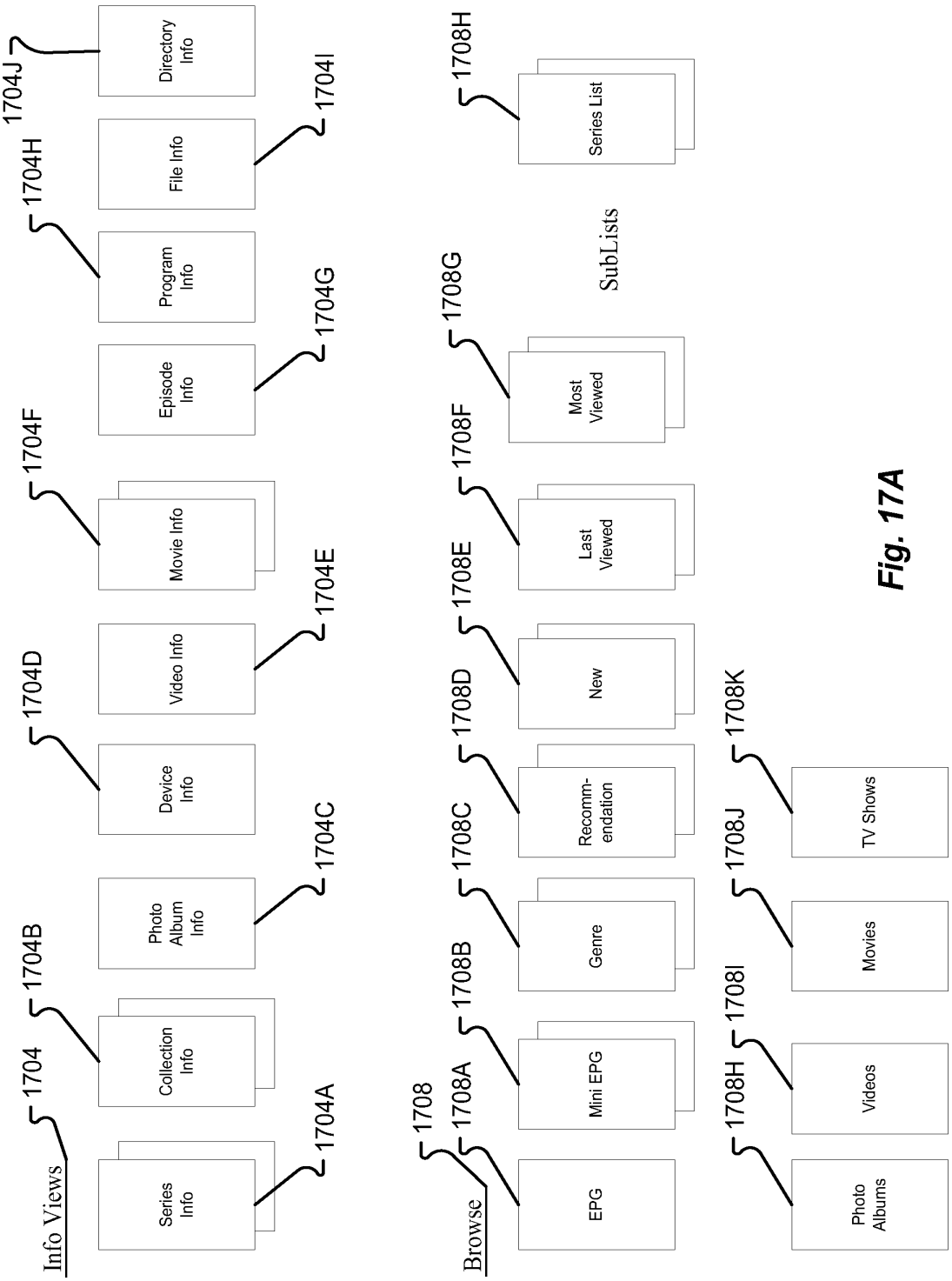

Info Views
1704
Series Info
1704A
Collection Info
1704B
Photo Album Info
1704C
Device Info
1704D
Video Info
1704E
Movie Info
1704F
Episode Info
1704G
Program Info
1704H
File Info
1704I
Directory Info
1704J
Browse
1708
EPG
1708A
Mini EPG
1708B
Genre
1708C
Recomm-endation
1708D
New
1708E
Last Viewed
1708F
Most Viewed
1708G
SubLists
Series List
1708H
Photo Albums
1708H
Videos
1708I
Movies
1708J
TV Shows
1708K

Fig. 17A

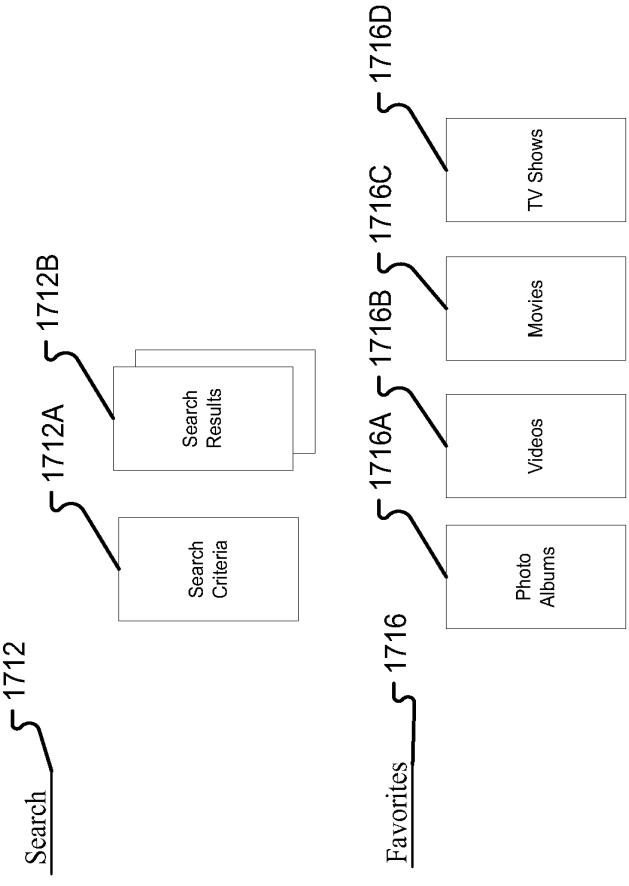

Search
1712
1712A
Search Criteria
1712B
Search Results
Favorites
1716
1716A
Photo Albums
1716B
Videos
1716C
Movies
1716D
TV Shows
Global
1720
1720A
Global Info Panel

Fig. 17B

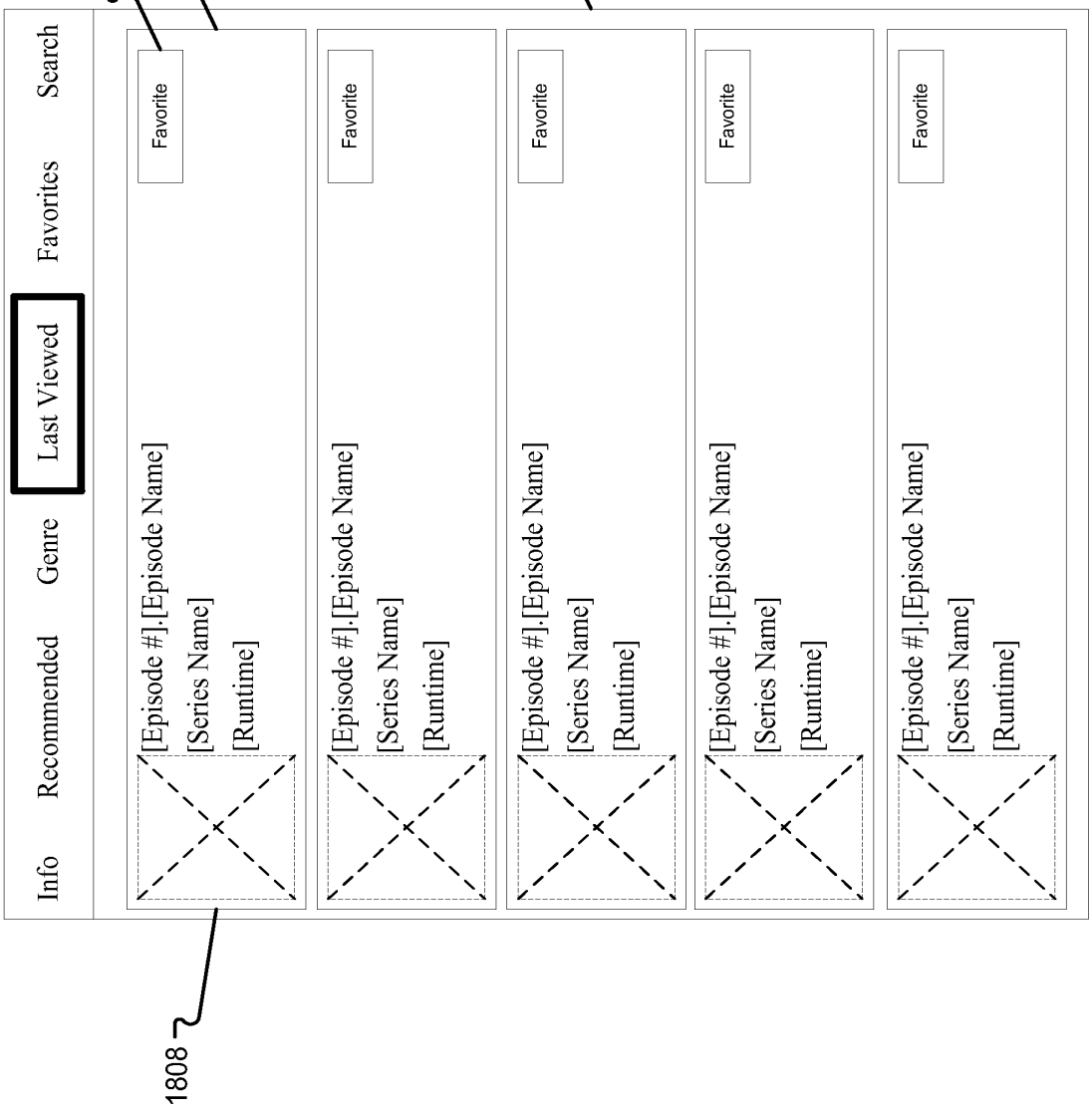

Info
Recommended
Genre
Last Viewed
Favorites
Search
1808
1804
1412
1808
Favorite
[Episode #].[Episode Name]
[Series Name]
[Runtime]

Fig. 18

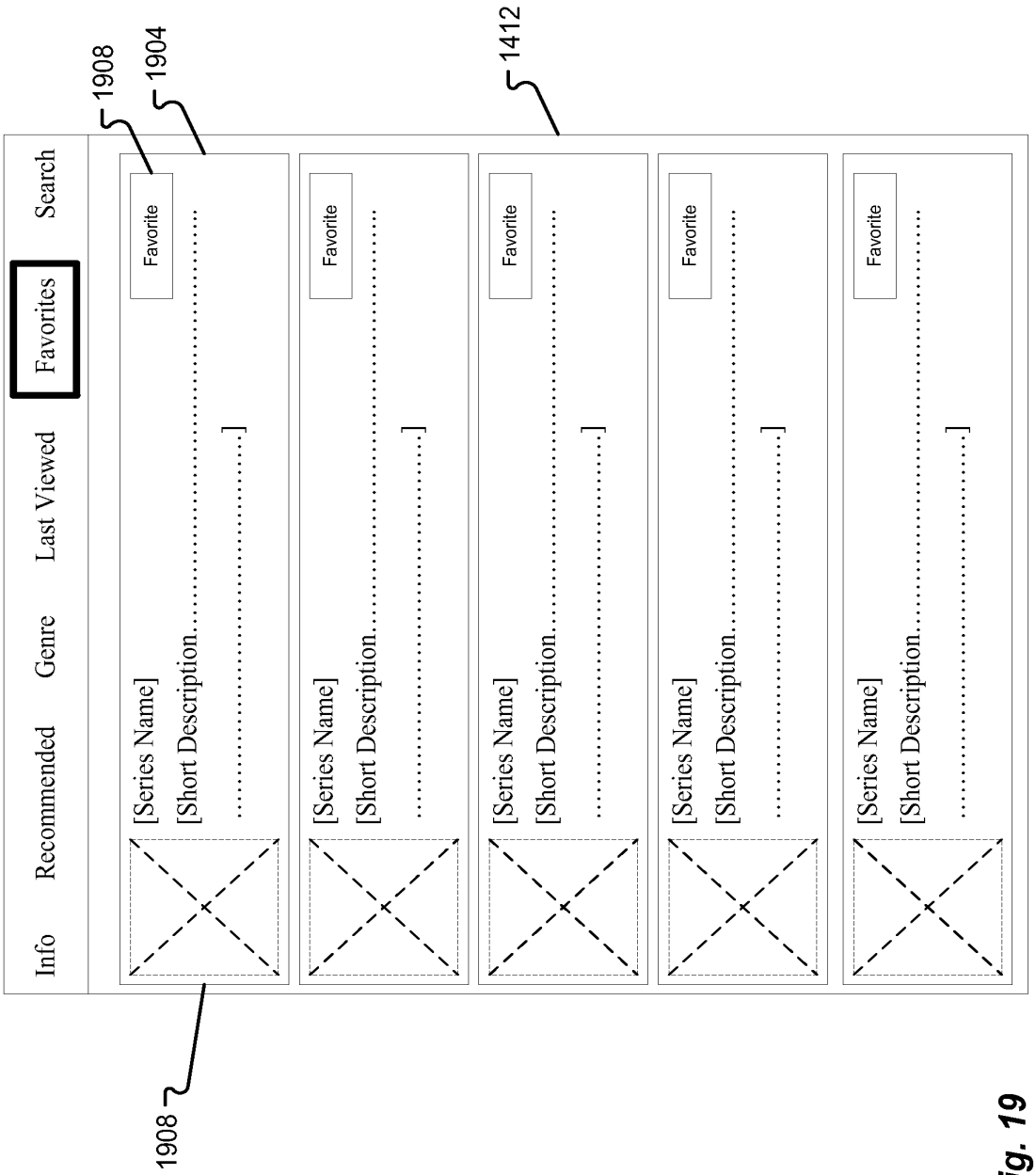

1908
1904
1412
Info
Recommended
Genre
Last Viewed
Favorites
Search
Favorite
[Series Name]
[Short Description.....
.....]
1908

Fig. 19

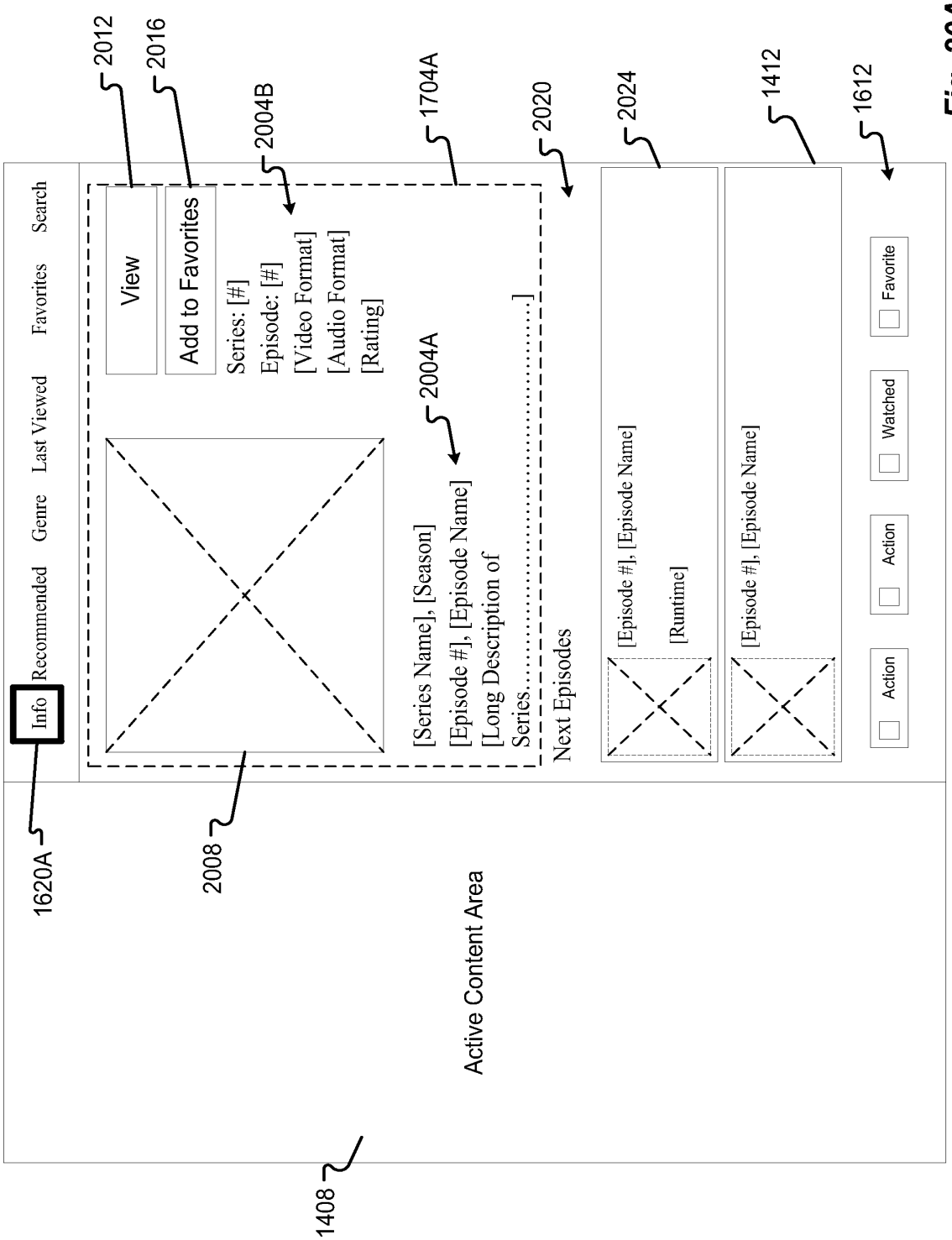

Search
Favorites
Last Viewed
Genre
Recommended
Info
1620A
2008
1408
Active Content Area
2012
2016
2004B
1704A
2020
2024
1412
1612
View
Add to Favorites
Series: [#]
Episode: [#]
[Video Format]
[Audio Format]
[Rating]
2004A
[Series Name], [Season]
[Episode #], [Episode Name]
[Long Description of Series.....]
Next Episodes
[Episode #], [Episode Name]
[Runtime]
[Episode #], [Episode Name]
Action
Action
Watched
Favorite

Fig. 20A

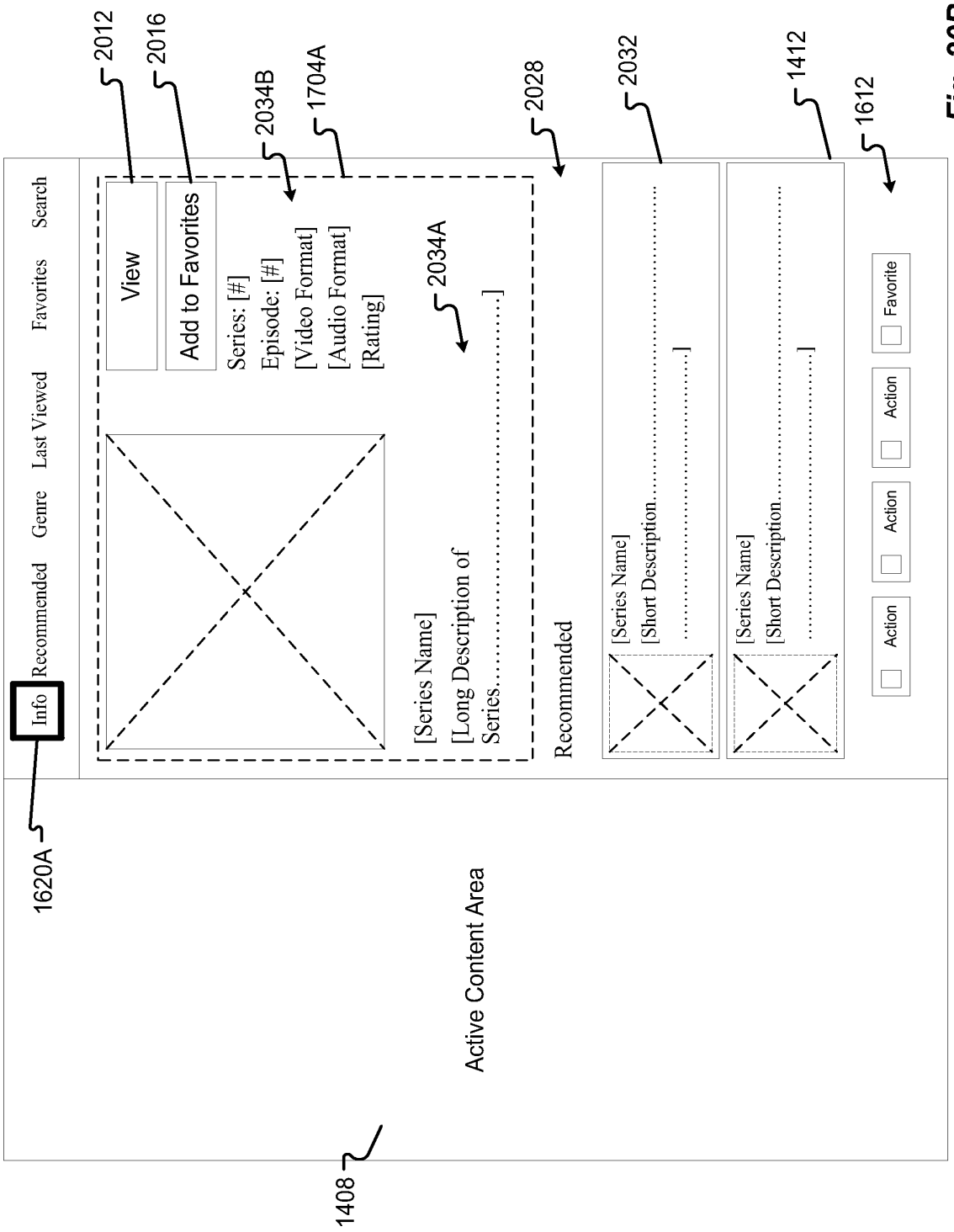

Search
Favorites
Last Viewed
Genre
Recommended
Info
1620A
Active Content Area
1408
2012
2016
2034B
1704A
2028
2032
1412
1612
View
Add to Favorites
Series: [#]
Episode: [#]
[Video Format]
[Audio Format]
[Rating]
2034A
[Series Name]
[Long Description of Series……]
Recommended
[Series Name]
[Short Description……]
[Series Name]
[Short Description……]
Action
Action
Action
Favorite

Fig. 20B

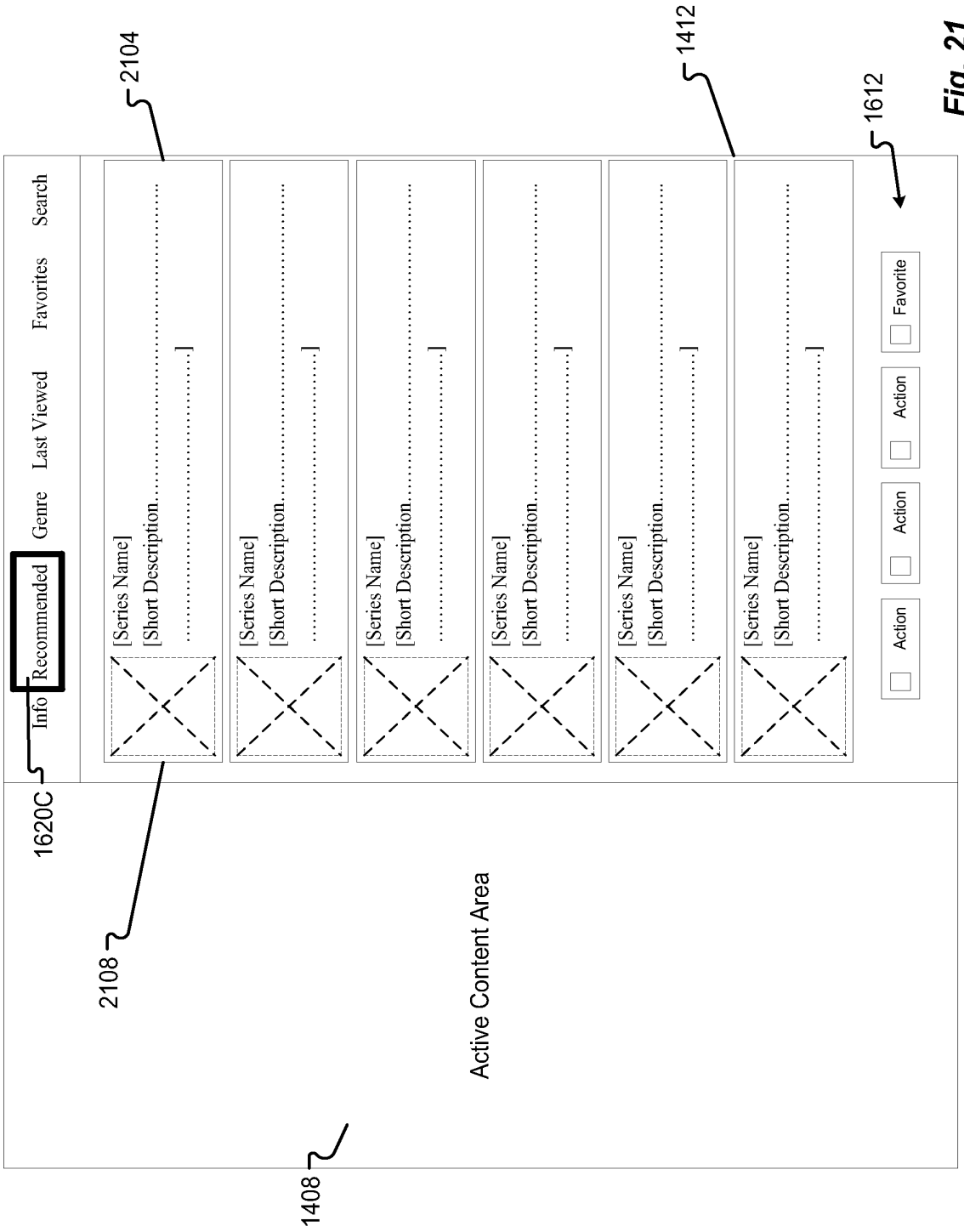

Info
Recommended
Genre
Last Viewed
Favorites
Search
1620C
2104
2108
1412
1612
1408
Active Content Area
[Series Name]
[Short Description.....
.....]
Action
Favorite

Fig. 21

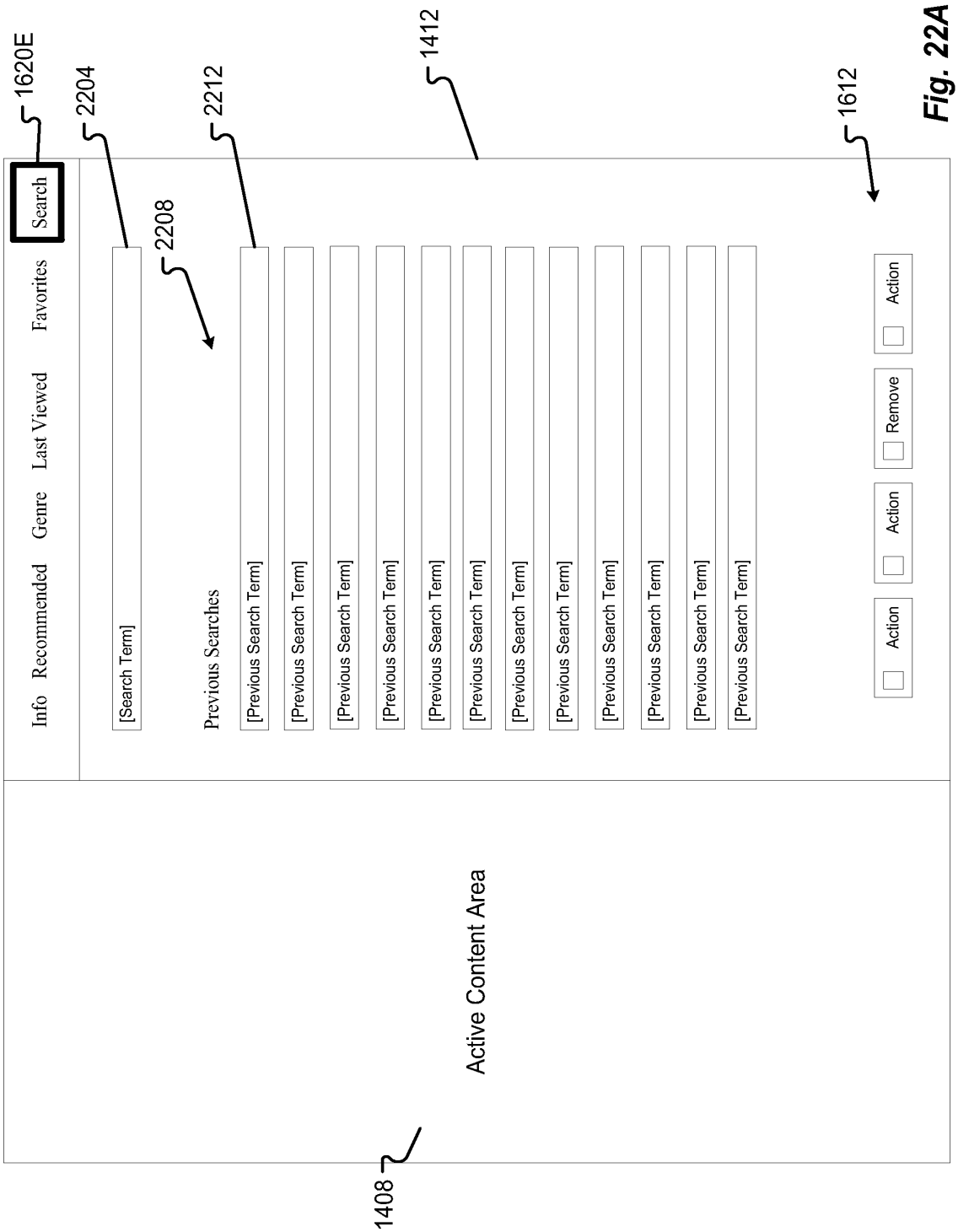

1620E
2204
2212
1412
1612
2208
Search
Info
Recommended
Genre
Last Viewed
Favorites
[Search Term]
Previous Searches
[Previous Search Term]
Action
Action
Remove
Action
Active Content Area
1408

Fig. 22A

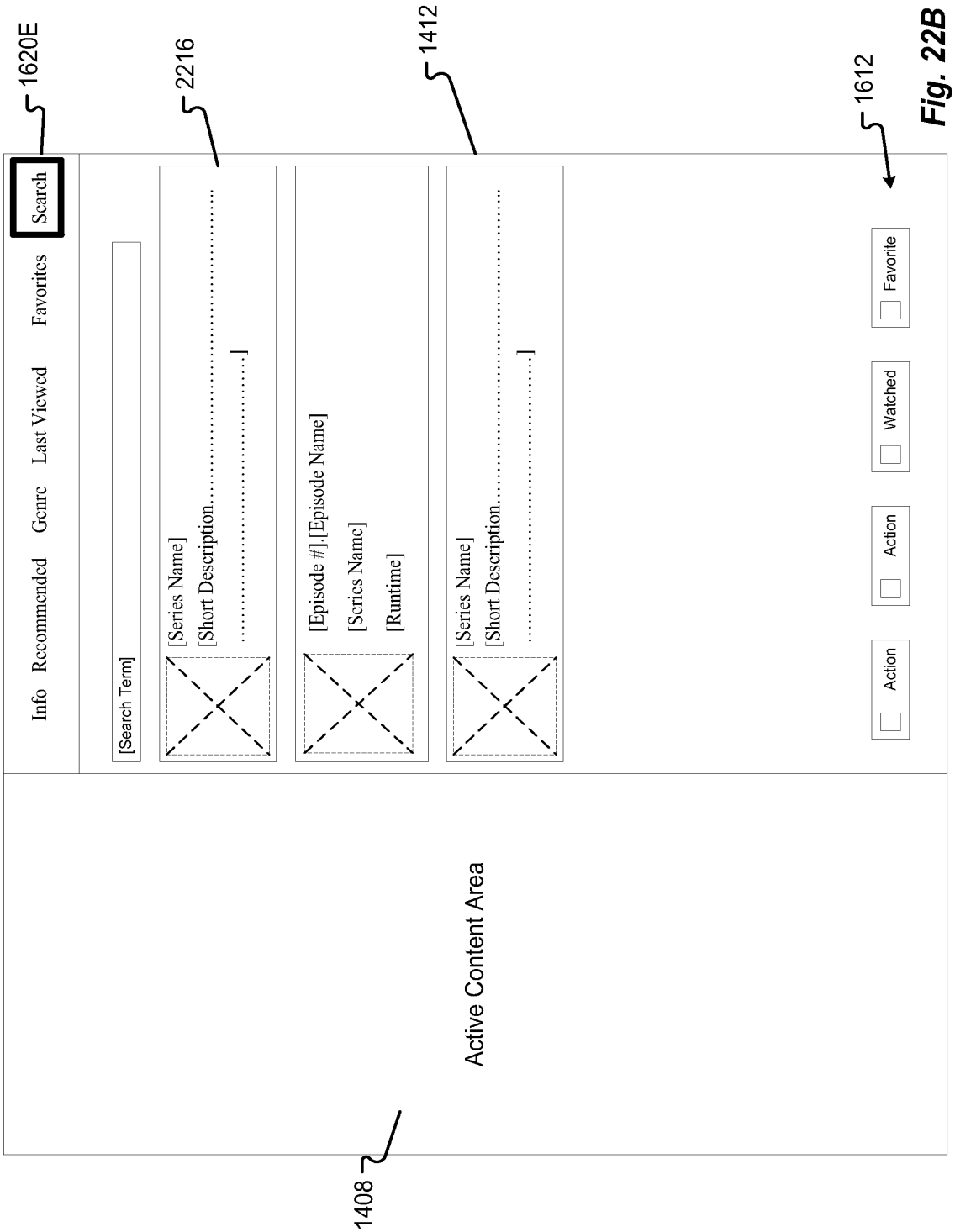

1620E
2216
1412
1612
1408
Info
Recommended
Genre
Last Viewed
Favorites
Search
[Search Term]
[Series Name]
[Short Description……]
[Episode #].[Episode Name]
[Series Name]
[Runtime]
[Series Name]
[Short Description……]
Action
Action
Watched
Favorite
Active Content Area

Fig. 22B

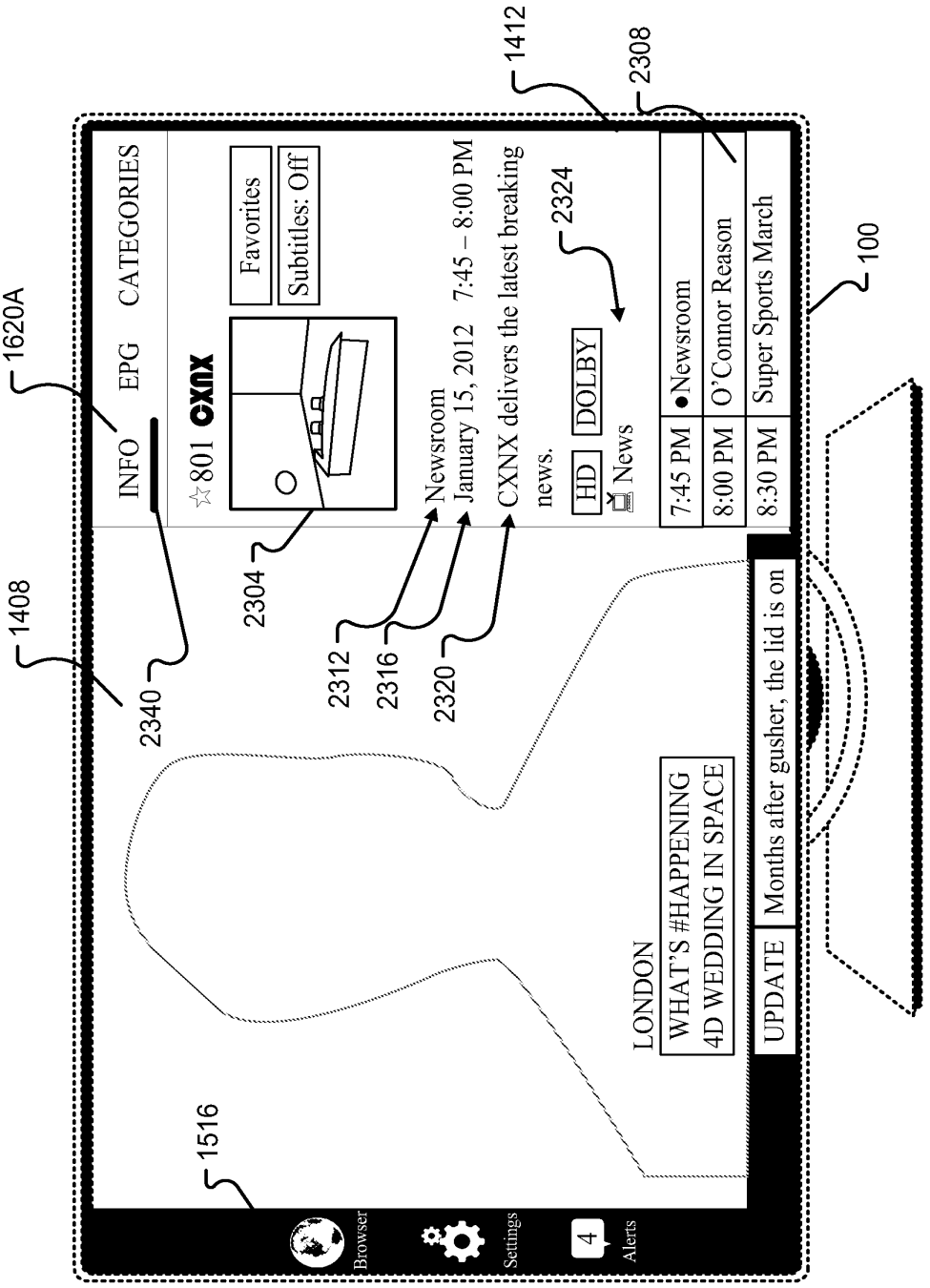

1620A
1408
1516
2340
2304
2312
2316
2320
1412
2308
2324
100
INFO
EPG
CATEGORIES
801 CXNX
Favorites
Subtitles: Off
Newsroom
January 15, 2012 7:45 – 8:00 PM
CXNX delivers the latest breaking news.
HD
DOLBY
News
7:45 PM
Newsroom
8:00 PM
O'Connor Reason
8:30 PM
Super Sports March
LONDON
WHAT'S #HAPPENING
4D WEDDING IN SPACE
UPDATE
Months after gusher, the lid is on
Browser
Settings
4
Alerts

Fig. 23A

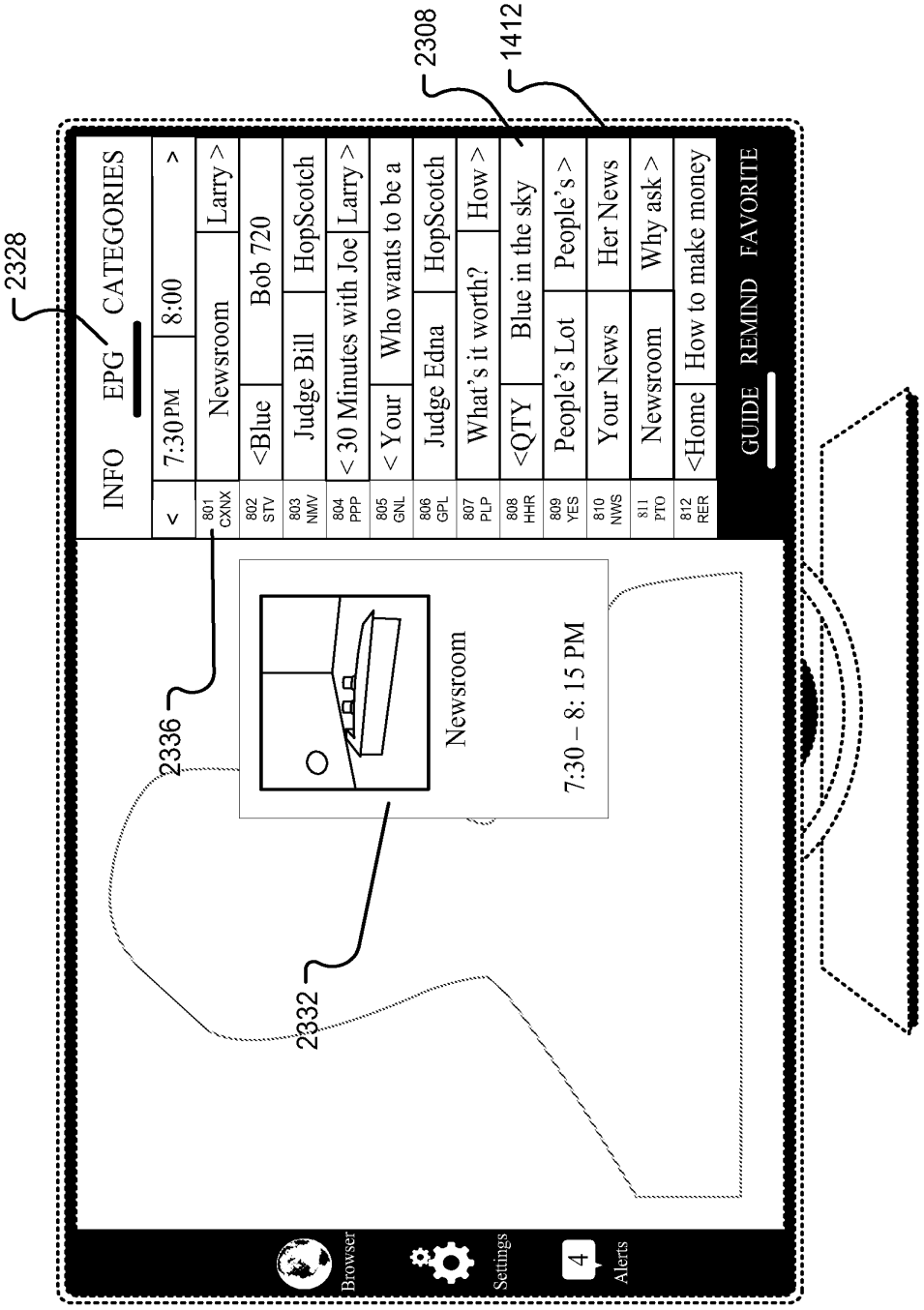

2328
2308
1412
2336
2332
INFO
EPG
CATEGORIES
7:30 PM
8:00
Newsroom
Larry >
<Blue
Bob 720
Judge Bill
HopScotch
< 30 Minutes with Joe
Larry >
< Your
Who wants to be a
Judge Edna
HopScotch
What's it worth?
How >
<QTY
Blue in the sky
People's Lot
People's >
Your News
Her News
Newsroom
Why ask >
<Home
How to make money
801 CXNX
802 STV
803 NMV
804 PPP
805 GNL
806 GPL
807 PLP
808 HHR
809 YES
810 NWS
811 PTO
812 RER
GUIDE
REMIND
FAVORITE
Newsroom
7:30 – 8: 15 PM
Browser
Settings
4
Alerts

Fig. 23B

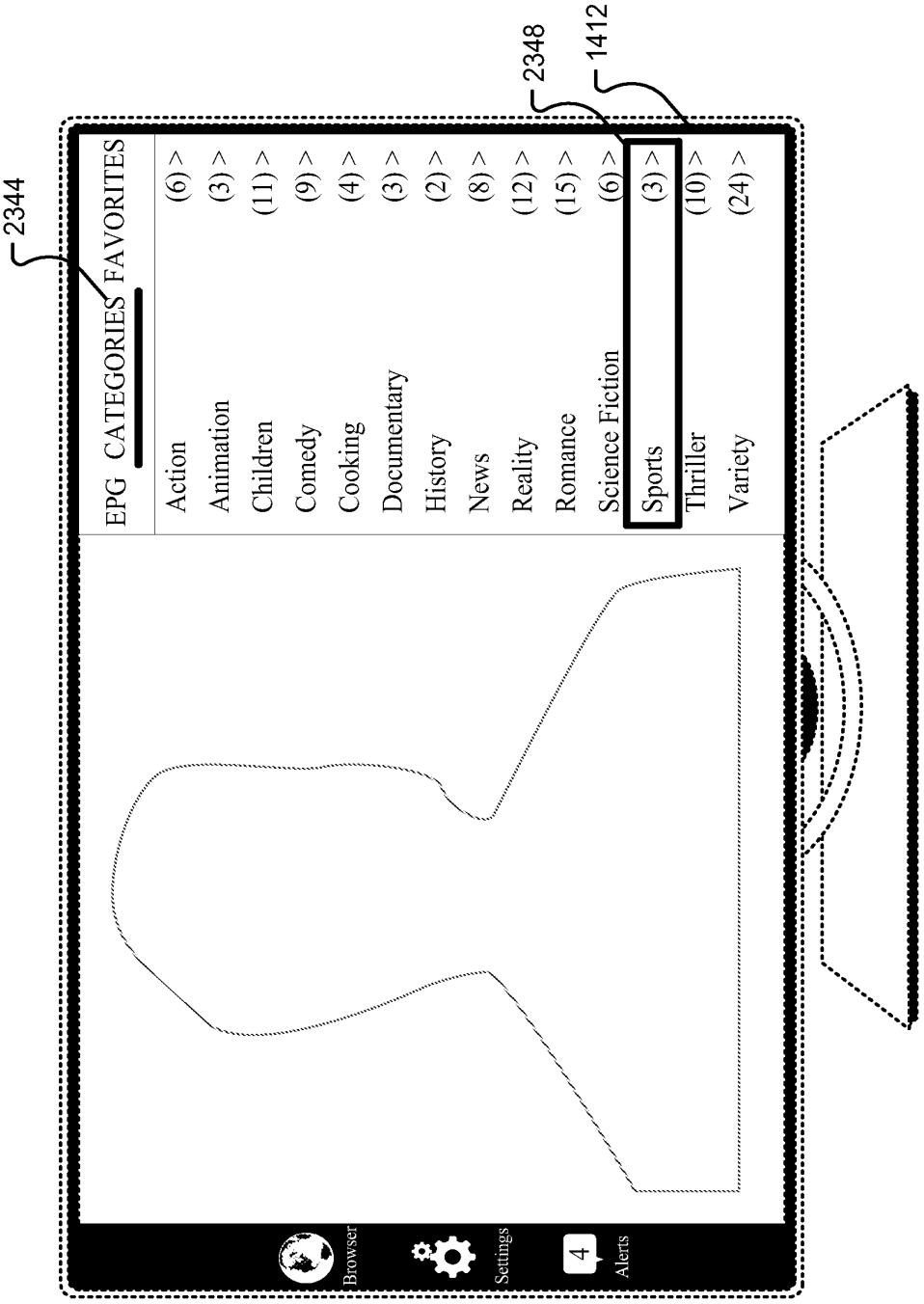

2344
EPG
CATEGORIES
FAVORITES
Action (6) >
Animation (3) >
Children (11) >
Comedy (9) >
Cooking (4) >
Documentary (3) >
History (2) >
News (8) >
Reality (12) >
Romance (15) >
Science Fiction (6) >
Sports (3) >
Thriller (10) >
Variety (24) >
2348
1412
Browser
Settings
4
Alerts

Fig. 23C

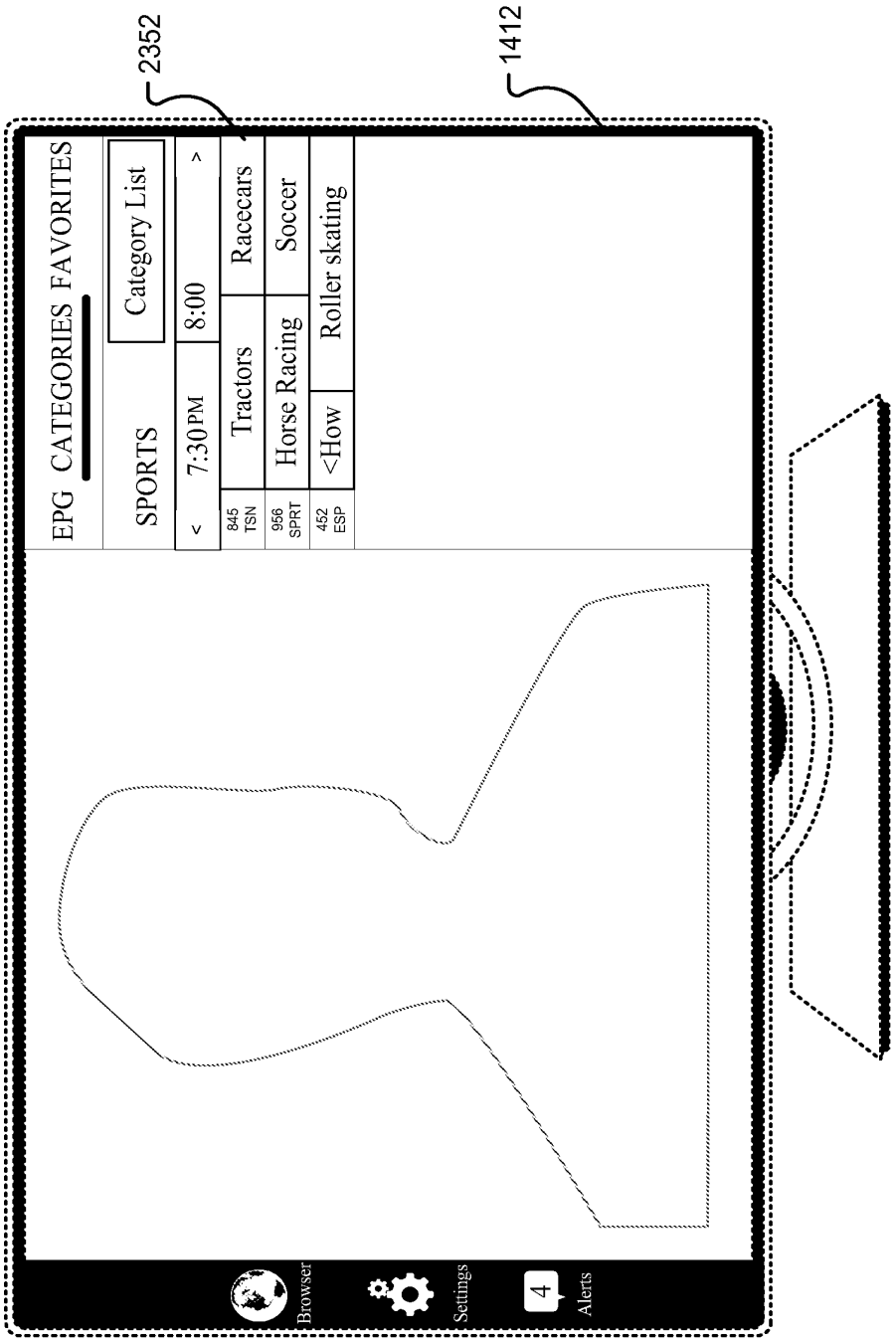

2352
1412
EPG CATEGORIES FAVORITES
SPORTS
Category List
< 7:30 PM
8:00
>
845 TSN
Tractors
Racecars
956 SPRT
Horse Racing
Soccer
452 ESP
<How
Roller skating
Browser
Settings
4
Alerts

Fig. 23D

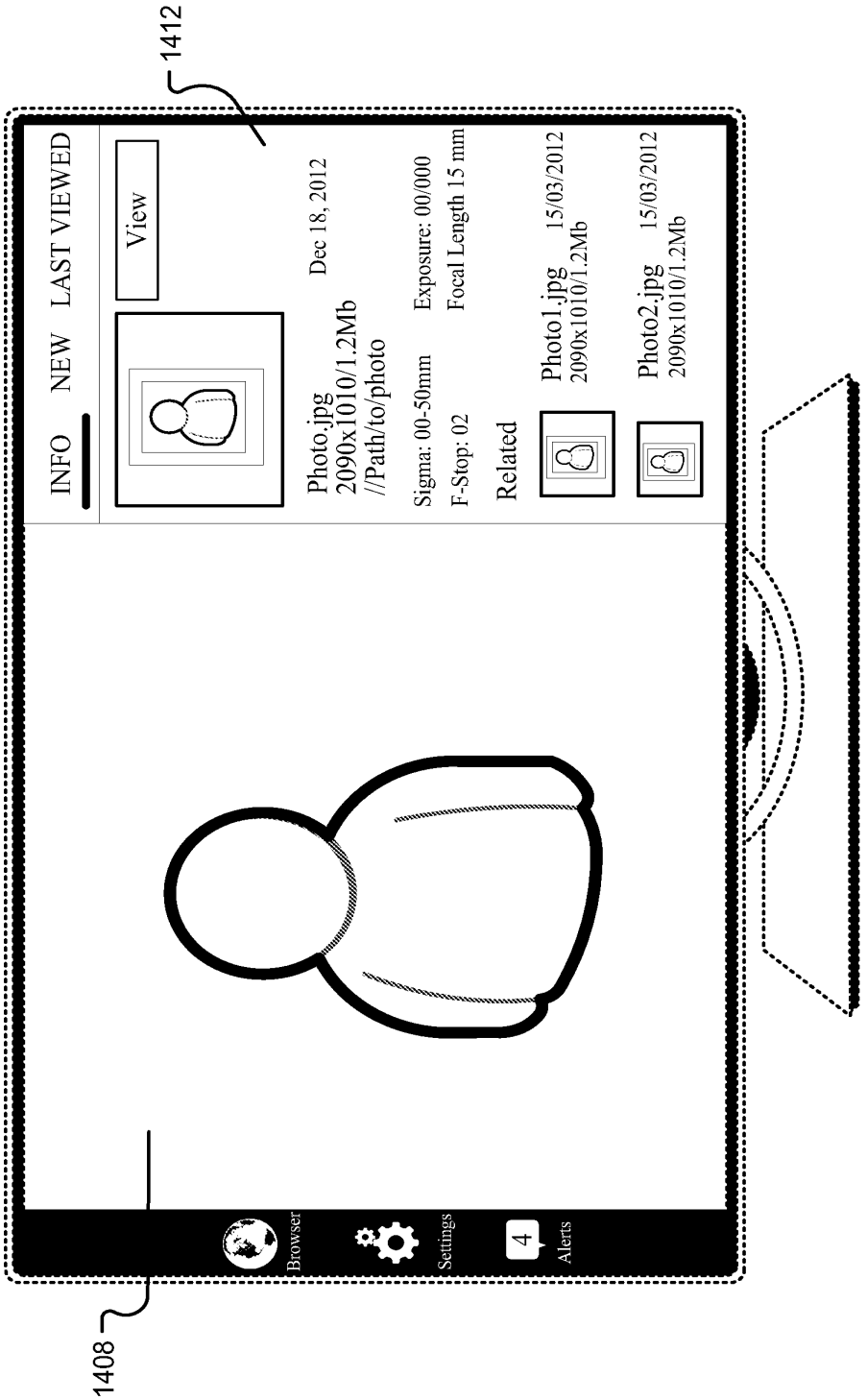

1412
INFO
NEW
LAST VIEWED
View
Photo.jpg
2090x1010/1.2Mb
//Path/to/photo
Dec 18, 2012
Sigma: 00-50mm
F-Stop: 02
Exposure: 00/000
Focal Length 15 mm
Related
Photo1.jpg
2090x1010/1.2Mb
15/03/2012
Photo2.jpg
2090x1010/1.2Mb
15/03/2012
Browser
Settings
4
Alerts
1408

Fig. 23E

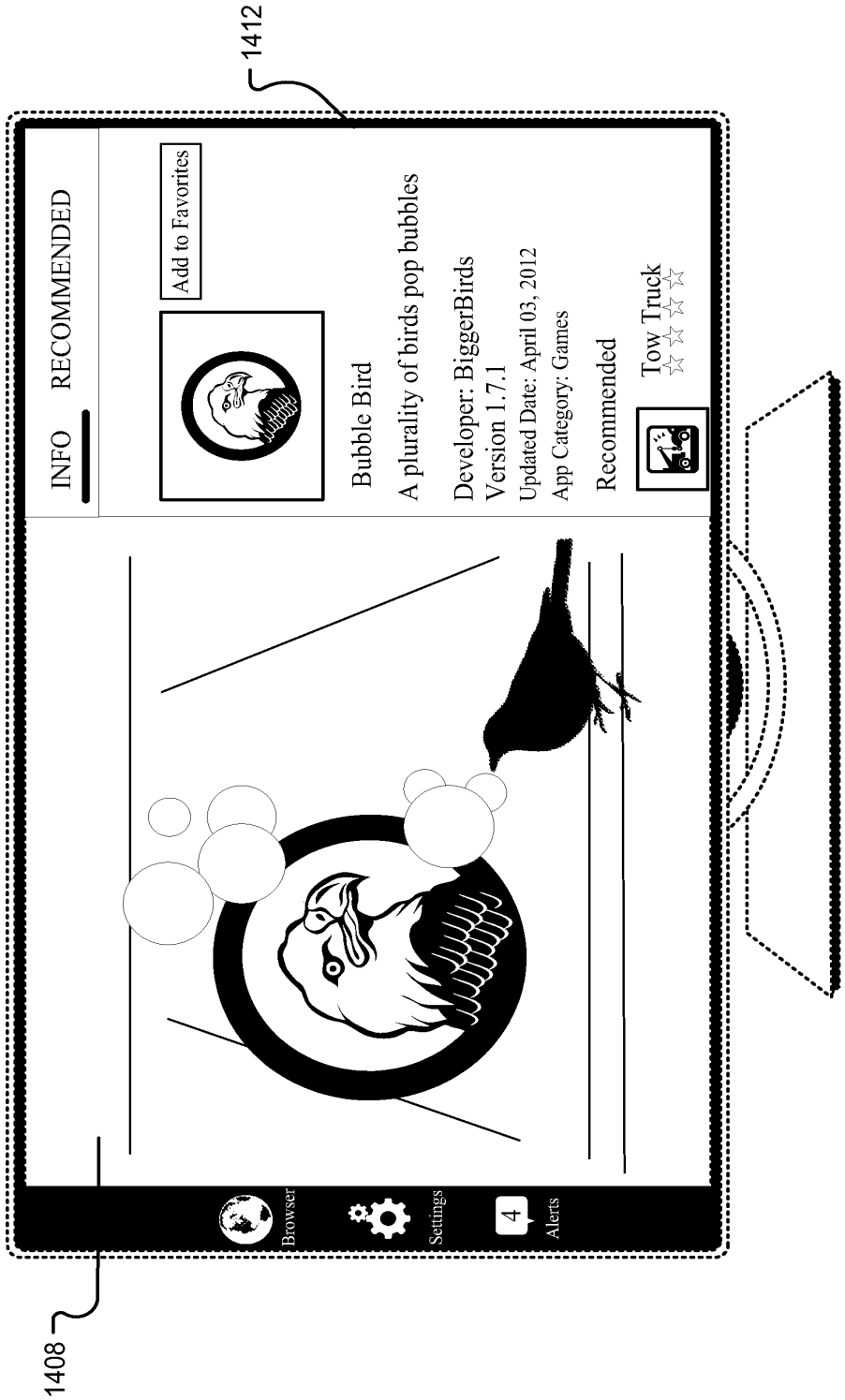

1412
1408
INFO
RECOMMENDED
Add to Favorites
Bubble Bird
A plurality of birds pop bubbles
Developer: BiggerBirds
Version 1.7.1
Updated Date: April 03, 2012
App Category: Games
Recommended
Tow Truck
Browser
Settings
4
Alerts

Fig. 23F

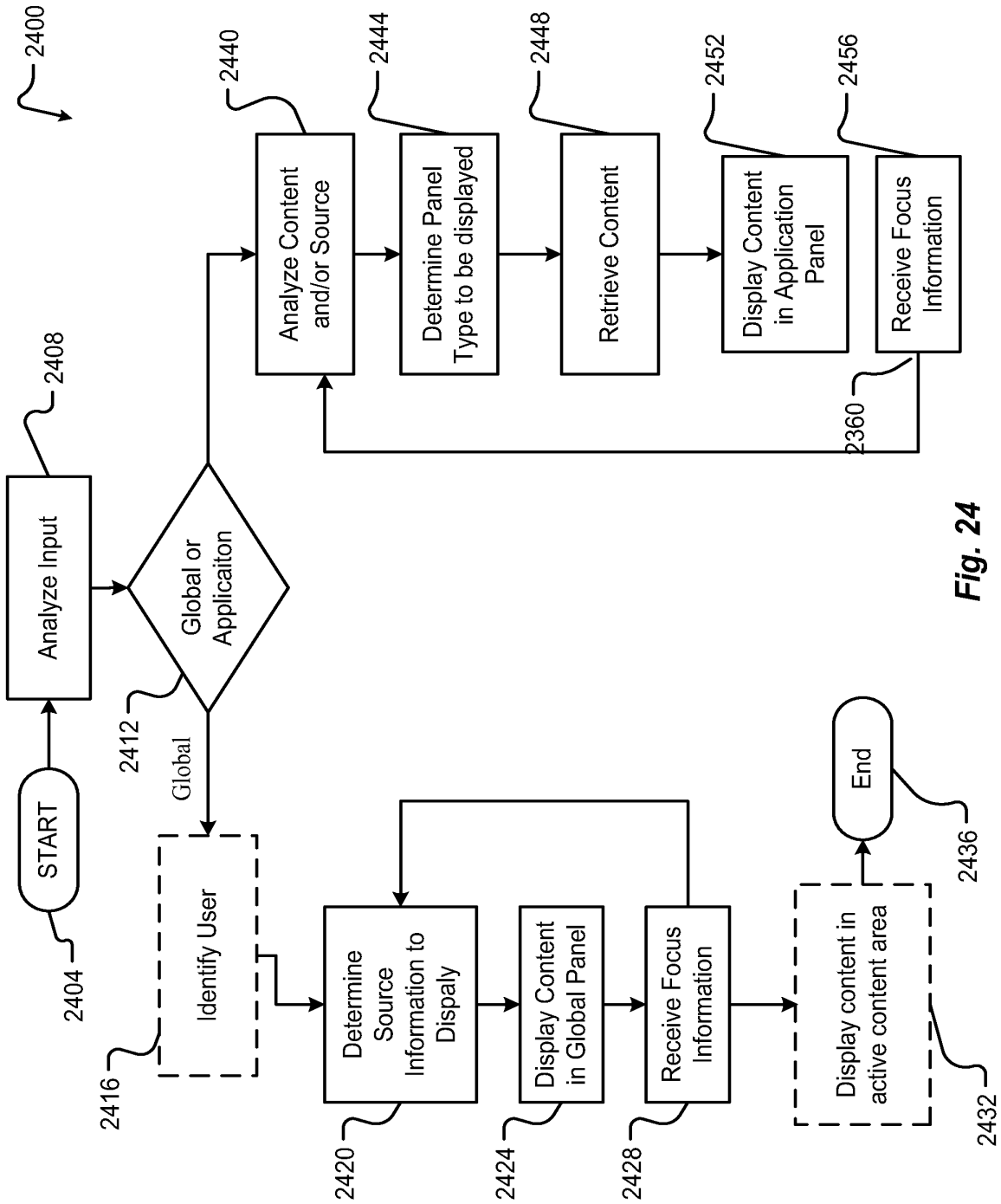

2400
START
2404
Analyze Input
2408
Global or Applicaiton
2412
Global
Identify User
2416
Determine Source Information to Dispaly
2420
Display Content in Global Panel
2424
Receive Focus Information
2428
Display content in active content area
2432
End
2436
Analyze Content and/or Source
2440
Determine Panel Type to be displayed
2444
Retrieve Content
2448
Display Content in Application Panel
2452
Receive Focus Information
2456
2360

Fig. 24

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/36844

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 17/30 (2013.01)
USPC - 348/554
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(8) Classification(s): G06F 17/30; G06F 3/00; G08B 21/00 (2013.01)
USPC Classification(s): 348/554; 725/110; 707/707; 340/635

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPro (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; Google
select, panel, television, content

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/0289067 A1 (JORDAN, D et al.), 24 November 2011, Paragraphs [0102]-[0106].	1-22
A	US 2006/0101504 A1 (ARAVAMUDAN, M et al.), 11 May 2006, the whole document.	1-22
A	US 2009/0064222 A1 (DAWSON, T et al.), 5 March 2009, the whole document.	1-22

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
13 June 2013 (13.06.2013)	28 JUN 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Brent R. Lindon
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-424-PCT	Date of mailing *(day/month/year)* 28 JUN 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/36844	International filing date *(day/month/year)* 16 April 2013 (16.04.2013)
Applicant Flextronics AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-424-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/36844	International filing date *(day/month/year)* 16 April 2013 (16.04.2013)	(Earliest) Priority Date *(day/month/year)* 14 June 2012 (14.06.2012)
Applicant Flextronics AP, LLC		

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

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

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

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 23A

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/36844

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 17/30 (2013.01)
USPC - 348/554
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(8) Classification(s): G06F 17/30; G06F 3/00; G08B 21/00 (2013.01)
USPC Classification(s): 348/554; 725/110; 707/707; 340/635

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPro (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; Google
select, panel, television, content

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/0289067 A1 (JORDAN, D et al.), 24 November 2011, Paragraphs [0102]-[0106].	1-22
A	US 2006/0101504 A1 (ARAVAMUDAN, M et al.), 11 May 2006, the whole document.	1-22
A	US 2009/0064222 A1 (DAWSON, T et al.), 5 March 2009, the whole document.	1-22

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
13 June 2013 (13.06.2013)	28 JUN 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Brent R. Lindon
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	28 JUN 2013
Applicant's or agent's file reference 6583-424-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/36844	16 April 2013 (16.04.2013)	14 June 2012 (14.06.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 17/30 (2013.01)
USPC - 348/554

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to th IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	13 June 2013 (13.06.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36844

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36844

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1-22	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-22	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-22 lack novelty under PCT Article 33(2) as being anticipated by US 2011/0289067 A1 to Jordan et al. (hereinafter 'Jordan').

As to Claims 1, 11, and 21, Jordan discloses a method and non-transitory computer readable information storage medium having stored thereon instructions that cause a computing system to execute a method of displaying content on a television, comprising: receiving an indication associated with a selection by a user (user may select command options in a television interface to display listings pages describing content available for display, Paragraph [0103]); determining, based on the received indication, a content panel to display via the television (a user can select to display "All", and a list of all available content will be displayed in content listing area 1820, located in content area 1720 (content panel), Paragraph [0103]); retrieving from memory, a first content information for display in the content panel (all available content may be listed in the content listing area 1820, located in content area 1720 (content panel), as retrieved from content database 112 (memory), Paragraphs [0102] and [0103]); and displaying, via the television, the retrieved content information in the specified content panel (all available content may be listed in the content listing area 1820, located in content area 1720 (content panel), Paragraph [0103]); and only as to Claim 21, an input device associated with the television (computer system, which may include a television, includes an input device, Figure 40; Paragraphs [0040] and [0139]; a memory (disk drive unit 4016, main memory 4004, and static memory 4006, Figure 40; Paragraph [0139]); and a microprocessor (data processor 4002, Figure 40, Paragraph [0139]).

As to Claims 2, 12, and 22, Jordan discloses the method, medium, and system of Claims 1, 11, and 21. Jordan further discloses a method, medium, and system further comprising: identifying a user associated with the received indication (a user may log in prior to selecting command options, in order to determine available content, Paragraph [0060]); retrieving one or more settings associated with the identified user (if logged-in user selects the favorites command option, stored favorites and recommendations based on stored user interest information (stored settings) may be retrieved and displayed, Paragraphs [0060], [0064], and [0104]); retrieving, from memory, content information associated with the identified user (if logged-in user selects the favorites command option, stored favorites (content information associated with the user) and recommendations based on stored user interest information may be retrieved and displayed, Paragraphs [0060], [0064], and [0104]); displaying, via the television, the retrieved content information in the specified content panel (if logged-in user selects the favorites command option, stored favorites and recommendations based on stored user interest information may be retrieved and displayed in the content listing area, located in content area 1720 (content panel), Paragraphs [0060], [0064], and [0104]).

As to Claims 3 and 13, Jordan discloses the method and medium of Claims 1 and 11. Jordan further discloses a method and medium further comprising: identifying a user associated with the received indication (a user may log in prior to selecting command options, in order to determine available content, Paragraph [0060]); retrieving, from memory, one or more settings associated with the identified user (if logged-in user selects the favorites command option, stored favorites and recommendations based on stored user interest information (stored settings) may be retrieved and displayed, Paragraphs [0060], [0064], and [0104]); retrieving, from memory, content information associated with the identified user and the one or more settings associated with the user (if logged-in user selects the favorites command option, stored favorites information (content information associated with the user) and recommendations based on stored user interest information (stored settings) may be retrieved and displayed, Paragraphs [0060], [0064], and [0104]); and displaying, via the television, the retrieved content information in the specified content panel (if logged-in user selects the favorites command option, stored favorites and recommendations based on stored user interest information may be retrieved and displayed in the content listing area, located in content area 1720 (content panel), Paragraphs [0060], [0064], and [0104]).

As to Claims 4 and 14, Jordan discloses the method and medium of Claims 1 and 11. Jordan further discloses a method and medium further comprising: receiving a second indication associated with a selection by a user (user may browse, selecting different command options, Paragraphs [0098]-[0100]); determining, based on the second indication, a source of content information to be displayed in the content panel based (a user can select a specific content item, such as "Lost", and information about that program (source of content information)will be displayed in the content listing area 1820, located in content area 1720 (content panel) as a Content Overview Page, Paragraphs [0103] and [0106]); retrieving at least a portion of content information from the determined source (designated movie content (determined source) may be listed in the content listing area 1820, located in content area 1720 (content panel) as a Content Overview Page, Paragraphs [0102], [0103], and [0106]); and displaying, via the television, the content information associated with the determined source (designated movie content (determined source) may be listed in the content listing area 1820, located in content area 1720 (content panel) of the television display as a Content Overview Page, Paragraphs [0102], [0103], and [0106]).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36844

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claim 16 is objected to under PCT Rule 66.2(a)(iii) as containing the following defect in the form or contents thereof:

At Page 54, Line 21 of the application, Claim 16 reads 'The method of claim 1, further comprising:'. As Claim 16 is located among the non-transitory computer-readable medium claims associated with Claim 11, would be duplicative of Claim 6 were it to be understood as written, and as it is referred to in Claim 17 as a non-transitory computer-reabable medium claim, for the purposes of this examination Claim 16 has been best understood to depend upon Claim 11, and the text at Page 54, Line 21 of the application which reads 'The method of claim 1, further comprising:' to read 'The non-transitory computer-readable medium of Claim 11, further comprising:'.

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Box No. V: Citations and Explanations-***-

As to Claims 5 and 15, Jordan discloses the method and medium of Claims 1 and 11. Jordan further discloses wherein the content panel is a global panel (content area 1720 hosts the display of content information across various menus, Figures 17-20, Paragraphs [0099] and [0108]).

As to Claims 6 and 16, Jordan discloses the method and medium of Claims 1 and 11. Jordan further discloses a method and medium further comprising: identifying at least one of a content source and a content information currently being displayed via a television (an additional dimension may be presented based on (identified) the currently selected content item, Paragraphs [0127]-[0129] and [0137]); selecting a panel type based on the identified at least one of content source and content information currently being displayed via the television (different types of information such as similar items or reviews may be presented based on what type of content is selected, Paragraphs [0127]-[0129]); retrieving, from memory, content information based on the selected panel type (if one of the additional information dimensions is selected, associated information may be obtained by the user, which is stored in a database (memory), Paragraphs [0060]-[0061] and [0127]-[0129]); and displaying, via the television, the retrieved content information in the content panel based on the selected panel type (if one of the additional information dimensions is selected, different types of information may be presented based on what type of content is selected, Paragraphs [0127]-[0129]).

As to Claims 7 and 17, Jordan discloses the method and medium of Claims 6 and 16. Jordan further discloses a method and medium further comprising: receiving a second indication associated with a selection by a user (user may browse, selecting different command options, Paragraphs [0098]-[0100] and [0127]-[0129]); selecting a panel type based on the second indication (different types of information such as similar items or reviews may be presented based on what type of content is selected, Paragraphs [0127]-[0129]); retrieving, from memory, content information based on the selected panel type and the second indication (if one of the additional information dimensions is selected, associated information may be obtained by the user, which is stored in a database (memory), Paragraphs [0060]-[0061] and [0127]-[0129]); and displaying, via the television, the retrieved content information in the content panel (if one of the additional information dimensions is selected, different types of information may be presented based on what type of content is selected, Paragraphs [0127]-[0129]).

As to Claims 8 and 18, Jordan discloses the method and medium of Claims 7 and 17. Jordan further discloses wherein the retrieved content information comprises information associated with content information marked as favorite (user can instead select the "For You" command option, which provides recommendations based on stored user interest information, such as designated Favorites, Paragraphs [0106], [0116], and [0125]).

As to Claims 9 and 19, Jordan discloses the method and medium of Claims 7 and 17. Jordan further discloses wherein the retrieved content information comprises information associated with content information recently viewed (user can instead select the "For You" command option, which provides recommendations based on stored user interest information, such as previously viewed content, Paragraphs [0106], [0116], and [0125]).

As to Claims 10 and 20, Jordan discloses the method and medium of Claims 7 and 7. Jordan further discloses wherein the content panel is an application panel (information is presented in various pages (application panels) in the content area 1720, Paragraphs [0118], [0120], and [0127]-[0129]).

Claims 1-22 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Tadd F. Wilson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	28 JUN 2013
Applicant's or agent's file reference: 6583-425-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US13/36843	International filing date *(day/month/year)*: 16 April 2013 (16.04.2013)
Applicant: Flextronics AP, LLC	

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

Filing of amendments and statement under Article 19:
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450	Authorized officer Shane Thomas
Facsimile No. 571-273-3201	Telephone No. PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-425-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/36843	International filing date *(day/month/year)* 16 April 2013 (16.04.2013)	(Earliest) Priority Date *(day/month/year)* 14 June 2012 (14.06.2012)
Applicant Flextronics AP, LLC		

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

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

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

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 14

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/36843

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 17/30 (2013.01)
USPC - 348/554
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(8) Classification(s): G06F 17/30; G06F 3/00; G08B 21/00 (2013.01)
USPC Classification(s): 348/554; 725/110; 707/707; 340/635

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPro (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; Google
select, silo, icon, television, content

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2011/0289067 A1 (JORDAN, D et al.) 24 November 2011, Figure 40; Paragraphs [0098]-[0100] and [0105]-[0106].	1-5, 9-13, and 16-18 --- 6-8, 14, 15, 19, and 20
Y	US 2011/0074591 A1 (ARLING, P et al.) 31 March 2011, Paragraphs [0028] and [0035].	6-8, 14, 15, 19, and 20
A	US 2006/0101504 A1 (ARAVAMUDAN, M et al.) 11 May 2006, the whole document.	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
11 June 2013 (11.06.2013)	28 JUN 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Tadd F. Wilson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	28 JUN 2013

Applicant's or agent's file reference	FOR FURTHER ACTION
6583-425-PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/36843	16 April 2013 (16.04.2013)	14 June 2012 (14.06.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 17/30 (2013.01)
USPC - 348/554

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	11 June 2013 (11.06.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36843

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36843

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	6-8, 14, 15, 19, and 20	YES
	Claims	1-5, 9-13, and 16-18	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-5, 9-13, and 16-18 lack novelty under PCT Article 33(2) as being anticipated by US 2011/0289067 A1 to Jordan et al. (hereinafter 'Jordan').

As to Claims 1, 11, and 16, Jordan discloses a method for providing content in an Intelligent television, tangible computer-readable medium, and Intelligent television, the method, medium, and television comprising: receiving a designation for a silo, wherein a silo is a logical representation of a content source for the Intelligent television (user may select (designate) an icon representing a content source (silo) through the television interface, Paragraphs [0098]-[0100]); based on the designation, determining the silo (system detects (determines) the highlighting and selection of the TV portal, Paragraphs [0105]-[0106]); and providing content from the silo (system presents TV Portal content to the user in response to the selection, Paragraph [0106]); and in reference only to Claim 16, a display (video display 4010, Figure 40); a memory (main and static memories 4004 and 4006, Figure 40); and a processor in communication with the memory and the display (processor 4002, in communication with video display 4010 and memories 4004 and 4006 through bus 4008, Figure 40).

As to Claim 2, Jordan discloses the method of Claim 1. Jordan further discloses wherein a silo is a content application or an input source (content sources (silos) may be broadcast, cable, or satellite media sources (input source) or on-demand sources (content application), among others, Paragraphs [0040] and [0100]).

As to Claim 3, Jordan discloses the method of Claim 2. Jordan further discloses wherein configuration data is associated with the silo (membership information related to a content source (configuration data) is stored in the system memory, Paragraph [0046]).

As to Claims 4, 12, and 17, Jordan discloses the method, medium, and television of Claims 3, 11, and 16. Jordan further discloses a method, medium, and television further comprising changing to the silo (the TV portal interface is displayed (changed to silo) when that content source is selected, Paragraphs [0104]-[0105]).

As to Claims 5, 13, and 18, Jordan discloses the method, medium, and television of Claims 4, 12, and 17. Jordan further discloses a method, medium, and television further comprising: determining whether the silo is a content application or an input source (when an icon is selected, it will either launch a navigation menu to select a content source (content application) or directly launch a content source, such as a broadcast television source (input source), Paragraphs [0093] and [0100]; if the silo is an input source: presenting a watermark in a user interface to indicate which silo has been selected; activating a device or storage mechanism associated with the input source (if a content source such as a broadcast television program is selected, the title of the program will be shown and a highlighting box surrounds it (watermark), and the content signal acquired, Paragraphs [0093], [0100], and [0105]-[0106]); if the silo is a content application, determining whether a preview has been cached for the silo (in the movie portal interface, the movie icons linking to the Movie Overview page (content application) may be represented by an image of the DVD jacket (preview), but only if such an image is available (check if preview is cached), Paragraph [0115]); if a preview has been cached: presenting the preview in during a silo transition; launching the content application (selectable movie icon (silo) may be represented by an image of the DVD jacket (preview), and when a user selects the movie icon, the Movie Overview page (content application) is presented, Paragraph [0115]); if a preview has not been cached: presenting a watermark in during a silo transition; and launching the content application (selectable movie icon (silo) may only be represented by a text description in its icon (watermark), such as when no DVD jacket image is available, and when a user selects the movie icon, the Movie Overview page (content application) is presented, Paragraph [0115]).

As to Claim 9, Jordan discloses the method of Claim 4. Jordan further discloses wherein the Intelligent TV includes two or more silos (system includes icons for multiple content sources (two or more), Paragraphs [0098]-[0100]).

As to Claim 10, Jordan discloses the method of Claim 9. Jordan further discloses wherein the two or more silos provide a contextual experience for a user based on an organization of the silos (content source icons are may arranged in a grid according to various ordering schemes (contextual experience), Paragraph [0103]).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36843

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Claims 6, 14, and 19 are objected to under PCT Rule 66.2(a)(iii) as containing the following defect in the form or contents thereof:

At Page 53, Line 32, Page 55, Line 20, and Page 57, Line 8 of the application, Claims 6, 14, and 19 contain the text 'if there is no a signal error'. There appears to be a letter 't' missing from the end of 'no'. For the purposes of this examination, the text 'if there is no a signal error' in Claims 6, 14, and 19 has been best understood to read 'if there is not a signal error'.

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

-***-Continued from Box No. V: Citations and Explanations-***-

Claims 6-8, 14, 15, 19, and 20 lack an inventive step under PCT Article 33(3) as being obvious over Jordan in view of US 2011/0074591 A1 to Arling et al. (hereinafter 'Arling').

As to Claims 6, 14, and 19, Jordan discloses the method, medium, and television of Claims 5, 12, and 17. However, Jordan fails to disclose a method, medium, and television further comprising: determining whether there is a signal error with a signal associated with the silo or an error with content associated with the silo; if there is a signal error, presenting a user interface indicating there is a signal error; and if there is not a signal error, presenting the content associated with the signal. Arling discloses a method, medium, and television further comprising: determining whether there is a signal error with a signal associated with the silo or an error with content associated with the silo (device will monitor the inputs and outputs of the AV system (determine error) for the expected result of a user command, such as playing a movie (silo), Paragraph [0035]); if there is a signal error, presenting a user interface indicating there is a signal error (if the expected result is not detected (content error), an error message may be displayed to prompt the user to retry the command, Paragraph [0035]); and if there is not a signal error, presenting the content associated with the signal (if the expected result is detected, the AV input will receive and display the content data, Paragraph [0035]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method, medium, and television disclosed in Jordan to include a method, medium, and television further comprising: determining whether there is a signal error with a signal associated with the silo or an error with content associated with the silo; if there is a signal error, presenting a user interface indicating there is a signal error; and if there is not a signal error, presenting the content associated with the signal, as taught in Arling, for the benefit of notifying the user if a problem is encountered, so that it can be corrected.

As to Claims 7, 15, and 20, Jordan discloses the method, medium, and television of Claims 4, 12, and 18. Jordan further discloses wherein the silo is a content application (content sources (silos) may be on-demand sources (content applications), among others, Paragraphs [0040] and [0100]). However, Jordan fails to disclose a method, medium, and television further comprising: determining if the silo is in a first time on state; if the silo is in a first time on state, starting the silo in the background; determining whether the silo is in a first time experience state; if the silo is not in a first time experience state or if the silo is not in a first time on state, determining if the silo is in an error state; if the silo is in an error state, presenting a user interface indicating that the silo is in an error state; if the silo is not in an error state, providing the silo; and if the silo is in a first time experience state, starting a first time experience process for the silo. Arling discloses a method, medium, and television further comprising: determining if the silo is in a first time on state (system checks to ensure that the source device is turned on (first time on state), Paragraph [0028]); if the silo is in a first time on state, starting the silo in the background (if the input device is not powered on (first time on state), a power on command is sent to the input device to activate it without user intervention (background), Paragraph [0028]); determining whether the silo is in a first time experience state (AV receiver checks to ensure that the activity, such as "Watch a Movie", has been configured (first time experience state), Paragraph [0028]); if the silo is not in a first time experience state or if the silo is not in a first time on state, determining if the silo is in an error state (if device is on and activity is configured, device will monitor the inputs and outputs of the AV system (determine error) for the expected result of a user command, such as playing a movie (silo), Paragraphs [0028] and [0035]); if the silo is in an error state, presenting a user interface indicating that the silo is in an error state (if the expected result is not detected (error state), an error message may be displayed to prompt the user to retry the command, Paragraph [0035]); if the silo is not in an error state, providing the silo (if the expected result is detected, the AV input will receive and display the content data, such as a movie (silo), Paragraph [0035]); and if the silo is in a first time experience state, starting a first time experience process for the silo (if the activity, such as "Watch a Movie", has not been configured (first time experience state), the user is prompted to configure the activity (first time experience process), Paragraph [0028]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method, medium, and television disclosed in Jordan to include a method, medium, and television further comprising: determining if the silo is in a first time on state; if the silo is in a first time on state, starting the silo in the background; determining whether the silo is in a first time experience state; if the silo is not in a first time experience state or if the silo is not in a first time on state, determining if the silo is in an error state; if the silo is in an error state, presenting a user interface indicating that the silo is in an error state; if the silo is not in an error state, providing the silo; and if the silo is in a first time experience state, starting a first time experience process for the silo, as taught in Arling, for the benefit of ensuring the content application is properly configured and functioning, and alerting the user if it is otherwise.

As to Claim 8, the combination of Jordan and Arling discloses the method of Claim 7. However, Jordan fails to disclose wherein the first time experience process comprises: presenting a first time experience user interface; receiving a first time experience input; and configuring the content application in response to the first time experience input. Arling discloses wherein the first time experience process comprises: presenting a first time experience user interface (user is prompted to select the appropriate source device for the activity in question (first time experience user interface), Paragraphs [0026]-[0028]); receiving a first time experience input (user selects the appropriate source device for the activity in question, Paragraphs [0026]-[0028]); and configuring the content application in response to the first time experience input (configuration parameters are stored in AV receiver memory (application configured), Paragraph [0027]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method disclosed in Jordan to include wherein the first time experience process comprises: presenting a first time experience user interface; receiving a first time experience input; and configuring the content application in response to the first time experience input, as taught in Arling, for the benefit of setting up a content application so that it functions according to the user's preferences.

Claims 1-20 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Tadd F. Wilson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-430-PCT	Date of mailing *(day/month/year)* 17 JUN 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/36826	International filing date *(day/month/year)* 16 April 2013 (16.04.2013)
Applicant Flextronics AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-430-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/36826	International filing date *(day/month/year)* 16 April 2013 (16.04.2013)	(Earliest) Priority Date *(day/month/year)* 14 June 2012 (14.06.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 15

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT PCT/US2013/036826 17.06.2013

International application No.
PCT/US13/36826

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/44543; G06F 8/34 (2013.01)
USPC - 715/763; 725/39
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(8): H04L 29/08072; G06F 3/0481, 3/04817, 3/0482, 8/34; H04N 5/44543 (2013.01); USPC: 709/224; 715/835, 836, 763, 810; 725/39

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPro (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; Google Scholar; associate*, badge*, content, source, interface, indicia, feature, state, destination, select*, second, television

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 8,201,104 B2 (YAMAMOTO, R et al.) June 12, 2012, abstract, column 2, lines 32-35, column 9, lines 8-10	1-4, 9-12 and 16-17 ---------- 5-8, 13-15 and 18-20
Y	US 8,151,215 B2 (BAURMANN, T et al.) April 3, 2012, column 1, lines 29-34, column 4, lines 44-49, column 3, lines 46-50	5-8, 13-15 and 18-20
A	US 7,363,591 B2 (GOLDTHWAITE, F et al.) April 22, 2008, entire document	1

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
6 June 2013 (06.06.2013)	17 JUN 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Tadd F. Wilson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	17 JUN 2013
Applicant's or agent's file reference 6583-430-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/36826	16 April 2013 (16.04.2013)	14 June 2012 (14.06.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/44543; G06F 8/34 (2013.01)
USPC - 715/763; 725/39

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	6 June 2013 (06.06.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36826

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36826

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	5-8, 13-15 and 18-20	YES
	Claims	1-4, 9-12 and 16-17	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-4, 9-12 and 16-17 lack novelty under PCT Article 33(2) as being anticipated by US 8,201,104 B2 Yamamoto et al. (hereinafter "Yamamoto").

As to claim 1, Yamamoto discloses a method for associating badges with an item of content or a content source, the method comprising (a plurality of function icons (associating badges) representing respective types of content playing functions, column 2, lines 32-35): receiving a selection associated with the item of content or the content source (A game icon 62 is an icon that represents the game running function and is selected to run a game program (selection associated with a item/game program), column 9, lines 8-10); based on the selection, associating a badge with the item of content or the content source (a plurality of function icons (associating badges) representing respective types of content playing functions, column 2, lines 32-35), wherein a badge is a user interface device having visual indicia that indicates the item of content or the content source includes a feature, a state, or a designation (A moving image icon, which is a function (feature) icon displayed in an area of intersection in which the array of function icons and the array of content icons (item of content) intersect, is highlighted by a color different from that of the other function icons (when the state changes) and by an enlarged view, abstract).

As to claim 2, Yamamoto discloses the method as defined in claim 1, further comprising receiving a second selection for a user interface containing information about the item of content or the content source (a display controller which generates the image data for the on-screen menu with a two-dimensional array which includes a first array comprising the plurality of function icons arranged in a specific direction on a screen and which also includes a second array comprising the plurality of content icons (item of content) in a direction intersecting the specific direction on the screen, column 2, lines 2-9).

As to claim 3, Yamamoto discloses the method as defined in claim 2, further comprising, based on the second selection, presenting the information about the item of content or the content source (The display controller displays the second array to intersect the first array at a position of one of the function icons selected by the user, and, if the contents are hierarchically stored in the storage, displays an expanded view (presenting the information) of the content icons (item of content) in the second array such that the hierarchy is represented visually or auditorily, column 2, lines 9-14).

As to claim 4, Yamamoto discloses the method as defined in claim 3, further comprising, based on the second selection, presenting the badge, associated with the item of content or the content source, with the information the item of content or the content source (the contents are hierarchically stored in the storage, displays an expanded view of the content icons (badge) in the second array such that the hierarchy is represented visually or auditorily and the term "content" refers to information including moving images, still images, audio, texts and programs that are played, displayed or run by respective types of information conveying means, column 2, lines 9-19).

As to claim 9, Yamamoto discloses the method as defined in claim 4, further disclose wherein the state is a paused playback (The instruction determination module 94 acquires instructions such as "content playing", "pause playing" (pause playback) and "invoke on-screen menu" entered by the user manipulating the controller 42, column 4, line 66 and column 5, line 3).

As to claim 10, Yamamoto discloses the method as defined in claim 3, further discloses wherein the badge is an in-progress badge (The instruction determination module 94 acquires instructions such as "content playing" (in progress icon), "pause playing" (pause playback) and "invoke on-screen menu" entered by the user manipulating the controller 42, column 4, line 66 and column 5, line 3).

As to claim 11, Yamamoto discloses a tangible computer readable medium having instructions stored thereon, wherein when executed by a processor cause the processor to execute a method (computer readable medium having stored therein a computer program executable by a computer for displaying an on-screen menu in a content player, column 25, lines 21-25), the instructions comprising: instructions to receive a selection associated with the item of content or the content source (A game icon 62 is an icon that represents the game running function and is selected to run a game program (selection associated with a item/game program), column 9, lines 8-10); based on the selection, instructions to associate a badge with the item of content or the content source (a plurality of function icons (associating badges) representing respective types of content playing functions, column 2, lines 32-35), wherein a badge is a user interface device having visual indicia that indicates the item of content or the content source includes a feature, a state, or a designation (A moving image icon, which is a function (feature) icon displayed in an area of intersection in which the array of function icons and the array of content icons intersect, is highlighted by a color different from that of the other function icons (when the state changes) and by an enlarged view, abstract).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36826

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

-***-Continued from Box No. V: Citations and Explanations-***-

As to claim 12, Yamamoto discloses the tangible computer readable medium as defined in claim 11, further comprising: instructions to receive a second selection for a user interface containing information about the item of content or the content source (a display controller which generates the image data for the on-screen menu with a two-dimensional array which includes a first array comprising the plurality of function icons arranged in a specific direction on a screen and which also includes a second array comprising the plurality of content icons in a direction intersecting the specific direction on the screen, column 2, lines 2-9); based on the second selection, instructions to present the information about the item of content or the content source (The display controller displays the second array to intersect the first array at a position of one of the function icons selected by the user, and, if the contents are hierarchically stored in the storage, displays an expanded view of the content icons in the second array such that the hierarchy is represented visually or auditorily, column 2, lines 9-14); and based on the second selection, instructions to present the badge, associated with the item of content or the content source, with the information the item of content or the content source (the contents are hierarchically stored in the storage, displays an expanded view of the content icons (badge) in the second array such that the hierarchy is represented visually or auditorily and the term "content" refers to information including moving images, still images, audio, texts and programs that are played, displayed or run by respective types of information conveying means, column 2, lines 9-19).

As to claim 16, Yamamoto discloses an intelligent television comprising: a display; a memory (a television set 30 onscreen display with a onscreen buffer 102 that temporally stores storage/memory) column 5, lines 53-57); a processor in communication with the memory and the display, the processor operable to (the processor 108 displays content icons, column 8, lines 10-12): receive a selection associated with the item of content or the content source (a plurality of function icons (associating badges) representing respective types of content playing functions, column 2, lines 32-35); based on the selection, associate a badge with the item of content or the content source, wherein a badge is a user interface device having visual indicia that indicates the item of content or the content source includes a feature, a state, or a designation (A moving image icon, which is a function icon displayed in an area of intersection in which the array of function icons and the array of content icons intersect, is highlighted by a color different from that of the other function icons and by an enlarged view, abstract).

As to claim 17, Yamamoto discloses the intelligent television as defined in claim 16, wherein the processor is further operable to: receive a second selection for a user interface containing information about the item of content or the content source (a display controller which generates the image data for the on-screen menu with a two-dimensional array which includes a first array comprising the plurality of function icons arranged in a specific direction on a screen and which also includes a second array comprising the plurality of content icons in a direction intersecting the specific direction on the screen, column 2, lines 2-9); based on the second selection, present the information about the item of content or the content source (The display controller displays the second array to intersect the first array at a position of one of the function icons selected by the user, and, if the contents are hierarchically stored in the storage, displays an expanded view of the content icons in the second array such that the hierarchy is represented visually or auditorily, column 2, lines 9-14); and based on the second selection, present the badge, associated with the item of content or the content source, with the information the item of content or the content source (the contents are hierarchically stored in the storage, displays an expanded view of the content icons (badge) in the second array such that the hierarchy is represented visually or auditorily and the term "content" refers to information including moving images, still images, audio, texts and programs that are played, displayed or run by respective types of information conveying means, column 2, lines 9-19).

Claims 5-8, 13-15 and 18-20 lack an inventive step under PCT Article 33(3) as being obvious over Yamamoto in view of US 8151215 B2 Baurmann et al. (hereinafter "Baurmann").

As to claim 5, Yamamoto discloses the method as defined in claim 4, Yamamoto fails to disclose wherein the designation is a favorite designation. Baurmann discloses wherein the designation is a favorite designation (icons that arc associated with favorite TV channels, column 1, lines 29-34). It would have been obvious to one skilled in the art at the time of the invention to modify the Yamamoto system to include the designation is a favorite designation features taught by Baurmann because doing so would make the Yamamoto system more flexible and user-friendly.

As to claim 6, the combination of Yamamoto and Baurmann discloses the method as defined in claim 5. Yamamoto fails to disclose wherein the badge is a star or a banner. Baurmann discloses wherein the badge is a star or a banner (the objects or icons 46, can be invoked from the remote control 22 by pressing the favorites key 30. If there is on-screen display (OSD) text on the screen e.g., a banner when Favorites is pressed, the OSD can be removed and the favorites icons 46 displayed, column 4, lines 44-49). It would have been obvious to one skilled in the art at the time of the invention to modify the Yamamoto system to include the designation is a star or a banner designation features taught by Baurmann because doing so would make the Yamamoto system more flexible and user-friendly.

As to claim 7, the combination of Yamamoto and Baurmann discloses the method as defined in claim 4. Yamamoto fails to disclose wherein the state is as new content. Baurmann discloses wherein the state is as new content (items may display when user first accesses New Favorites (new content), column 6, lines 54-56). It would have been obvious to one skilled in the art at the time of the invention to modify the Yamamoto system to include the designation of new content features taught by Baurmann because doing so would make the Yamamoto system more flexible and user-friendly.

As to claim 8, the combination of Yamamoto and Baurmann discloses the method as defined in claim 7. Yamamoto fails to disclose wherein the badge is a fresh badge. Baurmann discloses wherein the badge is a fresh badge (the GUI 42 revolves left or right across the display, moving a new icon (fresh badge) into the center-most focused spot and enlarging it relative to the other icons, column 3, lines 46-50). It would have been obvious to one skilled in the art at the time of the invention to modify the Yamamoto system to include the designation of fresh badge (new icon) features taught by Baurmann because doing so would make the Yamamoto system more flexible and user-friendly.

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36826

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

-***-Continued from Previous Supplemental Box-***-

As to claims 13 and 18, Yamamoto discloses the tangible computer readable medium as defined in claims 12 and 17. Yamamoto fails to disclose wherein: if the designation is a favorite designation, the badge is a star or a banner; if the state is as new content, the badge is a fresh badge; and if the state is a paused playback, the badge is an in-progress badge. Baurmann discloses wherein: if the designation is a favorite designation (icons that arc associated with favorite TV channels, column 1, lines 29-34), the badge is a star or a banner (the objects or icons 46, can be invoked from the remote control 22 by pressing the favorites key 30. If there is on-screen display (OSD) text on the screen e.g., a banner when <Favorites> is pressed, the OSD can be removed and the favorites icons 46 displayed, column 4, lines 44-49); if the state is as new content (items may display when user first accesses New Favorites (new content), column 6, lines 54-56), the badge is a fresh badge (the GUI 42 revolves left or right across the display, moving a new icon (fresh badge) into the center-most focused spot and enlarging it relative to the other icons, column 3, lines 46-50); and if the state is a paused playback (The instruction determination module 94 acquires instructions such as "content playing", "pause playing" (pause playback) and "invoke on-screen menu" entered by the user manipulating the controller 42, column 4, line 66 and column 5, line 3), the badge is an in-progress badge (The instruction determination module 94 acquires instructions such as "content playing" (in progress icon), "pause playing" (pause playback) and "invoke on-screen menu" entered by the user manipulating the controller 42, column 4, line 66 and column 5, line 3). It would have been obvious to one skilled in the art at the time of the invention to modify the Yamamoto system to include favorites, a star or banner, new content, fresh badge, paused playback and in-progress features taught by Baurmann because doing so would make the Yamamoto system more flexible and user-friendly.

As to claims 14 and 19, the combination of Yamamoto and Baurmann discloses the tangible computer readable medium as defined in claims 13 and 18. Yamamoto further discloses wherein the badge is presented in one of a panel, an electronic programming guide, or a menu (A broadcast icon 58 is an icon that represents the broadcast display function and is selected to view a television program input via the antenna cable 32 and The content information 65 may include the name of a broadcasting station, the name of a broadcast channel, the title of a program or broadcast schedule acquired based on Electronic Program Guide (EPG) data, column 8 line 66 – column 9 line 7).

As to claims 15 and 20, Yamamoto discloses the tangible computer readable medium as defined in claims 12 and 19. Yamamoto fails to disclose wherein the second selection is a paused playback and the badge is an in-progress indicator presented in a panel with a paused content display. Baurmann discloses wherein the second selection is a paused playback and the badge is an in-progress indicator presented in a panel with a paused content display (The instruction determination module 94 acquires instructions such as "content playing" (in-progress indicator), "pause playing" (pause playback) and "invoke on-screen menu" (presented n a panel) entered by the user manipulating the controller 42, column 4, line 66 and column 5, line 3). It would have been obvious to one skilled in the art at the time of the invention to modify the Yamamoto system to include paused playback and in-progress features taught by Baurmann because doing so would make the Yamamoto system more flexible and user-friendly.

Claims 1-20 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

From the INTERNATIONAL SEARCHING AUTHORITY

To: Tadd F. Wilson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-436-PCT	Date of mailing *(day/month/year)* 19 DEC 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/55589	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)
Applicant Flextronics AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-436-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55589	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 4 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☒ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 16

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☒ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55589

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Group I: Claims 1, 2; Group II: Claims 3, 4; Group III: Claims 5, 6; Group IV: Claims 7, 8; Group V: Claims 9, 10; Group VI: Claims 11, 12; Group VII: Claims 13, 14; Group VIII: Claims 15, 16

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1 and 2 are directed toward a method for providing video-on-demand in an intelligent television including determining metadata characteristics for a content and providing a first view of the VOD content.

Group II: Claims 3 and 4 are directed toward a method for providing video-on-demand in an intelligent television including a first, second and third selections and provide different views of the VOD content.

-***-Continued Within the Extra Page-***-

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Claims 1 and 2

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55589

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/0 (2013.01)
USPC - 725/46
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(8): G06F 3/00, 3/048; H04N 7/00 (2013.01)
USPC: 715/854; 725/46, 55, 141

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); Google/Google Scholar; IEEE; DialogPRO;

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008/0141307 A1 (WHITEHEAD S) June 12, 2008, paragraphs [0012], [0016], [0022], [0023], [0026], [0029] and [0097]	1 and 2

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
26 November 2013 (26.11.2013)	19 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55589

-Continued from Box No. III: Observations where unity of invention is lacking-

Group III: Claims 5 and 6 are directed toward a method for providing video-on-demand in an intelligent television including determining whether a second selection is for showcase content, movie content, television content, or variety content and provide a second user interface having content associated.

Group IV: Claims 7 and 8 are directed toward a method for providing video-on-demand in an intelligent television including receiving a first selection to filter the VOD content and providing a second collection view of the filtered content.

Group V: Claims 9 and 10 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection of a television series from the catalog view and if there is only one season, providing a first digest view of the season.

Group VI: Claims 11 and 12 are directed toward a method for providing one of two types of user interfaces in an intelligent television including receiving a second selection of an episode and playing the episode in a series player.

Group VII: Claims 13 and 14 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection to sort the items of content based on a watched status.

Group VIII: Claims 15 and 16 are directed toward a method for providing video-on-demand in an intelligent television including if the user has previously watched the content, prompting the user if the user desires to resume watching the content.

The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The common technical feature shared by Groups I-VIII are a method for providing video-on-demand in an intelligent television including sorting the contents. However, this common feature is previously disclosed by US 2006/0031875 A1 (YU). Yu discloses a method for providing video-on-demand in an intelligent television including sorting the contents (an apparatus and method for supplying electronic programs for video on demand services including sorting the received service data according to a predetermined sorting condition and display through a predetermined graphical user interface, abstract).

Since the common technical feature is previously disclosed by the Yu reference, this common feature is not special and so Groups I-VIII lack unity.

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Tadd F. Wilson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	19 DEC 2013
Applicant's or agent's file reference 6583-436-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55589	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/0 (2013.01)
USPC - 725/46

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	26 November 2013 (26.11.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55589

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55589

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the appicable time limit:
   - ☐ paid additional fees
   - ☐ paid additional fees under protest and, where applicable, the protest fee
   - ☐ paid additional fees under protest but the applicable protest fee was not paid
   - ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
   - ☐ complied with
   - ☒ not complied with for the following reasons:

Group I: Claims 1, 2; Group II: Claims 3, 4; Group III: Claims 5, 6; Group IV: Claims 7, 8; Group V: Claims 9, 10; Group VI: Claims 11, 12; Group VII: Claims 13, 14; Group VIII: Claims 15, 16

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1 and 2 are directed toward a method for providing video-on-demand in an intelligent television including determining metadata characteristics for a content and providing a first view of the VOD content.

Group II: Claims 3 and 4 are directed toward a method for providing video-on-demand in an intelligent television including a first, second and third selections and provide different views of the VOD content.

Group III: Claims 5 and 6 are directed toward a method for providing video-on-demand in an intelligent television including determining whether a second selection is for showcase content, movie content, television content, or variety content and provide a second user interface having content associated.

Group IV: Claims 7 and 8 are directed toward a method for providing video-on-demand in an intelligent television including receiving a first selection to filter the VOD content and providing a second collection view of the filtered content.

Group V: Claims 9 and 10 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection of a television series from the catalog view and if there is only one season, providing a first digest view of the season.

Group VI: Claims 11 and 12 are directed toward a method for providing one of two types of user interfaces in an intelligent television including receiving a second selection of an episode and playing the episode in a series player.

Group VII: Claims 13 and 14 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection to sort the items of content based on a watched status.

Group VIII: Claims 15 and 16 are directed toward a method for providing video-on-demand in an intelligent television including if the user has previously watched the content, prompting the user if the user desires to resume watching the content.

The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The common technical feature shared by Groups I-VIII are a method for providing video-on-demand in an intelligent television including sorting the contents. However, this common feature is previously disclosed by US 2006/0031875 A1 (YU). Yu discloses a method for providing video-on-demand in an intelligent television including sorting the contents (an apparatus and method for supplying electronic programs for video on demand services including sorting the received service data according to a predetermined sorting condition and display through a predetermined graphical user interface, abstract).

Since the common technical feature is previously disclosed by the Yu reference, this common feature is not special and so Groups I-VIII lack unity.

4. Consequently, this opinion has been established in respect of the following parts of the international application:
   - ☐ all parts
   - ☒ the parts relating to claims Nos. 1 and 2

Form PCT/ISA/237 (Box No. IV) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55589

Box No. V. Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1 and 2	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1 and 2	NO
Industrial applicability (IA)	Claims	1 and 2	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1 and 2 lack novelty under PCT Article 33(2) as being anticipated by US 2008/0141307 A1 (Whitehead).

As per claim 1, Whitehead discloses a method for providing video-on-demand (VOD) in an intelligent television (providing VOD in a media player 115 such as a HDTV, figure 1 and paragraphs [0012], [0016], [0022] and [0023]), the method comprising: receiving, by a processor of the intelligent television, content for VOD (receiving by the HDTV processor content of the VOD, figure 1 and paragraphs [0012], [0016], [0022] and [0023]); determining metadata characteristics for the content (determining certain content characteristics/profile of metadata such as advertising content or media content, paragraphs [0025] and [0097]); storing the metadata characteristics with the content in a database for VOD content (advertising metadata 141 is stored in an advertising database 142 and media metadata 150 is stored in a media database 156, paragraphs [0027] and [0029]); and providing a first view of the VOD content based on the metadata characteristics (providing VOD content to be viewed on the HDTV based on whether the content is media or advertisements, paragraphs [0016], [0025], [0026] and [0097]).

As per claim 2, Whitehead discloses an intelligent television system (a HDTV system, figure 1 and paragraphs [0012] and [0016]) comprising: a memory operable to store video-on-demand (VOD) content (a database for storing VOD content, paragraph [0022]); a processor in communication with the memory (a processing device 110 interact with a recording memory 112, figure 1 and paragraph [0012]), the processor operable to: execute a VOD data service (the processing device 110 can execute the VOD, paragraph [0022]) operable to: receive content for VOD (receiving content for the VOD, figure 1 and paragraphs [0012], [0016], [0022] and [0023]); determine metadata characteristics for the content (determining certain content characteristics/profile of metadata such as advertising content or media content, paragraphs [0025] and [0097]); store the metadata characteristics with the content in a database for VOD content (advertising metadata 141 is stored in an advertising database 142 and media metadata 150 is stored in a media database 156, paragraphs [0027] and [0029]); and execute a user interface application in communication with the VOD data service (a user interface (TV screen) application is implemented using the VOD content, paragraph [0088]), the user interface application operable to provide a first view of the VOD content based on the metadata characteristics (providing VOD content to be viewed on the HDTV based on whether the content is media or advertisements, paragraphs [0016], [0025], [0026] and [0097]).

Claims 1 and 2 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	02 DEC 2013
Applicant's or agent's file reference: 6583-444-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US2013/055289	International filing date *(day/month/year)*: 16 August 2013
Applicant: FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-444-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055289	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 25

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT PCT/US2013/055289 02.12.2013

International application No.
PCT/US2013/055289

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/41
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(8) - H04N 5/50, 5/445 (2013.01)
USPC - 348/731, 732; 725/28, 32, 38, 39, 41

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC: H04N 5/44543, 21/482 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2010/0201890 A1 (DEGONDE et al) 12 August 2010 (12.08.2010) entire document	1-20
Y	US 2008/0244637 A1 (CANDELORE) 02 October 2008 (02.10.2008) entire document	1-20
Y	US 2009/0235311 A1 (MICHEL et al) 17 September 2009 (17.09.2009) entire document	19, 20
A	US 2011/0072480 A1 (STONE) 24 March 2011 (24.03.2011)entire document	1-20
A	US 2008/0307457 A1 (YANG et al) 11 December 2008 (11.12.2008) entire document	1-20
A	US 2012/0011545 A1 (DOETS et al) 12 January 2012 (12.01.2012) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
13 November 2013	02 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	02 DEC 2013
Applicant's or agent's file reference 6583-444-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055289	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/41

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	13 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055289

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055289

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-18 lack an inventive step under PCT Article 33(3) as being obvious over DeGonde et al. (hereinafter referred to as DeGonde) in view of Candelore.

Regarding claims 1, 13, DeGonde discloses a method (abstract), comprising receiving, by a television, a request to change a television tuner from a first channel to a second channel (user changes channel on a broadcast data receiver to switch from a first channel to a newly selected channel by using a remote control, para 55-56; see para 9, abstract), the first channel providing first programming and the second
channel providing second programming, wherein the first and second programming are different (first channel and new channel broadcast data, para 13, 55; video 16 [first channel programming] and video 26 [second channel programming], fig. 3, para 64-65) and wherein changing from the first channel to the second channel causes a delay in providing, by the television tuner, the second programming (changing from a first channel to a second channel produces a delay, para 4-5, 57; delay between first video 16 and newly selected video 26, see fig. 3, para 64-65); determining, by a microprocessor executable application framework (see application processing of system, fig. 1) and based on data associated with the at least one of the second channel and second programming, a graphical image associated with the second programming (identify and decode data for new channel, which includes I-frames, para 58-59; first I-frame decoded and displayed during transfer to new channel, para 62; video frame of newly selected channel is output for display as a still image until transfer to new channel is complete, abstract, para 14); and during the delay, displaying, by the microprocessor executable application framework and on a screen of the television, the image (video frame of newly selected channel is output for display as a still image until transfer to new channel is complete, abstract, para 14; as soon as first I-frame of new channel is received it is displayed as a still image, para 65; system is a television system, para 1). DeGonde does not specifically disclose that the data is metadata, or tangible and non-transient computer readable medium, comprising microprocessor executable instructions that, when executed, are configured to perform operations.
Candelore is in the field of a television system for displaying program information during channel changes (abstract, fig. 1) and teaches tangible and non-transient computer readable medium, comprising microprocessor executable instructions that, when executed (para 26-28), are configured to perform operations of using metadata to extract program information for display during a channel change (para 8, metadata associated with user selected program is determined, para 23, 30). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the metadata features as taught in Candelore with the invention of DeGonde in order to provide the appearance of the channels being switched more quickly to the user (see DeGonde, para 1, 14).

Regarding claim 7, DeGonde discloses a television (television system, para 1, abstract), comprising: a television tuner (tuning means, para 8-9); a screen for displaying programming (display screen, para 21); at least one of an infrared and radio frequency module (broadcast data receiver receives input from remote control via infra-red signal, para 4) configured to receive a request to change the television tuner from a first channel to a second channel (user changes channel on a broadcast data receiver to switch from a first channel to a newly selected channel by using a remote control, para 55-56; see para 9, abstract), the first channel providing first programming and the second channel providing second programming, wherein the first and second programming are different (first channel and new channel broadcast data, para 13, 55; video 16 [first channel programming] and video 26 [second channel programming], fig. 3, para 64-65) and wherein changing from the first channel to the second channel causes a delay in providing, by the television tuner, the second programming (changing from a first channel to a second channel produces a delay, para 4-5, 57; delay between first video 16 and newly selected video 26, see fig. 3, para 64-65); and a microprocessor executable application framework (see application processing of system, fig. 1) configured to determine, based on data associated with the at least one of the second channel and second programming, an image associated with the second programming (identify and decode data for new channel, which includes I-frames, para 58-59; first I-frame decoded and displayed during transfer to new channel, para 62; video frame of newly selected channel is output for display as a still image until transfer to new channel is complete, abstract, para 14) and, during the delay, display, on the screen ofthe television, the image (video frame of newly selected channel is output for display as a still image until transfer to new channel is complete, abstract, para 14; as soon as first I-frame of new channel is received it is displayed as a still image, para 65; system is a television system, para 1). DeGonde does not specifically disclose that the data is metadata. Candelore is in the field of a television system for displaying program information during channel changes (abstract, fig. 1) and teaches using metadata to extract program information for display during a channel change (para 8, metadata associated with user selected program is determined, para 23, 30). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the metadata features as taught in Candelore with the invention of DeGonde in order to provide the appearance of the channels being switched more quickly to the user (see DeGonde, para 1, 14).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055289

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claims 2, 8, 14, DeGonde discloses wherein the image is one of a captured frame of the second programming, a picture associated with the second programming, and a photograph associated with the second programming (video frame of newly selected channel is output for display as a still image until transfer to new channel is complete, abstract, para 14; as soon as first I-frame of new channel is received it is displayed as a still image, para 65; system is a television system, para 1), but does not specifically disclose wherein each ofthe first and second programming is one or more of a movie, an episode, sport event, and a television special. However, Candelore teaches wherein each ofthe first and second programming is one or more of a movie, an episode, sport event, and a television special (obtaining program information during channel changes [first channel to second channel], para 8; programming includes television programs such as movie, sporting events, news broadcasts, etc., para 29). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the programming features as taught in Candelore with the invention of DeGonde in order to allow a user of a television system to switch between desired watching experiences.

Regarding claims 3, 9, 15, DeGonde discloses wherein the image is a captured frame of the second programming and wherein the captured frame is a still image and wherein the image is displayed full screen (video frame of newly selected channel is output for display as a still image until transfer to new channel is complete, abstract, para 14; as soon as first I-frame of new channel is received it is displayed as a still image, para 65; system is a television system, para 1).

Regarding claims 4, 10, 16, DeGonde discloses wherein the image is a captured frame of the second programming and wherein the captured frame is a still and not moving image (video frame of newly selected channel is output for display as a still image until transfer to new channel is complete, abstract, para 14; as soon as first I-frame of new channel is received it is displayed as a still image, para 65; system is a television system, para 1), but fails to disclose wherein the image is displayed as part of a header bar, and wherein the header bar comprises at least one of a program name, series name, episode number, episode name, and sport event name and a plurality of a program description, a program type, a program category, a start-to-finish time, current runtime, and a remaining runtime.
However, Candelore teaches wherein the metadata is displayed as part of a header bar, and wherein the header bar comprises at least one of a program name, series name, episode number, episode name, and sport event name and a plurality of a program description, a program type, a program category, a start-to-finish time, current runtime, and a remaining runtime (during channel change event, metadata provides information about the selected program channel and displays it to the user, which includes program description and name, see Fig. 5, 7, para 73-74). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the header bar information features as taught in Candelore with the invention of DeGonde in order to provide the user with useful information related to the selected programming during a channel change (see Candelore, para 20, 73-74).

Regarding claims 5, 11, 17, DeGonde discloses wherein the image is a captured frame of the second programming and is not moving (video frame of newly selected channel is output for display as a still image until transfer to new channel is complete, abstract, para 14; as soon as first I-frame of new channel is received it is displayed as a still image, para 65; system is a television system, para 1).

Regarding claims 6, 12, 18, DeGonde discloses the invention above, including the image, but fails to disclose wherein the metadata and image are provided by an electronic program guide service. However, Candelore teaches obtaining metadata and information provided by an electronic program guide service (electronic program guide (EPG) provides metadata information, para 29-30; see para 66, 68). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the electronic program guide features as taught in Candelore with the invention of DeGonde in order to use information provided by the service provider (see Candelore, para 68).

Claims 19-20 lack an inventive step under PCT Article 33(3) as being obvious over DeGonde in view of Candelore and further in view of Michel et al. (hereinafter referred to as Michel).

Regarding claims 19-20, DeGonde as modified discloses the invention above, but fails to disclose wherein the metadata is populated into an electronic program guide using the Program and System Information Protocol or wherein the metadata is converted into a broadcast-ready format by a Programming Metadata Communication Protocol generator. However, the use of Program and System Information Protocol and Programming Metadata Communication Protocol was well known in the art at the time of the invention, as evidenced by Michel. Michel is in the field of transmitting program information over television networks (abstract) and teaches using wherein the metadata is populated into an electronic program guide using the Program and System Information Protocol (program data server configured to provide current programsystem information protocol (PSIP) data, para 6; inserted into EPG, para 19, 25) and wherein the metadata is converted into a broadcast-ready format by a Programming Metadata Communication Protocol generator (data formatter 320 then formats the PSIP data into a format referred to as Programming and Metadata Communication Protocol (PMCP), which can be interpreted by the station PSIP generator 134, para 28, fig. 3). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the metadata protocols as taught in Michel with the invention of modified DeGonde in order to abide by current mandated laws (see Michel, para 3).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 02DEC 2013
Applicant's or agent's file reference 6583-445-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/055288	International filing date *(day/month/year)* 16 August 2013
Applicant FLEXTRONICS AP , LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-445-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055288	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP , LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 26

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055288

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 7/173 (2013.01)
USPC - 725/27
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(8) - G06F 3/00; H04N 7/16, 173 (2013.01)
USPC - 715/ 709, 738, 760; 725/27

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G06F 3/00; H04N 7/16, 173 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0289419 A1 (YU et al) 24 November 2011 (24.11.2011) entire document	1-20
Y	US 2012/0200574 A1 (HILL et al) 09 August 2012 (09.08.2012) entire document	1-20
A	WO 99/21308 (MUGURA et al) 29 April 1999 (29.04.1999) entire document	1-20
A	TVONICSUK. TVonics: How to use the EPG search function. 2011. [retrieved on 2013-11-11]. Retrieved from the Internet:<URL:http://www.youtube.com/watch?v=H8weuZ0lydo >. entire document.	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
11 November 2013	02DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	02DEC 2013
Applicant's or agent's file reference 6583-445-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055288	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 7/173 (2013.01)
USPC - 725/27

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	11 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055288

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055288

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-20 lack an inventive step under PCT Article 33(3) as being obvious over Yu et al., hereinafter referred to as Yu in view of Hill et al., hereinafter referred to as Hill.

Regarding claims 1, 7, 13, Yu discloses a method [claim 1] (a method for providing content, abstract), a television, comprising: a television screen [claim 7] (a user platform 140 comprises a television 142 [includes television screen], figs.2 & 7 para 0071): a tangible and non-transient computer readable medium, comprising microprocessor executable instructions that, when executed, are configured to perform operations comprising [claim 13] (a non-transitory machine readable medium 5622 which stores instructions, further a memory 5606 and processor 5602 executes the instructions and transmitted over the network, para 0229): comprising: receiving, wirelessly by at least one of an infrared and radio frequency module of a television and from a remote control, a request to change a programming channel (a user platform 140 comprises a television 142, para 0071; figs 17, 18 & 20 shows the user access television content items via a TV portal, the television content is provided as a listing which can be accessed by the user by manipulating a conventional television remote control device by position the selection box 2022 around a desired TV content item [it is inherent for a conventional television remote control device to include an infrared module and as the TV receives the selection via the infrared the television also includes an infrared module], para 0115, 0122);
displaying, by a microprocessor executable application framework and on a television screen, an on screen channel changer, the on screen channel changer comprising electronic program guide ("EPG") information (fig. 18 displays a content listing area 1820 [screen channel changer/ electronic program guide] which lists the available contents with the time slots which includes the programming channels, which the users can highlights/select a particular content using an input device which upon selection delivers the content, para 0119, 0123; further fig. 20 displays a TV portal 2012 which displays a listing of television content which can be accessed by the user, and displays an electronic/interactive programing guide (EPG) on a user selection platform 140, and further the user selects the listed TV content by position the selection box 2022 using the remote control device, para 0086, 0122; fig.56 shows a processor 5602 that is a central processing unit which executes instructions to provide display at the display unit 5610, para 0228),
receiving, by the application framework and from the remote control, a channel selection using the on screen channel changer (fig. 18 displays a content listing area 1820 [screen channel changer/ application framework] which lists the available contents with the time slots which includes the programming channels, which the users can highlights/select a particular content using an input device which upon selection [receiving a channel selection] delivers the content, para 0119, 0123; further fig. 20 displays a TV portal 2012 which displays a listing of television content which can be accessed by the user, and displays an electronic/interactive programing guide (EPG) on a user selection platform 140, and further the user selects the particular listed TV content by position the selection box 2022 [receiving a channel selection using the remote control] using the remote control device, para 0086, 0122);
and changing, by the application framework, to the selected channel (further fig. 20 displays a TV portal 2012 wherein the user selects the particular listed TV content by position the selection box 2022 using the remote control device and upon the selection of 2022 the user is presented with fig.21 wherein the display 2100 provides the user with an option to select 2122 upon the selection of that button the user is enable to watch the content [interpreted as changing to the selected channel], para 0086, 0122), but lacks the teaching of the on screen channel changer comprising a number input bar comprising digits; receiving a channel selection based on digits using the on screen channel changer.
Hill is in the field of a TV display 28 which displays a soft number pad used to receive inputs for channel selection (see para 0119) and teaches displaying the on screen channel changer comprising electronic program guide ("EPG") information and a number input bar comprising digits (fig.1 shows a TV display 28 and a broadcast EPG is displayed on the display 28, para 0014; figs. 2 & 7 shows an image button 62 which can be selected by the user to display an electronic programing guide to be presented on the display 28, further the display 28 displays a soft number pad 310 which allows the viewer to select any number from zero to nine to input to select/tune to a specific channel number, para 0019) receiving a channel selection based on digits using the on screen channel changer (fig.1 shows a TV display 28 and a broadcast EPG is displayed on the display 28, para 0014; figs. 2 & 7 shows an image button 62 which can be selected by the user to display an electronic programing guide to be presented on the display 28, further the display 28 displays a soft number pad 310 which allows the viewer to select any number from zero to nine to input [receiving a channel selection] to select/tune to a specific channel number, para 0019). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Hill to incorporate the on screen channel changer comprising a number input bar comprising digits; receiving a channel selection based on digits using the on screen channel changer into the invention of Yu. The motivation would have been to provide a touch interface for an optimized user experience (see para 0004).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055288

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 7-19 is objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because Claim 1 is indefinite for the following reasons:

Claim 7 seems to incorrectly combine two separate claims, and recites "A television, comprising: a television screen..... and change to the selected channel. The television of claim 7, wherein the digits range from 0 to 9." Further, claims 8-9 depend from themselves. For the purpose of the written opinion, claims 7-19 are interpreted as including an extra claim, to provide a total of 20 claims, and to recite the following:

7. A television, comprising: a television screen; at least one of an infrared and radio frequency module configured to receive wirelessly requests from a remote control of a user, the requests comprising a selected channel or program from a displayed listing; and microprocessor executable application framework configured to receive a request to change a programming channel, display, on the television screen, an on screen channel changer, the on screen channel changer comprising electronic program guide ("EPG") information and a number input bar comprising digits, receive, from the remote control, a channel selection based on digits using the on screen channel changer, and change to the selected channel.

8. The television of claim 7, wherein the digits range from 0 to 9, wherein the remote control selects the digits using non-numeric keys, and wherein the EPG information corresponds to multiple programs and/or channels, and wherein the EPG information comprises, for each program, airtime, program name, program channel, and program description.

9. The television of claim 8, wherein each of the digits are selected using one or more arrow keys and a select button.

10. The television of claim 9, wherein the remote control does not have a key corresponding to each of the digits.

11. The television of claim 7, wherein the on screen channel changer comprises a thumbnail preview containing EPG information corresponding to an in focus channel and/or program and a graphical image, wherein the EPG information in the thumbnail preview comprises, for the in focus channel and/or program, airtime, program name, program channel, and program description, and wherein the graphical image in the thumbnail preview is one of a captured frame of a program associated with the in focus program, a picture associated with the in focus program, and a photograph associated with the in focus program.

12. The television of claim 7, wherein, as the user selects each digit, the application framework updates the EPG information to include only those programs and/or channels selectable from the selected digits.

13. A tangible and non-transient computer readable medium, comprising microprocessor executable instructions that, when executed, are configured to perform operations comprising: receive, from a remote control of a user, a request to change a programming channel; display, on a television screen, an on screen channel changer, the on screen channel changer comprising electronic program guide ("EPG") information and a number input bar comprising digits; receive, from the remote control, a channel selection based on digits using the on screen channel changer; and change to the selected channel.

14. The computer readable medium of claim 13, wherein the digits range from 0 to 9, wherein the remote control selects the digits using non-numeric keys, and wherein the EPG information corresponds to multiple programs and/or channels, and wherein the EPG information comprises, for each program, airtime, program name, program channel, and program description.

15. The computer readable medium of claim 14, wherein each of the digits are selected using one or more arrow keys and a select button.

16. The computer readable medium of claim 15, wherein the remote control does not have a key corresponding to each of the digits.

17. The computer readable medium of claim 13, wherein the on screen channel changer comprises a thumbnail preview containing EPG information corresponding to an in focus channel and/or program and a graphical image, wherein the EPG information in the thumbnail preview comprises, for the in focus channel and/or program, airtime, program name, program channel, and program description, and wherein the graphical image in the thumbnail preview is one of a captured frame of a program associated with the in focus program, a picture associated with the in focus program, and a photograph associated with the in focus program.

18. The computer readable medium of claim 13, wherein, as the user selects each digit, the application framework updates the EPG information to include only those programs and/or channels selectable from the selected digits.

19. The method of claim 5, wherein the EPG information and graphical image in the thumbnail preview changes as the in focus EPG information changes.

20. The television of claim 11, wherein the EPG information and graphical image in the thumbnail preview changes as the in focus EPG information changes.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055288

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claims 2, 8, 14, Yu further teaches wherein the remote control selects keys (the user selects any of the listed TV content by activating a selection button on the remote control device, para 0122) and wherein the EPG information corresponds to multiple programs and/or channels (fig. 18 displays a content listing area 1820 [electronic program guide includes multiple programs and/or channels] which lists the available contents with the time slots which includes the programming channels, which the users can highlights/select a particular content using an input device which upon selection delivers the content, para 0119, 0123), and wherein the EPG information comprises, for each program, airtime, program name, program channel, and program description (fig. 18 displays a content listing area 1820 [electronic program guide includes multiple programs and/or channels] which lists the available contents with the time slots [airtime] which includes the programming channels, which the users can highlights/select a particular content 1822 "Lost" [includes the program name] 1812 displays the program channel "abc" and further 1824 [program description] provides detailed information of the selected content listing, para 0119, 0123), but lacks the teaching of wherein the digits range from 0 to 9, wherein the remote control selects the digits using non-numeric keys. Furthermore, to establish the selected key on the remote control to be a non-numeric key would have been a matter of design choice and would have been a known practice in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine wherein the remote control selects using non-numeric keys as taught by Yu. The motivation would have been to provide users with an optimized experience for accessing the program contents.
Hill is in the field of a TV display 28 which displays a soft number pad used to receive inputs for channel selection (see para 0119) and teaches selects the digits on a display and wherein the digits range from 0 to 9 (fig.1 shows a TV display 28 and a broadcast EPG is displayed on the display 28, para 0014; figs. 2 & 7 shows an image button 62 which can be selected by the user to display an electronic programing guide to be presented on the display 28, further the display 28 displays a soft number pad 310 which allows the viewer to select any number from zero to nine to input to select/tune to a specific channel number, para 0019). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Hill to incorporate wherein the digits range from 0 to 9, wherein the remote control selects the digits using non-numeric keys into the invention of Yu. The motivation would have been to provide a touch interface for an optimized user experience (see para 0004).

Regarding claims 3, 9, 15, Yu further teaches wherein each of the digits are selected using one or more arrow keys and a select button (figs.34 & 35 shows a user is presented with an alphanumeric tool 3410, 3510 which the user uses to type in a search query "12 Monkeys" 3422 [each of the digits are selected] using the remote control device, para 0140; a user using the conventional television remote control device using a keyboard arrow buttons to select the options on the display, para 0115; the user selects any of the listed TV content by activating a selection button on the remote control device, para 0122).

Regarding claims 4, 10, 16, Yu further teaches wherein the remote control does not have a key corresponding to each of the digits (figs.34 & 35 shows a user is presented with an alphanumeric tool 3410, 3510 which the user uses to type in a search query "12 Monkeys" 3422 [each of the digits are selected] using the remote control device, para 0140; a user using the conventional television remote control device using a keyboard arrow buttons to select the options on the display [as arrow keys are used on the remote control device it is interpreted as remote control does not have a key corresponding to each of the digits], para 0115).

Regarding claims 5, 11, 17, Yu further teaches wherein the on screen channel changer comprises
a thumbnail preview containing EPG information corresponding to an in focus channel and/or program and a graphical image, wherein the EPG information in the thumbnail preview comprises, for the in focus channel and/or program, airtime, program name, program channel, and program description (fig. 18 displays a content listing area 1820 [electronic program guide includes multiple programs and/or channels] which lists the available contents with the time slots [airtime] which includes the programming channels, which the users can highlights/select a particular content 1822 "Lost" [includes the program name] 1812 displays the program channel "abc" and further 1824 [program description] provides a thumbnail preview [graphical image] and 1826 provides detailed information of the selected content listing, para 0119, 0123), and wherein the graphical image in the thumbnail preview is one of a captured frame of a program associated with the in focus program, a picture associated with the in focus program, and a photograph associated with the in focus program (1824 shows a graphical image is a photograph related to the programming channel selected by the user, para 0123).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055288

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claims 6, 12, 18, Yu further teaches wherein, the application framework updates the EPG information to include only those programs and/or channels selectable (fig. 20 displays a TV portal 2012 which displays a listing of television content which can be accessed by the user, and displays an electronic/interactive programing guide (EPG) on a user selection platform 140, and further the user selects the listed TV content by position the selection box 2022 using the remote control device and upon the selection of 2022 the user is presented with fig.21 wherein the display 2100 provides the user with an option to select 2122 upon the selection of that button the user is enable to watch the content [upon the selection of 2022 to provide the display screen 2100 is interpreted as updates the EPG information], para 0086, 0122), but lacks the teaching of wherein, as the user selects each digit, the application framework updates the EPG information to include only those programs and/or channels selectable from the selected digits
Hill is in the field of a TV display 28 which displays a soft number pad used to receive inputs for channel selection (see para 0119) and teaches as the user selects each digit and the programs and/or channels selectable from the selected digits (fig.1 shows a TV display 28 and a broadcast EPG is displayed on the display 28, para 0014; figs. 2 & 7 shows an image button 62 which can be selected by the user to display an electronic programing guide to be presented on the display 28, further the display 28 displays a soft number pad 310 which allows the viewer to select any number from zero to nine to input to select/tune to a specific channel number, para 0019). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Hill to incorporate wherein, as the user selects each digit, the application framework updates the EPG information to include only those programs and/or channels selectable from the selected digits into the invention of Yu. The motivation would have been to provide a touch interface for an optimized user experience (see para 0004).

Regarding claim 19, Yu further teaches wherein the EPG information and graphical image in the thumbnail preview changes as the in focus EPG information changes (fig.18 shows an EPG with 1824 [graphical image] and further when the pointing device is moved in proximity to a particular content item listing in content listing area 1820, the particular content item listing is highlighted and the content information associated with the highlighted content item listing is displayed in an expanded form [as the user selects different contents each contents image is displayed interpreted as thumbnail preview changes as the in focus] of the highlighted content item listing as shown in FIG. 18, para 0119).

Regarding claim 20, Yu further teaches, wherein the EPG information and graphical image in the thumbnail preview changes as the in focus EPG information changes (fig.18 shows an EPG with 1824 [graphical image] and further when the pointing device is moved in proximity to a particular content item listing in content listing area 1820, the particular content item listing is highlighted and the content information associated with the highlighted content item listing is displayed in an expanded form [as the user selects different contents each contents image is displayed interpreted as thumbnail preview changes as the in focus] of the highlighted content item listing as shown in FIG. 18, para 0119).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-446-PCT	Date of mailing *(day/month/year)* 02DEC 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/055286	International filing date *(day/month/year)* 16 August 2013
Applicant FLEXTRONICS AP, LLC.	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-446-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055286	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC.		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 19

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055286

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/41
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(8) - H04N 5/50, 5/445 (2013.01)
USPC - 348/731, 732; 725/28, 32, 38, 39, 41

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC: H 04N 5/44543; H 04N 21/482 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase, Orbit, Google Patents, Google Scholar,

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2012/0206652 A1 (YI) 16 August 2012 (16.08.2012) entire document	1-21
Y	EP 2 348 724 A2 (CONSTANT et al) 27 July 2011 (27.07.2011) entire document	1-21
A	US 2010/0201890 A1 (DEGONDE et al) 12 August 2010 (12.08.2010) entire document	1-21
A	US 2008/0244637 A1 (CANDELORE) 02 October 2008 (02.10.2008) entire document	1-21
A	US 2011/0289419 A1 (YU et al) 24 November 2011 (24.11.2011) entire document	1-21

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
15 November 2013	02DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	02 DEC 2013
Applicant's or agent's file reference 6583-446-PCT	FOR FURTHER ACTION See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055286	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/41

Applicant FLEXTRONICS AP, LLC.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	15 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055286

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

a. (means)

☐ on paper

☐ in electronic form

b. (time)

☐ in the international application as filed

☐ together with the international application in electronic form

☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055286

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-21	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-21	NO
Industrial applicability (IA)	Claims	1-21	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-21 lack an inventive step under PCT Article 33(3) as being obvious over Yi in view of Constant et al. (hereinafter referred to as Constant).

Regarding claims 1, 15, Yi discloses a method (para 6), and a tangible and non-transient computer readable medium, comprising microprocessor executable instructions that, when executed, are configured to perform operations (para 7, 14) comprising: receiving, by a television (television 12, Fig. 1), electronic program guide ("EPG") information associated with a channel and/or program (EPG, Fig. 2, is displayed on TV Display, para 5, 17); determining, by a microprocessor executable application framework (processor 14 of TV, para 14) and based on metadata associated with a selected program (metadata associated with selected channel is accessed, para 23, 6), a graphical image associated with the selected program (second metadata may also include information pertaining to a program different than a current program on the TV channel as well as a video preview of the TV channel, para 5; metadata information can include thumbnail image of channel, para 23); and in a first mode, displaying, by the application framework and on a screen of the television, a thumbnail preview comprising EPG information associated with the selected program and the graphical image, wherein the selected program corresponds to an in focus program in a listing of EPG information for multiple channels and/or programs and wherein the graphical image is not related with a currently viewed program (when browsing the channels a desired [i.e. not currently viewed] channel icon can be selected so that enhanced metadata is accessed from EPG data structure and presented to the user, which includes a still image miniature of the program, para 23-25, Fig. 4); and in a second mode, displaying, by the application framework and on the television screen, a header bar (cross media bar XMB, para 6), the header bar comprising EPG information associated with the selected program and the graphical image (XMB bar displays EPG metadata associated with the desired [selected] program, para 23-25, fig.3-4), but does not specifically disclose wherein the selected program corresponds to a currently viewed program and is not related to an in focus program in a listing of EPG information for multiple channels and/or programs.
However, in the field of displaying EPG information on a television display (abstract, Fig. 1a), Constant teaches receiving, by a television (television, para 12), electronic program guide ("EPG") information associated with a channel and/or program (providing an electronic program guide to a television, abstract, para 12); in a first mode, displaying a thumbnail preview comprising EPG information associated with the selected program and the graphical image (see Fig. 1a-b; image preview of a show is shown in top banner 110, para 20-21); and in a second mode, displaying, by the application framework and on the television screen, a header bar (fig. 2a-b [showing second mode], window displays a TV Viewing Now & Next banner 230, para 32-34), the header bar comprising EPG information associated with the selected program and the graphical image (image shown in 210 may depend on selected channel, para 34-35), wherein the selected program corresponds to a currently viewed program and is not related to an in focus program in a listing of EPG information for multiple channels and/or programs (banner 230 provides information on the current TV channel, para 34). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the header bar showing the currently viewed program information as taught in Constant with the invention of Yi in order to provide the viewer with information that corresponds to the current time and channel viewed (see Constant, para 34).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055286

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 8, Yi discloses a television (television 10, para 14, fig. 1), comprising: a screen for displaying programming (TV display 40, para 5, 17, Fig. 1); at least one of an infrared and radio frequency module configured to receive wireless signals from a remote control of a user (TV system 10 also includes a portable hand-holdable TV remote control (RC) 22. The RC 22, among other things, can have cursor control keys 24 for sending wireless signals to a receiver 26 on the chassis 12, para 15, fig. 1); and a microprocessor executable application framework (processor 14 of TV, para 14) configured to receive electronic program guide ("EPG") information associated with a channel and/or program (EPG, Fig. 2, is displayed on TV Display, para 5, 17), determine, based on metadata associated with a selected program(metadata associated with selected channel is accessed, para 23, 6), a graphical image associated with the selected program (second metadata may also include information pertaining to a program different than a current program on the TV channel as well as a video preview of the TV channel, para 5; metadata information can include thumbnail image of channel, para 23); and operate in the following modes: in a first mode, displaying, on the television screen, a thumbnail preview comprising EPG information associated with the selected program and the graphical image, wherein the selected program corresponds to an in focus program in a listing of EPG information for multiple channels and/or programs and wherein the graphical image is not related with a currently viewed program (when browsing the channels a desired [i.e. not currently viewed] channel icon can be selected so that enhanced metadata is accessed from EPG data structure and presented to the user, which includes a still image miniature of the program, para 23-25, Fig. 4); and in a second mode, displaying, on the television screen, a header bar (cross media bar XMB, para 6), the header bar comprising EPG information associated with the selected program and the graphical image (XMB bar displays EPG metadata associated with the desired [selected] program, para 23-25, fig.3-4), but does not specifically disclose wherein the selected program corresponds to a currently viewed program and is not related to an in focus program in a listing of EPG information for multiple channels and/or programs. However, in the field of displaying EPG information on a television display (abstract, Fig. 1a), Constant teaches receiving, by a television (television, para 12), electronic program guide ("EPG") information associated with a channel and/or program (providing an electronic program guide to a television, abstract, para 12); in a first mode, displaying a thumbnail preview comprising EPG information associated with the selected program and the graphical image (see Fig. 1a-b; image preview of a show is shown in top banner 110, para 20-21); and in a second mode, displaying, by the application framework and on the television screen, a header bar (fig. 2a-b [showing second mode], window displays a TV Viewing Now & Next banner 230, para 32-34), the header bar comprising EPG information associated with the selected program and the graphical image (image shown in 210 may depend on selected channel, para 34-35), wherein the selected program corresponds to a currently viewed program and is not related to an in focus program in a listing of EPG information for multiple channels and/or programs (banner 230 provides information on the current TV channel, para 34). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the header bar showing the currently viewed program information as taught in Constant with the invention of Yi in order to provide the viewer with information that corresponds to the current time and channel viewed (see Constant, para 34).

Regarding claims 2, 9, 16, Yi discloses wherein the first mode is performed when the user changes a channel to the selected program (when browsing the channels a desired channel icon can be selected [i.e. user changed channel] so that enhanced metadata is accessed from EPG data structure and presented to the user, which includes a still image miniature of the program, para 23-25, Fig. 4) and/or when the user moves a remote control (enhanced metadata is displayed when the desired channel icon is activated by user for more than a first period, para 4-5, wherein the user uses a remote control to select desired channels, para 17).

Regarding claims 3, 10, 17, Yi as modified discloses the invention above, and Yi further discloses wherein the second mode is performed when the listing EPG information is displayed on the television screen (EPG, Fig. 2, is displayed on TV Display, para 5, 17) and wherein the EPG information comprises, for each program, program name, program channel, and program description (program name 70 and other enhanced metadata information, including program description and channel, para 21, 23, fig. 3-4), but does not specifically disclose the EPG information includes, for each program, airtime. However, Constant teaches wherein the second mode is performed when the listing EPG information is displayed on the television screen (see fig. 2a; EPG shown on TV display, para 11-12) and wherein the EPG information comprises, for each program, airtime, program name, program channel (Fig. 1a-b shows the EPG information includes the time 122, name and channel 121, para 21). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the second mode features as taught in Constant with the invention of Yi in order to provide the viewer with information that corresponds to the current time and channel viewed (see Constant, para 34).

Regarding claims 4, 11, 18, Yi discloses wherein the selected program is one or more of a movie, an episode, sport event, and a television special (selected program may be an episode, para 23, fig. 4) and wherein the image is one of a captured frame of the selected program, a picture associated with the selected program, and a photograph associated with the selected program (desired channel icon can be selected so that enhanced metadata is accessed from EPG data structure and presented to the user, which includes a still image miniature of the program, para 23-25, Fig. 4).

Regarding claims 5, 12, 19, Yi discloses wherein the image is a captured frame, wherein the captured frame is a still image and wherein the image is displayed only on part of the screen (desired channel icon can be selected so that enhanced metadata is accessed from EPG data structure and presented to the user, which includes a still image miniature of the program, para 23-25, see Fig. 4 [showing enhanced metadata shown on part of display 50]).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055286

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claims 6, 13, 20, Yi discloses wherein the image is a captured frame, wherein the captured frame is a still and not moving image (desired channel icon can be selected so that enhanced metadata is accessed from EPG data structure and presented to the user, which includes a still image miniature of the program, para 23-25, see Fig. 4), and wherein the header bar comprises at least one of a program name, series name, episode number, episode name, and sport event name and a plurality of a program description, a program type, a program category, a start to-finish time, current runtime, and a remaining runtime (XMB header bar displays program name 70 and other enhanced metadata information, including program description, para 21, 23, fig. 3-4).

Regarding claims 7, 14, 21, Yi discloses wherein the metadata and image are provided by an electronic program guide service (desired channel icon can be selected so that enhanced metadata is accessed from EPG data structure and presented to the user, which includes a still image miniature of the program, para 23-25, see Fig. 4).

Claims 1-21 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Thaine Lennox-Gentle
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	11 DEC 2013
Applicant's or agent's file reference: 6583-447-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US13/55285	International filing date *(day/month/year)*: 16 August 2013 (16.08.2013)
Applicant: Flextronics AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-447-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55285	International filing date *(day/month/year)* 16 August 2013 (16.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 23

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55285

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 13/00 (2013.01)
USPC - 725/53
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(8): G06F 13/00; H04N 5/445 (2013.01)
USPC: 348/563; 725/40, 46, 53

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); Google/Google scholar; IEEE; DialogPRO; application, framework, panel, manager, controller, electronic, program, guide, EPG, television, TV, search, term, phrase, characters, query, display, screen, channel, favorite, reminder

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2010/0031193 A1 (STARK K et al.) February 4, 2010, paragraphs [0012], [0023], [0025], [0029], [0031]-[0034], [0167]	1-6, 9-14 and 17-22 --- 7, 8, 15, 16, 23 and 24
Y	US 2009/0019485 A1 (ELLIS M et al.) January 15, 2009, paragraphs [0103], [0113], [0129], [0133], [0152], [0156], [0157], [0162]	7, 8, 15, 16, 23 and 24

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
29 November 2013 (29.11.2013)	11 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Thaine Lennox-Gentle
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	11 DEC 2013
Applicant's or agent's file reference 6583-447-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55285	16 August 2013 (16.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 13/00 (2013.01)
USPC - 725/53

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	29 November 2013 (29.11.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55285

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55285

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	7, 8, 15, 16, 23 and 24	YES
	Claims	1-6, 9-14 and 17-22	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-24	NO
Industrial applicability (IA)	Claims	1-24	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-6, 9-14 and 17-22 lack novelty under PCT Article 33(2) as being anticipated by US 2010/0031193 A1 to Stark et al. (hereinafter 'Stark').

As per claim 1, Stark discloses a method, comprising: accessing, from a network accessible content provider, electronic program guide ("EPG") information (a user can access an EPG with a help of a content provider, paragraphs [0011], [0016] and [0080]), the EPG information comprising, for each program, airtime, program name, program channel, and program description (the EPG has a program, an airtime, a program name, a channel name and program description, figure 2, TV view area 140 and paragraphs [0023] and [0188]); displaying, by a microprocessor executable application framework and on a screen of a television, a search panel (using a computer with a CPU to display a search window on a screen of a TV, figure 1 and figure 11 and paragraphs [0015], [0018] and [0279]), the search panel comprising a search term field to receive a search term and at least one previous set of search terms used by the user in a prior search (a TV screen with search section receives from a user a search term which is associated with previous term searches, figure 11 and paragraphs [0038]-[0040], [0127] and [0151]), wherein selection of the at least one previous set of search terms initiates a search of the EPG information using the at least one previous set of search terms as a selected set of search terms (selecting a previous search using a term such as "Stargate" in the EPG of a TV, paragraphs [0011], [0016] and [0038]-[0040]); performing, by a microprocessor executable data service of a television, the search using a selected set of search terms (using a CPU to execute data in order to display on a TV screen search terms to be selected by a user, figure 11 and paragraphs [0011], [0015], [0016] and [0038]-[0040]), the selected set of search terms being received in the search term field or a selected previous set of search terms (search terms to be selected are shown on a screen, figure 11 and paragraphs [0038]-[0040]); obtaining, by the data service, a set of search results (obtaining search results, figure 11 and paragraphs [0038]-[0040] and [0167]), the set of search results comprising EPG information corresponding to multiple channels and/or programs (displayed search results are associated with shown EPG channels and programs, figures 2 and 11 and paragraphs [0011], [0016] and [0038]-[0040]); displaying, by the application framework, the set of search results on the television screen (displaying a result of searching for a "Stargate" on a TV screen a program and the channel that displays the program, paragraphs [0014], [0018] and [0038]-[0040]); receiving, by the application framework and from a remote control of the user, a program selection from the displayed set of search results (receiving by a cell phone acting as a remote control, remote control functionality to apply a program selection of the search results, paragraphs [0020], [0023], [0038]-[0040] and [0167]); and changing, by the application framework, a current channel to a channel broadcasting the program selection (changing a current channel to a selected channel airing desired programs, paragraphs [0012], [0023], [0025], [0029] and [0031]-[0034]).

As per claim 9, Stark discloses a television (a TV, figure 1, device 370 and paragraphs [0014] and [0018]), comprising: a television screen (programs are presented on a TV screen, paragraphs [0014], [0017] and [0018]); a local computer readable medium (a computer readable medium, paragraph [0021]); at least one of an infrared and radio frequency module configured to receive wirelessly input signals from a remote control of a user (a wireless cellphone acts as a remote control using RF signals to control what is displayed on a TV screen, paragraphs [0014], [0018], [0020] and [0023]); a microprocessor executable application platform configured to display, on the television screen, a search panel (using a computer with a CPU to display a search window on a screen of a TV, figures 1 and 11 and paragraphs [0015], [0018] and [0279], the search panel comprising a search term field to receive a search term and at least one previous set of search terms used by the user in a prior search (a TV screen with search section receives from a user a search term which is associated with previous term searches, figure 11 and paragraphs [0038]-[0040], [0127] and [0151]), wherein selection of the at least one previous set of search terms initiates a search of the EPG information using the at least one previous set of search terms as a selected set of search terms (selecting a previous search using a term such as "Stargate" in the EPG of a TV, paragraphs [0011], [0016] and [0038]-[0040]), to display a set of search results on the television screen (displaying a result of searching for a "Stargate" on a TV screen a program and the channel that displays the program, paragraphs [0014], [0018] and [0038]-[0040]), to receive a program selection from the displayed set of search results, and to change a current channel to a channel airing the program selection (changing a current channel to a selected channel airing desired programs, paragraphs [0012], [0023], [0025], [0029] and [0031]-[0034]); and a microprocessor executable data service configured to receive, from a network accessible content provider, electronic program guide ("EPG") information (a user can access an EPG with a help of a content provider, paragraphs [0011], [0016] and [0080]), the EPG information comprising, for each program, airtime, program name, program channel, and program description (the EPG has a program, an airtime, a program name, a channel name and a program description, figure 2, TV view area 140 and paragraphs [0023] and [0188]), to perform the search using a selected set of search terms (using a CPU to execute data in order to display on a TV screen search terms to be selected by a user, figure 11 and paragraphs [0011], [0015], [0016] and [0038]-[0040]), the selected set of search terms being received in the search term field or a selected previous set of search terms (search terms to be selected are shown on a screen, figure 11 and paragraphs [0038]-[0040]), and obtain the set of search results (obtaining search results, figure 11 and paragraphs [0038]-[0040] and [0167]), comprising EPG information corresponding to multiple channels and/or programs (displayed search results are associated with shown EPG channels and programs, figures 2 and 11 and paragraphs [0011], [0016] and [0038]-[0040]).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55285

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Box V: Citations and Explanations-***-

As per claim 17, Stark discloses a tangible and non-transient computer readable medium, comprising microprocessor executable instructions that, when executed, are configured to perform operations (a computer readable medium and a CPU for executing instructions, paragraphs [0015] and [0021]) comprising: obtaining, from a network accessible content provider, electronic program guide ("EPG") information (a user can access an EPG with a help of a content provider, paragraphs [0011], [0016] and [0080]), the EPG information comprising, for each program, airtime, program name, program channel, and program description (the EPG has a program, an airtime, a program name, a channel name and a program description, figure 2, TV view area 140 and paragraphs [0023] and [0188]); displaying, on a screen of a television, a search panel (using a computer with a CPU to display a search window on a screen of a TV, figures 1 and 11 and paragraphs [0015], [0018] and [0279]), the search panel comprising a search term field to receive a search term and at least one previous set of search terms used by the user in a prior search (a TV screen with search section receives from a user a search term which is associated with previous term searches, figure 11 and paragraphs [0038]-[0040], [0127] and [0151]), wherein selection of the at least one previous set of search terms initiates a search of the EPG information using the at least one previous set of search terms as a selected set of search terms (selecting a previous search using a term such as "Stargate" in the EPG of a TV, paragraphs [0011], [0016] and [0038]-[0040]); performing the search using a selected set of search terms (using a CPU to execute data in order to display on a TV screen search terms to be selected by a user, figure 11 and paragraphs [0011], [0015], [0016] and [0038]-[0040]), the selected set of search terms being received in the search term field or a selected previous set of search terms (search terms to be selected are shown on a screen, figure 11 and paragraphs [0038]-[0040]); obtaining a set of search results (obtaining search results, figure 11 and paragraphs [0038]-[0040] and [0167]), the set of search results comprising EPG information corresponding to multiple channels and/or programs (displayed search results are associated with shown EPG channels and programs, figures 2 and 11 and paragraphs [0011], [0016] and [0038]-[0040]); displaying the set of search results on the television screen (displaying a result of searching for a "Stargate" on a TV screen a program and the channel that displays the program, paragraphs [0014], [0018] and [0038]-[0040]); receiving, from a remote control of the user, a program selection from the displayed set of search results (receiving by a cell phone acting as a remote control, remote control functionality to apply a program selection of the search results, paragraphs [0020], [0023], [0038]-[0040] and [0167]); and changing a current channel to a channel broadcasting the program selection (changing a current channel to a selected channel airing desired programs, paragraphs [0012], [0023], [0025], [0029] and [0031]-[0034]).

As per claims 2, 10 and 18, Stark further discloses wherein, when a search term is entered into the search term field (doing (entering) a quick term search, paragraphs [0038]-[0040]), an existing set of search results is cleared automatically and replaced by the obtained set of search results (a search is cleared and replaced by a selected search, paragraphs [0039] and [0040]).

As per claims 3, 11 and 19, Stark further discloses wherein the displayed search results lists multiple programs (as a result of search new programs are displayed, paragraphs [0040] and [0041]) and wherein each search result comprises an air time of the corresponding program, a name of the corresponding program, and a channel broadcasting the corresponding program (a TV program has an airtime, a program name, a channel name and a program description, figure 2, TV view area 140 and paragraphs [0023], [0041] and [0188]).

As per claims 4, 12 and 20, Stark further discloses wherein one of the multiple programs is in focus (programs that currently are a "focus", paragraphs [0033] and [0207]), wherein a thumbnail preview is displayed on the television screen with the displayed set of search results (pop-up, image or thumb (thumbnail) displayed on a TV screen, paragraphs [0013], [0018], [0026], [0069], [0070], [0076], [0081] and [0086]), wherein the thumbnail preview corresponds to the in focus program (an image that is currently of a focus of the user, paragraphs [0033], [0041], [0076] and [0207]), wherein the thumbnail preview comprises a graphical image and at least one of a program name, series name, episode number, episode name, and sport event name and a plurality of a program description, a program type, a program category, a start-to-finish time, current runtime, and a remaining runtime (the images/thumbs (thumbnails) contains name of program such "Seinfeld", paragraphs [0041], [0026], [0081] and [0086]), and wherein the graphical image is one of a captured frame of the in focus program, a picture associated with the in focus program, and a photograph associated with the in focus program (an image is associated with a PHOTO which is a focus of the user, paragraphs [0033], [0076], [0081] and [0207]).

As per claims 5, 13 and 21, Stark further discloses wherein the displayed set of search results lists multiple airings of a common program (displaying multiple listing of programs with airtime, figure 2 and paragraphs [0023], [0054], [0058], [0059], 0243]-[0245]) and wherein each search result in the set of search results comprises a respective air time of the common program, a name of the common program, and a respective channel broadcasting the common program (a search results in the EPG has an airtime, a program, a program name, a channel broadcasting a program and program description, figure 2, TV view area 140 and paragraphs [0023] and [0188]) and wherein the displayed set of search results are ordered by time (displayed programs are listed by airtime, figure 2 and paragraphs [0023], [0054], [0058], [0059], 0243]-[0245]).

As per claims 6, 14 and 22, Stark further discloses wherein the displayed set of search results update in real time while the user fills in the search term field (live TV programs (programs listed in real time) are updated during a user's search, paragraphs [0023], [0026]-[0029], [0033], [0034], [0052], [0059] and [0069]).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55285

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Previous Supplemental Box-***-

Claims 7, 8, 15, 16, 23 and 24 lack an inventive step under PCT Article 33(3) as being obvious over Stark in view of US 2009/0019485 Al to Ellis et al. (hereinafter 'Ellis').

As per claims 7, 15 and 23, Stark does not teach wherein the user can, using the remote control, mark a channel and/or program as a favorite, wherein a set of user marked favorite channels and/or programs is maintained in a local computer readable medium, wherein the accessed EPG information is indexed by airtime, channel, category, and favorites, and wherein the set of favorite channels and/or programs are not maintained in a remotely located computer readable medium. However, Ellis teaches wherein the user can, using the remote control, mark a channel and/or program as a favorite (user a remote control to display the EPG on a TV screen comprises favorite programs and favorite channels, paragraphs [0103], [0120], [0156] and [0157]), wherein a set of user marked favorite channels and/or programs is maintained in a local computer readable medium (favorite programs are stored in a memory, paragraph [0162]), wherein the accessed EPG information is indexed by airtime, channel, category, and favorites (the EPG has an air time, channel, category, and favorite, paragraphs [0113], [0129], [0133], [0156], [0157] and [0162]), and wherein the set of favorite channels and/or programs are not maintained in a remotely located computer readable medium (favorite programs ands channels are stored in the memory 25, wherein the memory 25 is not located in a remote computer, paragraph [0162]). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to improve Stark's system to include wherein the user can, using the remote control, mark a channel and/or program as a favorite, wherein a set of user marked favorite channels and/or programs is maintained in a local computer readable medium, wherein the accessed EPG information is indexed by airtime, channel, category, and favorites, and wherein the set of favorite channels and/or programs are not maintained in a remotely located computer readable medium as taught by Ellis to provide a favorite feature in order to enhance the user's experience.

As per claims 8, 16 and 24, Stark further discloses a category indicator to indicate a category of the corresponding program (indication categorized programs, paragraphs [0059], [0067], [0081] and [0279]); and a first air indicator to indicate that a corresponding program that is airing for the first time (airing programs as new (first time) programs, paragraphs [0041], [0046], [0049], [0052] and [0073]) and wherein the program is one or more of a movie, an episode, sport event, and a television special (a program such as Chris Rock Show (episode), paragraph [0052]). Stark does not teach wherein locally stored EPG information comprises a favorite indicator to indicate that a corresponding channel or program is in the set of favorite channels and programs, a reminder indicator to indicate that a corresponding program has been set to trigger a reminder. However, Ellis teaches wherein locally stored EPG information comprises a favorite indicator to indicate that a corresponding channel or program is in the set of favorite channels and programs (the EPG comprises favorites such as favorite programs and favorite channels, paragraphs [0156] and [0157]), a reminder indicator to indicate that a corresponding program has been set to trigger a reminder (set a reminder to remind the user about a programs, paragraphs [0129], [0136], [0150]-[0152], [0162] and [0202]). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to improve Stark's system to include wherein locally stored EPG information comprises a favorite indicator to indicate that a corresponding channel or program is in the set of favorite channels and programs, a reminder indicator to indicate that a corresponding program has been set to trigger a reminder as taught by Ellis to provide favorite and reminder features in order to enhance the user's experience.

Claims 1-24 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	14 JAN 2014
Applicant's or agent's file reference: 6583-448-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US2013/055284	International filing date *(day/month/year)*: 16 August 2013
Applicant: FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/	Authorized officer
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450	Blaine R. Copenheaver
Facsimile No. 571-273-3201	Telephone No. PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-448-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055284	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 4 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☒ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 17

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055284

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see extra sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-24

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055284

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445 (2014.01)
USPC - 725/41
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(8) - H04N 5/50, 5/445 (2014.01)
USPC - 348/731, 732; 725/28, 32, 38, 39, 41

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC: H 04N 5/44543; H 04N 21/482 (2014.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2011/0289419 A1 (YU et al) 24 November 2011 (24.11.2011) entire document	1-2, 4-6, 9-10, 12-14, 17-18, 20-22 --- 3, 7-8, 11, 15-16, 19, 23, 24
X -- Y	WO 2012/030024 (LEE et al) 08 March 2012 (08.03.2012) entire document	1, 17 --- 8, 16, 24
Y	US 2011/0041150 A1 (SCHEIN et al) 17 February 2011 (17.02.2011) entire document	3, 7, 11, 15, 19, 23
A	US 2003/0177498 A1 (ELLIS et al) 18 September 2003 (18.09.2003), abstract, para 36, 93, 95	1-24

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
02 January 2014	14 JAN 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055284

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-24, drawn to a method of maintaining and displaying a set of favorite channels and programs.
Group II, claims 25-28, drawn to a method of monitoring viewing patterns of a user.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: receiving EPG information, maintaining a set of favorite channels and programs, displaying a list, receiving a selection and changing the channel to the selection as claimed therein is not present in the invention of Group II. The special technical feature of the Group II invention: monitoring viewing patterns of a user and determining the more frequently viewed channels of greater interest to the user than less frequently viewed channels as claimed therein is not present in the invention of Groups I.

Groups I and II lack unity of invention because even though the inventions of these groups require the technical feature of a microprocessor executable application related to television programming, this technical feature is not a special technical feature as it does not make a contribution over the prior art in view of US 2003/0177498 A1 (ELLIS et al) 18 September 2003 (18.09.2003), abstract, para 36, 93, 95.

Since none of the special technical features of the Group I or II inventions are found in more than one of the inventions, unity of invention is lacking.

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	14 JAN 2014
Applicant's or agent's file reference 6583-448-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055284	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445 (2014.01)
USPC - 725/41

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	02 January 2014	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055284

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055284

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the appicable time limit:

   ☐ paid additional fees

   ☐ paid additional fees under protest and, where applicable, the protest fee

   ☐ paid additional fees under protest but the applicable protest fee was not paid

   ☒ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

   ☐ complied with

   ☒ not complied with for the following reasons:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-24, drawn to a method of maintaining and displaying a set of favorite channels and programs.
Group II, claims 25-28, drawn to a method of monitoring viewing patterns of a user.

The inventions listed as Groups I-II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: receiving EPG information, maintaining a set of favorite channels and programs, displaying a list, receiving a selection and changing the channel to the selection as claimed therein is not present in the invention of Group II. The special technical feature of the Group II invention: monitoring viewing patterns of a user and determining the more frequently viewed channels of greater interest to the user than less frequently viewed channels as claimed therein is not present in the invention of Groups I.

Groups I and II lack unity of invention because even though the inventions of these groups require the technical feature of a microprocessor executable application related to television programming, this technical feature is not a special technical feature as it does not make a contribution over the prior art in view of US 2003/0177498 A1 (ELLIS et al) 18 September 2003 (18.09.2003), abstract, para 36, 93, 95.

Since none of the special technical features of the Group I or II inventions are found in more than one of the inventions, unity of invention is lacking.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

   ☐ all parts

   ☒ the parts relating to claims Nos. 1-24

Form PCT/ISA/237 (Box No. IV) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055284

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	3, 7-8, 11, 15-16, 19, 23, 24	YES
	Claims	1-2, 4-6, 9-10, 12-14, 17-18, 20-22	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-24	NO
Industrial applicability (IA)	Claims	1-24	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-2, 4-6, 9-10, 12-14, 17-18, 20-22 lack novelty under PCT Article 33(2) as being anticipated by Yu et al., hereinafter referred to as Yu.

Regarding claims 1, 17, Yu discloses a method and tangible and non-transient computer readable medium, comprising microprocessor executable instructions (abstract, para 44, Fig. 56), comprising: receiving, by a microprocessor executable data service of a television and from a network accessible content provider (see Fig. 2, showing service provider sending content to a television), electronic program guide ("EPG") information (content includes providing an EPG, para 86, see fig. 18), the
EPG information comprising, for each program, airtime, program name, program channel, and program description (see Fig. 18 showing for each program, a schedule time [airtime as shown in top bar], program name, channel and description, para 123); maintaining, by the data service in a local computer readable medium (guide generator 366 is part of user platform 140 and stores guide information locally, see Fig. 10 & 13, para 86; local storage, para 87, 89, Fig. 9), a set of favorite channels and programs (content listing grouping represented by the 'Favorites' command option in command option area 1810, para 120, Fig. 18); receiving, by a microprocessor executable application framework (Fig. 13) and from a
remote control of a user (user can manipulate a conventional television remote control device, cursor control device, keyboard arrow buttons, or other pointing and/or control mechanism to select one of the command options, para 115), a request for channels and programs marked as favorites (The 'Favorites' command option enables the user to pick content from a group of pre-defined user favorites, para 120, Fig. 18); displaying, by the application framework and on a television screen, a listing of the set of favorite channels and programs, the listing comprising EPG information (user favorites can be content items explicitly specified by the user as favorite content items by using command options provided by the 'Favorites' functionality, para 119-120, see Fig. 18); receiving, by the application framework and from the remote control, a selected channel or program from the listing (user selects content from the favorites listing, para 120, Fig. 18); and changing, by the application framework, to the selected channel (the favorites content items provide the user with easy access to the channel for content viewing [i.e. the channel is changed to the favorite], para 124).

Regarding claim 9, Yu discloses a television (Fig. 2, abstract), comprising: a television screen (television provides user with display of information, Fig. 2, para 121); a local computer readable medium (Fig. 56, para 228); at least one of an infrared and radio frequency module configured to receive wirelessly requests from a remote control of a user (remote control device may be wireless, para 115), the requests comprising a selected channel or program from a displayed listing (select desired command option, para 115; user selects content from the favorites listing, para 120, Fig. 18); a microprocessor executable data service configured to receive from a network accessible content provider (see Fig. 2, showing service provider sending content to a television), electronic program guide ("EPG") information (content includes providing an EPG, para 86, see fig. 18), the EPG information comprising, for each program, airtime, program name, program channel, and program description (see Fig. 18 showing for each program, a schedule time [airtime as shown in top bar], program name, channel and description, para 123) and to maintain, in the local computer readable medium (guide generator 366 is part of user platform 140 and stores guide information locally, see Fig. 10 & 13, para 86; local storage, para 87, 89, Fig. 9), a set of favorite channels and programs (content listing grouping represented by the 'Favorites' command option in command option area 1810, para 120, Fig. 18); and a microprocessor executable application framework (Fig. 13) configured to receive from a remote control of a user (user can manipulate a conventional television remote control device, cursor control device, keyboard arrow buttons, or other pointing and/or control mechanism to select one of the command options, para 115), a request for channels and programs marked as favorites (The 'Favorites' command option enables the user to pick content from a group of pre-defined user favorites, para 120, Fig. 18) to display, on the television screen, a listing of the set of favorite channels and programs, the listing comprising EPG information (user favorites can be content items explicitly specified by the user as favorite content items by using command options provided by the 'Favorites' functionality, para 119-120, see Fig. 18), to receive, from the at least one of an infrared and radio frequency module, a selected channel or program from the listing (user selects content from the favorites listing, para 120, Fig. 18), and change to the
selected channel (the favorites content items provide the user with easy access to the channel for content viewing [i.e. the channel is changed to the favorite], para 124).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055284

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 5, 13, 21 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because they are indefinite for the following reason:

Claims 5, 13, 21 cite dependency from claims 4, 12, 20, respectively. However, claims 4, 12, 20 lack antecedent basis for "the second programming" recited. For the purpose of the written opinion, Claims 5, 13, 21 are interpreted as reciting "a second programming."

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055284

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claims 2, 10, 18, Yu discloses wherein the programs described by the EPG programming information are indexed by airtime, channel, category, and favorites (see EPG data shown in Fig. 18, showing each program with its scheduled time [top bar], channel [10-16], and 1810 showing categories and favorites, para 119-120) and wherein the set of favorite channels and programs are not maintained in a remotely located computer readable medium (guide generator 366 is part of user platform 140 and stores guide information, including favorites listings, locally, see Fig. 10 & 13, para 86; local storage, para 87, 89, Fig. 9).

Regarding claims 4, 12, 20, Yu discloses wherein, in the displaying step, the screen comprises a header bar, the header bar comprising a graphical image associated with an infocus program EPG information (see Fig. 18, showing header bar with an infocus program information for listing "Lost", para 122-123).

Regarding claims 5, 13, 21, Yu discloses wherein the header bar comprises at least one of a program name, series name, episode number, episode name, and sport event name (see Fig. 18, showing header bar with program name "Lost", para 122) and a plurality of a program description, a program type, a program category, a start-to-finish time, current runtime, and a remaining runtime (see Fig. 18, showing program description for "Lost", para 122) and wherein the image is one of a captured frame of the second programming, a picture, and a photograph (see picture depicting program "Lost", Fig. 18, para 122).

Regarding claims 6, 14, 22, Yu discloses wherein the image is a captured frame of the second programming and wherein the captured frame is a still image and the image is displayed on only a part of the screen (see Fig. 18 showing still image of TV show "Lost" on only part of the screen, para 122).

Claims 1, 17 lack novelty under PCT Article 33(2) as being anticipated by Lee et al., hereinafter referred to as Lee.

Regarding claims 1, 17, Lee discloses a method and tangible and non-transient computer readable medium, comprising microprocessor executable instructions (abstract, Fig. 19, para 489), comprising receiving, by a microprocessor executable data service of a television (image display apparatus 100 includes processor and application, Fig. 2, para 57-59) and from a network accessible content provider (content provider 10 and HNED 40 comprising a smart TV, Fig. 1, para 48-49; see Fig. 14), electronic program guide ("EPG") information (para 214, Fig. 4), the EPG information comprising, for each program, airtime, program name, program channel, and program description (EPG data includes broadcasting information specifying start times, end times [airtime] of scheduled TV programs, para 222; see object 2021 showing broadcast information including channel, program name and airtime, Fig. 49); maintaining, by the data service in a local computer readable medium, a set of favorite channels and programs (memory 140 stores applications, para 104, 126-132; applications include favorite channel object representing favorite channels, para 299, 330); receiving, by a microprocessor executable application framework (Fig. 12) and from a remote control of a user (Fig. 13), a request for channels and programs marked as favorites (favorite channel object selected? S1920, Fig. 19; user selects favorite channel object 2019 using remote controller 200, para 380); displaying, by the application framework and on a television screen (Fig. 12, 15), a listing of the set of favorite channels and programs, the listing comprising EPG information (display favorite channel list S1925, Fig. 19; favorite channel list 2110 is displayed, para 381); receiving, by the application framework and from the remote control, a selected channel or program from the listing (display broadcast image of selected channel, S1935, Fig. 19; specific channel from favorite listing is selected by user, para 380-383); and changing, by the application framework, to the selected channel (Fig. 19; channel is switched to selected channel from favorites listing, para 380-383).

Claims 3, 7, 11, 15, 19, 23 lack an inventive step under PCT Article 33(3) as being obvious over Yu in view of Schein et al., hereinafter referred to as Schein.

Regarding claims 3, 11, 19, Yu discloses the invention above, and further discloses wherein locally stored EPG information comprises a category indicator to indicate a category of the corresponding program (see Fig. 18, showing category of selected program "Lost" as being TVPG [TV category], para 123), and a first air indicator to indicate that a corresponding program that is airing for the first time (see Fig. 18, showing icon caption of "repeat" in the program content listing for "Lost" [indicating this is a repeat, and not a first aired program listing], para 123) and wherein the program is one or more of a movie, an episode, sport event, and a television special (see Fig. 18, showing program episode "Lost", para 123-124). Yu lacks teaching a favorite indicator to indicate that a corresponding channel or program is in the set of favorite channels and programs, a reminder indicator to indicate that a corresponding program has been set to trigger a reminder. Schein is in the field of television program schedule listings (abstract, para 56) and teaches the EPG information (program guide, para 56) comprises a favorite indicator to indicate that a corresponding channel or program is in the set of favorite channels and programs (viewer than identifies which ones are favorites. After specifying the criteria for being a favorite, a confirmation panel (not shown) may appear that allows the viewer to o.k. the action. When the viewer returns to the Items Info Menu, a favorite symbol has been added to the title, para 56, Fig. 9A-F), and a reminder indicator to indicate that a corresponding program has been set to trigger a reminder(user creates a program reminder and after confirmation, a reminder symbol has been added to the title , para 57, Fig. 10A-D). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the favorites and reminder indicators as taught in Schein with the invention of Yu in order to allow the user to quickly identify favorites and reminders from the program guide and provide an option to remove the indicators (see Schein, para 56-57).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055284

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claims 7, 15, 23, Yu discloses the invention above, but fails to disclose wherein, in the displaying step, the display comprises a view of currently selected programming, the view being displayed on only a part of the screen.
Schein is in the field of television program schedule listings that provide favorites listings (abstract, para 56) and teaches the display comprises a view of currently selected programming, the view being displayed on only a part of the screen (see Fig. 9E, showing favorites listing on left hand side of screen and currently viewed programming on right hand side of screen [second box on right, corresponding to box 126 of Fig. 8B], para 45-46). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the view of currently selected programming as taught in Schein with the invention of Yu so that the viewer can browse through program matrix 106 without missing the action on the currently tuned program (see Schein, para 46).

Claims 8, 16, 24 lack an inventive step under PCT Article 33(3) as being obvious over Yu in view of Lee et al., hereinafter referred to as Lee.

Regarding claims 8, 16, 24, Yu discloses wherein, in the displaying step, the listing of favorite channels and programs are presented in a first portion of the screen (user selects favorites command from 1810 to provide a list of user favorites, Fig. 18, para 120) and wherein the recommended channels are based on one or more of the user's set of favorite channels and programs and watching patterns (recommendation engine 241 obtains user behavior information to provide recommended content, para 80; the user favorites can be content items implicitly identified by using recommendation engine 241 to gather user interest information, as described above, and to correlate user interests with corresponding content items and content information, para 120, 141).
However, Lee is in the field of broadcast information on televisions (see Fig. 25, abstract) and teaches wherein, in the displaying step, the listing of favorite channels and programs are presented in a first portion of the screen (favorite channels listed within channel card 2060 on portion of screen, as seen in Fig. 39, para 326, 342) and recommended channels or programs are presented in a second portion of the screen (RECOMMENDED LIST card object 2070, Fig. 39, para 418), the first and second portions being non-overlapping (cards may be selected and presented on the display by user as seen in Fig. 39, showing favorite channel card 2060 displayed next to recommended list card object 2070, para 418; see Fig. 41-44, showing user can move card objects for display on screen, para 418-419).
It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the display features as taught in Lee with the invention of Yu in order to provide the user with multiple options when browsing television content (see Lee, para 418-419, 348).

Claims 1-24 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	02 DEC 2013
Applicant's or agent's file reference: 6583-449-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US2013/055293	International filing date *(day/month/year)*: 16 August 2013
Applicant: FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-449-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055293	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 15

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

PCT/US2013/055293 02.12.2013

International application No.
PCT/US2013/055293

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/61
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(8) - G06F 3/0488, H04N 5/445, H04Q 5/22 (2013.01)
USPC - 340/10.1, 715/810, 725/61

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - H04N 7/17318, 21/4722, 21/47214 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2012/0210370 Al (KIM et al) 16 August 2012 (16.08.2012) entire document	1-20
Y	US 8,127,329 B1 (KUNKEL et al) 28 February 2012 (28.02.2012) entire document	1-20
Y	US 2010/0225830 A1 (BLANCHARD et al) 09 September 2010 (09.09.2010) entire document	9 and 18
A	US 2012/0210275 A1 (PARK et al) 16 August 2012 (16.08.2012) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
12 November 2013	02 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	02DEC 2013
Applicant's or agent's file reference 6583-449-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055293	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/61

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	12 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055293

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055293

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-8, 10-17, and 19-20 lack an inventive step under PCT Article 33(3) as being obvious over Kim et al, hereinafter Kim in view of Kunkel et al, hereinafter Kunkel.

Regarding Claim 1, Kim teaches a method, comprising: initiating a live television (TV) application associated with an intelligent TV (paragraph 121 for having a Smart TV or electronic device element 300 with a multi-functional display element 302 and a receiver and paragraph 328 for having real time or live broadcasting through a satellite or terrestrial broadcast system); determining, via a processor associated with the intelligent TV (paragraph 327 for having a controller element 340 or processor means to control the GUI for the smart TV element 300) and prior to enabling full functionality of the live TV application (paragraph 621 for the controller element 340 initializing the GUI element upon boot or prior to full function of the electronic device element 300 or the smart TV), that a setup of one or more channel sets associated with the live TV application is required (paragraph 328 for having a GUI to set up the electronic device with broadcast channels for receiving terrestrial and satellite channels with real time broadcasting or live TV means); presenting, via a display of the intelligent TV (paragraph 327 for the GUI being displayed on the display element 302 input boxes to enter information from the user for the smart TV element 300), a first setup option dialog (figure 31 element 3110 for the first box with channels NBC and FOX and paragraph 327 for the controller element 340 controls the display element 302 with three different input boxes for dragging and dropping), wherein the first setup option dialog is associated with a first channel set of the one or more channel sets (paragraph 327 for having a GUI with the display for setting up channels and figure 31 element 3110 for having a first list of channels CBS, FOX, and NBC etc.); selecting the first setup option dialog associated with the first channel set (figure 31 element 3110 for a first set up box with a set of channels and paragraph 327 for having a user option of selecting a channel or selecting a menu item for set up); scanning at least one signal source for one or more live TV channels (paragraph 636 for scanning channels either automatically or manually at the request of the user and controlled by the controller element 340 and paragraph 642 for scanning for broadcast channels); and enabling at least partial functionality of the live TV application upon detecting the one or more live TV channels (paragraphs 646-647 for skipping the channel scan and displaying the results of the channels found at that time or a partial list of channels along with displaying the results of the channel scan), wherein the at least partial functionality of the live TV application is associated with the detected one or more live TV channels (paragraph 328 for having real time or live broadcasting through a satellite or terrestrial broadcast system and paragraph 121 for having a Smart TV or electronic device element 300 with a multi-functional display element 302 and a receiver). Kim does not explicitly teach scanning associated with the first channel set and detecting the one or more live TV channels associated with the first channel set. Kunkel has methods for a video scan (abstract) and teaches scanning associated with the first channel set and detecting the one or more live TV channels associated with the first channel set (col 21, lines 40-67 for having two different scans associated with a criteria for the first channel set such as a user selection and having a second scan with a second criteria such as the user's behavior and then identifying or detecting the channels available according to the criteria with col 3, lines 40-60 for using both analog and digital signals for the tuner). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the scan criteria as taught by Kunkel in the smart TV method of Kim in order to scan for channels based on user behavior (Kunkel, col 21, lines 40-60).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055293

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 2, Kim teaches wherein presenting the first setup option dialog includes presenting a second option dialog (figure 31 element 3110 for the first setup dialog box with a first set of broadcast channels such as NBC and FOX and a second dialog box element 3120 with a second set of channels that are part of the social network service or SNS channels such as Facebook and Twitter and paragraph 328 for having the option of dragging and dropping the channels), wherein the second setup option dialog is associated with a second channel set of the one or more channel sets , and wherein the second option dialog is presented (figure 31 element 3120 for the first box and element 3140 for the second box), via the display of the intelligent TV, at the same time as the first setup option dialog (figure 31 for the controller element 340 controls the display element 302 with three different input boxes elements 3110, 3120, 3130 and 3140 for displayed simultaneously).

Regarding Claim 3, Kim teaches wherein the selection of the first setup option dialog is made automatically via the processor associated with the intelligent TV (paragraph 636 for having the GUI for scanning channels being displayed automatically by the controller element 340 of the smart TV element 300 and figure 31 element 3110 for having a dialog box for selecting TV channels).

Regarding Claim 4, Kim teaches wherein the selection of the first setup option dialog is made in response to detecting an input received at the intelligent TV via a remote control associated with the intelligent TV (paragraph 370 for having a remote controller associated with the TV controller element 340 for making user selections based on the channel map and paragraph 327 for the display element 302 having a GUI to detect user actions for channel set up using a menu).

Regarding Claim 5, Kim teaches wherein the at least one signal source includes at least one of an over-the-air broadcast medium, a digital TV channel source, an analog TV channel source, the Internet, a satellite provider, a cable provider, and a multiple-system operator (paragraph 32 for using signals from a satellite network, a terrestrial broadcast, as well as the internet).

Regarding Claim 6, Kim teaches presenting, via the display of the intelligent TV (paragraph 327 for having a GUI for a display element 302), a first switch option associated with the first channel set (paragraph 327 for having a menu with associated user actions for selecting a menu item with figure 31 element 3110 for having a first set of channels on the display in a box and paragraph 330 for using a switch to go to the next channel in the channel region), wherein a selection of the first switch option tunes the intelligent TV to the detected one or more live TV channels of the first channel set (paragraph 329 for having a list of channels in the first channel set element 3110, and paragraph 151 for the smart TV element 300 having a tuner element 305 for selecting a channel and tuning to the channel frequency); and presenting, via the display of the intelligent TV, a second setup option dialog (figure 31 element 3120 for having a second dialog box with a second set of channels that are social network services or SNS channels), wherein the second setup option dialog is associated with a second channel set of the one or more channel sets (figure 31 element 3130 for a second dialog box that has a second set of social network channels such as Facebook and Twitter along with information of messages for the user).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055293

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 7, Kim teaches selecting the first switch option associated with the first channel set (paragraph 327 for having a menu with associated user actions for selecting a menu item with figure 31 element 3110 for having a first set of channels on the display in a box and paragraph 330 for using a switch to go to the next channel in the channel region); and tuning the intelligent TV to the one or more live TV channels of the first channel (paragraph 329 for having a list of channels in the first channel set element 3110, and paragraph 151 for the smart TV element 300 having a tuner element 305 for selecting a channel and tuning to the channel frequency).

Regarding Claim 8, Kim teaches selecting the second setup option dialog associated with the second channel set (figure 31 for a second dialog box element 3120 with a second set of channels that are part of the social network service or SNS channels such as Facebook and Twitter and paragraph 328 for having the option of dragging and dropping the channels). Kim does not explicitly teach scanning at least one signal source associated with the second channel set for one or more live TV channels, detecting the one or more live TV channels associated with the second channel set, and enabling at least partial functionality of the live TV application upon detecting the one or more live TV channels of the second channel set, wherein the at least partial functionality of the live TV application is associated with the detected one or more live TV channels of the second channel set. Kunkel has methods for a video scan (abstract) and teaches scanning at least one signal source associated with the second channel set for one or more live TV channels scanning at least one signal source associated with the second channel set for one or more live TV channels (col 21, lines 40-67 for having two different scans associated with a criteria for the first channel set such as a user selection and having a second scan with a second criteria such as the user's behavior and then identifying or detecting the channels available according to the criteria with col 3, lines 40-60 for using both analog and digital signals for the tuner), detecting the one or more live TV channels associated with the second channel set , detecting the one or more live TV channels associated with the second channel set (col 21, lines 60-67 for identifying the channels that fit the scan criteria or detecting the channels that fit the second scan criteria of the user's behavior) and enabling at least partial functionality of the live TV application upon detecting the one or more live TV channels of the second channel set (col 22, lines 15-30 for the application upon scanning the channels of the second criteria tune to the first and second selected programs and direct the program to the display device or allowing some function of the TV to display the programs), wherein the at least partial functionality of the live TV application is associated with the detected one or more live TV channels of the second channel set (col 22, lines 30-40 for the interactive guide to sequentially display the programs and based on the scan sequences). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the scan criteria as taught by Kunkel in the smart TV method of Kim in order to scan for channels based on user behavior (Kunkel, col 21, lines 40-60).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055293

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 10, Kim teaches tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (paragraph 121 for having a Smart TV or electronic device element 300 with a multi-functional display element 302 and a receiver with a controller or processor means element 340 and paragraph 328 for having real time or live broadcasting through a satellite or terrestrial broadcast system), perform the method comprising: initiating a live television (TV) application associated with an intelligent TV (paragraph 621 for the controller element 340 initializing the GUI element upon boot or prior to full function of the electronic device element 300 or the smart TV); determining, via a processor associated with the intelligent TV and prior to enabling full functionality of the live TV application (paragraph 621 for the controller element 340 or processor means for initializing the GUI element upon boot or prior to full function of the electronic device element 300 or the smart TV), that a setup of one or more channel sets associated with the live TV application is required (paragraph 328 for having a GUI to set up the electronic device with broadcast channels for receiving terrestrial and satellite channels with real time broadcasting or live TV means); presenting, via a display of the intelligent TV (paragraph 327 for the GUI being displayed on the display element 302 input boxes to enter information from the user for the smart TV element 300), a first setup option dialog (figure 31 element 3110 for the first box with channels NBC and FOX and paragraph 327 for the controller element 340 controls the display element 302 with three different input boxes for dragging and dropping), wherein the first setup option dialog is associated with a first channel set of the one or more channel sets (paragraph 327 for having a GUI with the display for setting up channels and figure 31 element 3110 for having a first list of channels CBS, FOX, and NBC etc.); selecting the first setup option dialog associated with the first channel set (paragraph 327 for having a GUI with the display for setting up channels and figure 31 element 3110 for having a first list of channels CBS, FOX, and NBC etc.); selecting the first setup option dialog associated with the first channel set (figure 31 element 3110 for a first set up box with a set of channels and paragraph 327 for having a user option of selecting a channel or selecting a menu item for set up); scanning at least one signal source for one or more live TV channels (paragraph 636 for scanning channels either automatically or manually at the request of the user and controlled by the controller element 340 and paragraph 642 for scanning for broadcast channels); and enabling at least partial functionality of the live TV application upon detecting the one or more live TV channels of the first channel set (paragraphs 646-647 for skipping the channel scan and displaying the results of the channels found at that time or a partial list of channels along with displaying the results of the channel scan), wherein the at least partial functionality of the live TV application is associated with the detected one or more live TV channels of the first channel set (paragraph 328 for having real time or live broadcasting through a satellite or terrestrial broadcast system and paragraph 121 for having a Smart TV or electronic device element 300 with a multi-functional display element 302 and a receiver). Kim does not explicitly teach scanning associated with the first channel set and detecting the one or more live TV channels associated with the first channel set. Kunkel has methods for a video scan (abstract) and teaches scanning associated with the first channel set and detecting the one or more live TV channels associated with the first channel set (col 21, lines 40-67 for having two different scans associated with a criteria for the first channel set such as a user selection and having a second scan with a second criteria such as the user's behavior and then identifying or detecting the channels available according to the criteria with col 3, lines 40-60 for using both analog and digital signals for the tuner). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the scan criteria as taught by Kunkel in the smart TV method of Kim in order to scan for channels based on user behavior (Kunkel, col 21, lines 40-60).

Regarding Claim 11, Kim teaches wherein presenting the first setup option dialog includes presenting a second option dialog (figure 31 element 3110 for the first setup dialog box with a first set of broadcast channels such as NBC and FOX and a second dialog box element 3120 with a second set of channels that are part of the social network service or SNS channels such as Facebook and Twitter and paragraph 328 for having the option of dragging and dropping the channels), wherein the second setup option dialog is associated with a second channel set of the one or more channel sets (figure 31 for a second dialog box element 3120 with a second set of channels that are part of the social network service or SNS channels such as Facebook and Twitter and paragraph 328 for having the option of dragging and dropping the channels), and wherein the second option dialog is presented, via the display of the intelligent TV, at the same time as the first setup option dialog (figure 31 for the controller element 340 controls the display element 302 with three different input boxes elements 3110, 3120, 3130 and 3140 for displayed simultaneously).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055293

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 12, Kim teaches wherein the selection of the first setup option dialog is made automatically via a processor associated with the intelligent TV (paragraph 636 for having the GUI for scanning channels being displayed automatically by the controller element 340 of the smart TV element 300 and figure 31 element 3110 for having a dialog box for selecting TV channels).

Regarding Claim 13, Kim teaches wherein the selection of the first setup option dialog is made in response to detecting an input received at the intelligent TV via a remote control associated with the intelligent TV (paragraph 370 for having a remote controller associated with the TV controller element 340 for making user selections based on the channel map and paragraph 327 for the display element 302 having a GUI to detect user actions for channel set up using a menu).

Regarding Claim 14, Kim teaches wherein the at least one signal source includes at least one of an over-the-air broadcast medium, a digital TV channel source, an analog TV channel source, the Internet, a satellite provider, a cable provider, and a multiple-system operator (paragraph 32 for using signals from a satellite network, a terrestrial broadcast, as well as the internet).

Regarding Claim 15, Kim teaches wherein the method further comprises: presenting, via the display of the intelligent TV (paragraph 327 for having a GUI for a display element 302), a first switch option associated with the first channel set (paragraph 327 for having a menu with associated user actions for selecting a menu item with figure 31 element 3110 for having a first set of channels on the display in a box and paragraph 330 for using a switch to go to the next channel in the channel region), wherein a selection of the first switch option tunes the intelligent TV to the detected one or more live TV channels of the first channel set (paragraph 329 for having a list of channels in the first channel set element 3110, and paragraph 151 for the smart TV element 300 having a tuner element 305 for selecting a channel and tuning to the channel frequency); and presenting, via the display of the intelligent TV (paragraph 327 for having a GUI for a display element 302), a second setup option dialog, wherein the second setup option dialog is associated with a second channel set of the one or more channel sets (figure 31 for a second dialog box element 3120 with a second set of channels that are part of the social network service or SNS channels such as Facebook and Twitter and paragraph 328 for having the option of dragging and dropping the channels).

Regarding Claim 16, Kim teaches wherein the method further comprises: selecting the first switch option associated with the first channel set (paragraph 327 for having a menu with associated user actions for selecting a menu item with figure 31 element 3110 for having a first set of channels on the display in a box and paragraph 330 for using a switch to go to the next channel in the channel region); and tuning the intelligent TV to the one or more live TV channels of the first channel set (paragraph 329 for having a list of channels in the first channel set element 3110, and paragraph 151 for the smart TV element 300 having a tuner element 305 for selecting a channel and tuning to the channel frequency).

Regarding Claim 17, Kim teaches wherein the method further comprises: selecting the second setup option dialog associated with the second channel set (figure 31 for a second dialog box element 3120 with a second set of channels that are part of the social network service or SNS channels such as Facebook and Twitter and paragraph 328 for having the option of dragging and dropping the channels). Kim does not explicitly teach scanning at least one signal source associated with the second channel set for one or more live TV channels, detecting the one or more live TV channels associated with the second channel set, and enabling at least partial functionality of the live TV application upon detecting the one or more live TV channels of the second channel set, wherein the at least partial functionality of the live TV application is associated with the detected one or more live TV channels of the second channel set. Kunkel has methods for a video scan (abstract) and teaches scanning at least one signal source associated with the second channel set for one or more live TV channels (col 21, lines 40-67 for having two different scans associated with a criteria for the first channel set such as a user selection and having a second scan with a second criteria such as the user's behavior and then identifying or detecting the channels available according to the criteria with col 3, lines 40-60 for using both analog and digital signals for the tuner), detecting the one or more live TV channels associated with the second channel set (col 21, lines 60-67 for identifying the channels that fit the scan criteria or detecting the channels that fit the second scan criteria of the user's behavior) and enabling at least partial functionality of the live TV application upon detecting the one or more live TV channels of the second channel set (col 22, lines 15-30 for the application upon scanning the channels of the second criteria tune to the first and second selected programs and direct the program to the display device or allowing some function of the TV to display the programs), wherein the at least partial functionality of the live TV application is associated with the detected one or more live TV channels of the second channel set (col 22, lines 30-40 for the interactive guide to sequentially display the programs and based on the scan sequences). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the scan criteria as taught by Kunkel in the smart TV method of Kim in order to scan for channels based on user behavior (Kunkel, col 21, lines 40-60).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055293

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 19, Kim discloses a system, comprising: an intelligent television (TV) having a display and a tuner (paragraph 121 for having a Smart TV or electronic device element 300 with a multi-functional display element 302 and a tuner element 305, and paragraph 328 for having real time or live broadcasting through a satellite or terrestrial broadcast system), wherein the tuner is configured to receive and convert broadcast content signals to be displayed by the display (paragraph 151 for converting the RF signals using the tuner element 305 and demodulating the signal for display with display element 302); an input device associated with the intelligent TV (paragraph 370 for having a remote controller associated with the TV controller element 340 for making user selections based on the channel map and paragraph 327 for the display element 302 having a GUI to detect user actions for channel set up using a menu); a memory (paragraph 150 for having a storage unit element 345 with the smart TV element 300 and paragraph 187 for the storage unit element 345 having memory means); and a microprocessor operable to (paragraph 327 for having a controller element 340 or processor means to control the GUI for the smart TV element 300): initiate a live TV application associated with the intelligent TV (paragraph 621 for the controller element 340 initializing the GUI element upon boot or prior to full function of the electronic device element 300 or the smart TV); determine, prior to enabling full functionality of the live TV application (paragraph 621 for the controller element 340 initializing the GUI element upon boot or prior to full function of the electronic device element 300 or the smart TV), that a setup of one or more channel sets associated with the live TV application is required (paragraph 328 for having a GUI to set up the electronic device with broadcast channels for receiving terrestrial and satellite channels with real time broadcasting or live TV means); present, via the display of the intelligent TV (paragraph 327 for the GUI being displayed on the display element 302 input boxes to enter information from the user for the smart TV element 300), a first setup option dialog (figure 31 element 3110 for the first box with channels NBC and FOX and paragraph 327 for the controller element 340 controls the display element 302 with three different input boxes for dragging and dropping), wherein the first setup option dialog is associated with a first channel set of the one or more channel sets (paragraph 327 for having a GUI with the display for setting up channels and figure 31 element 3110 for having a first list of channels CBS, FOX, and NBC etc.); select the first setup option dialog associated with the first channel set (paragraph 327 for having a GUI with the display for setting up channels and figure 31 element 3110 for having a first list of channels CBS, FOX, and NBC etc.); selecting the first setup option dialog associated with the first channel set (figure 31 element 3110 for a first set up box with a set of channels and paragraph 327 for having a user option of selecting a channel or selecting a menu item for set up); scan at least one signal source for one or more live TV channels (paragraph 636 for scanning channels either automatically or manually at the request of the user and controlled by the controller element 340 and paragraph 642 for scanning for broadcast channels); and enable at least partial functionality of the live TV application upon detecting the one or more live TV channels of the first channel set (paragraphs 646-647 for skipping the channel scan and displaying the results of the channels found at that time or a partial list of channels along with displaying the results of the channel scan), wherein the at least partial functionality of the live TV application is associated with the detected one or more live TV channels of the first channel set (paragraph 328 for having real time or live broadcasting through a satellite or terrestrial broadcast system and paragraph 121 for having a Smart TV or electronic device element 300 with a multi-functional display element 302 and a receiver). Kim does not explicitly disclose scanning associated with the first channel set and detecting the one or more live TV channels associated with the first channel set. Kunkel has methods for a video scan (abstract) and discloses scanning associated with the first channel set and detecting the one or more live TV channels associated with the first channel set (col 21, lines 40-67 for having two different scans associated with a criteria for the first channel set such as a user selection and having a second scan with a second criteria such as the user's behavior and then identifying or detecting the channels available according to the criteria with col 3; lines 40-60 for using both analog and digital signals for the tuner). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the scan criteria as taught by Kunkel in the smart TV system of Kim in order to scan for channels based on user behavior (Kunkel, col 21, lines 40-60).

Regarding Claim 20, Kim discloses wherein the selection of the first setup option dialog is made in response to detecting an input received at the intelligent TV via the input device (paragraph 370 for having a remote controller associated with the TV controller element 340 for making user selections based on the channel map and paragraph 327 for the display element 302 having a GUI to detect user actions for channel set up using a menu).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055293

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Claims 9 and 18 lack an inventive step under PCT Article 33(3) as being obvious over Kim et al, hereinafter Kim in view of Kunkel, and further in view of Blanchard et al, hereinafter Blanchard.

Regarding Claim 9 and 18, Kim teaches having the live TV application upon scanning all channel sets of the one or more channel sets associated with the live TV application (paragraph 647 for having the controller determine if the channel scan is complete). Kim and Kunkel do not explicitly teach enabling the full functionality of the live TV. Blanchard has a full scan of every frequency to find a channel (abstract) and teaches enabling the full functionality of the live TV (paragraph 26 for having the TV revert to normal operations or full function once the scan is complete and paragraphs 22-23 for scanning the TV channels and then enabling control for the TV to have normal operations). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the enabling of functionality as taught by Blanchard in the smart TV method of Kim in order to allow for quicker or immediate use of the TV set (Blanchard, paragraph 23).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	02DEC 2013
Applicant's or agent's file reference 6583-450-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/055294	International filing date *(day/month/year)* 16 August 2013
Applicant FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300
Facsimile No. 571-273-3201	Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-450-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055294	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 24A

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055294

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/39
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(8) - G06F 3/00, 15/00; G09G 5/00; H04N 5/44, 5/445, 7/16, 7/173 (2013.01)
USPC -348/553; 725/39-55, 60, 100, 105, 110, 112, 113, 135, 136

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - H04N 5/00, 7/00 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2010/0013997 A1 (HWANG) 21 January 2010 (21.01.2010) entire document	1-20
Y	US 7,493,641 B2 (Klosterman et al.) 17 february 2009 (17.02.2009) entire document	1-20
A	US 2004/0216156 A1 (Wagner) 28 October 2004 (28.10.2004) entire document	1-20
A	US 2007/0261090 A1 (Miller et al.) 08 November 2007 (08.11.2007) entire document	1-20
A	US 7,487,529 B1 (Orlick) 03 February 2009 (03.02.2009) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
07 November 2013	02 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)* 02 DEC 2013

Applicant's or agent's file reference	FOR FURTHER ACTION
6583-450-PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055294	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/39

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	07 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055294

Box No. I **Basis of this opinion**

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055294

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-20 lacks an inventive step under PCT Article 33(3) as being obvious over Hwang in view of Klosterman et al.

Regarding claim 1, Hwang disclose a method (Metadata Display Control Method and System for Broadcast Receiver, abstract), comprising:

Presenting, via a display of an intelligent television (TV), live TV content, wherein the live TV content is presented to a first portion of the display (The display unit 140 displays the video data of the broadcast program transmitted by the broadcast station, fig.1-2, para. 0033);

Receiving an electronic program guide (EPG) presentation input at the intelligent TV (Electronic Program Guide (EPG) is referred to as "Metadata", para. 0005, 0026; Interactive TV 100 receives the broadcast programs and Metadata associated with broadcast program, fig. 2, 0036); and

Determining, by a processor associated with the intelligent TV and in response to receiving the EPG presentation input, EPG information that corresponds to at least one of the presented live TV content and the EPG presentation input received (the metadata is transmitted to the mobile terminal 300 through a Bluetooth link established between the interactive TV 100 and the mobile terminal 300, para. 0036, 0037; the controller 370 monitors to detect user command input by the viewer and determines , if a user command is detected, once determined if the metadata is received, the metadata (EPG) associated with the broadcast program is displayed, fig. 6, para. 0064-0065); and

Retrieving, from at least one source, the EPG information (the control unit 160 of the interactive TV 100 receives metadata (EPG) associated broadcast programs provided by the broadcast station or broadcast service provider, fig. 1, para. 0035).

Hwang fails to specifically teach determining, by processor, an EPG presentation layout, wherein the EPG presentation layout includes at least one position associated with content of the EPG information within a live TV application panel. However, Klosterman et al. discloses a system/method for displaying an electronic program guide (Abstract) and teaches determining an EPG presentation layout, wherein the EPG presentation layout includes at least one position associated with content of the EPG information within a live TV application panel (a program guide data processor 1205 and a plug-in program guide controller module 1240 wherein the module 1240 determines the program guide 1205 capabilities by allowing user to customize the program guide layout, fig. 12, col.12, lines 65-67 and col. 13, lines 10-21; a user may evoke a preview screen within the display content where the user can view EPG information within a live TV application panel which can be referred to a hypertune, fig. 6d, col. 10, lines 1-14).

Hwang teaches that the metadata (EPG) can overlap the broadcast program displayed on screen of the interactive TV 100 (fig. 2, para. 0036), but fails to specifically teach presenting, via the display, the EPG information in the EPG presentation layout to a second portion of the display, wherein the second portion of the display is associated with the live TV application panel, and wherein the live TV application panel overlaps at least a portion of the presented live TV content. However, Klosterman et al. teaches presenting, via the display, the EPG information in the EPG presentation layout to a second portion of the display, wherein the second portion of the display is associated with the live TV application panel, and wherein the live TV application panel overlaps at least a portion of the presented live TV content (a preview window or a pop-up window that can overlap the current live program while searching or messaging the program guide via user interaction, fig. 2, col. 7, lines 62-67 and fig. 5a, col. 8, lines 42-59 and fig. 6d, col. 10, lines 1-14). Therefore, it would have been obvious to one of ordinary skill at the time of the invention to use the teaching of an Electronic Program Guide display system and method that includes a processor capable of processing the user command for EPG layout presentation and output displays overlays, picture-in-picture, and pop-up windows while responding to user commands during live content broadcast as taught by Klosterman et al. to incorporate the above EPG displaying features in the invention of Hwang in order to provide an easy and convenient way to manipulate the electronic program guide based on user command and preferences (Klosterman et al., col. 1, line 64 - col. 2, line 7).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055294

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 2, Hwang disclose the method of claim 1, wherein determining the EPG presentation layout further comprises:
Referring to rules stored in a memory, wherein the rules include one or more EPG information layout templates, wherein the one or more EPG information layout templates correspond to one or more EPG presentation inputs (storage 360 stores application programs associated with functions of the mobile terminal 300, metadata and sub-metadata from interactive TV or user data and may be divided into program region and a data region, fig. 4, para. 0048);
Matching the received EPG presentation input to one of the one or more EPG presentation inputs (user selects one of the items constituting the metadata, controller 370 transmits the information of the selected item to the interactive TV 100 and the metadata is displayed currently, when channel is switched or program ended, fig. 4, para.0050); and
Hwang fails to specifically teach determining, based on the match, a select EPG information layout template for the EPG presentation layout from the one or more EPG information layout templates. However, Klosterman et al. teaches determining, based on the match, a select EPG information layout template for the EPG presentation layout from the one or more EPG information layout templates (an electronic program guide that can have different display arrangements such as different typeface, different color, given additional space for program description or other graphic enhancements, thereby one can conclude that such preference is stored in a computer readable medium of the device 100, fig. 2, col. 6, lines 59-63; User can upgrade/change program guides based on preferences, col. 13, lines 10-25. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teaching of the use of EPG layout choices stored in memory based on user or provider as taught by Klosterman et al. to incorporate the above features in the invention of Hwang in order to allow modification and alterations to the program guide without requiring major hardware changes.

Regarding claim 3, Hwang discloses the method of claim 1, wherein the EPG information is retrieved from two or more signal sources (EPG information is retrieved from interactive TV control system includes broadcast receiver unit 110, data processing unit 115, a feedback data transmitter 120, Bluetooth unit 130, storage unit 120 and a control unit 160, Fig. 2, para, 0028).

Regarding claim 4, Hwang discloses the method of claim 1, wherein the at least one source is at least one of a local memory, a remote memory, a broadcast signal, and a memory located across a network (broadcast receiver unit 110 receives and processes the broadcast signals and transmitter 120 receives and transmits channel data via IP network, fig. 2, para. 0029 and para. 0031).

Regarding claim 5, Hwang discloses the method of claim 1, wherein at least one of EPG information and the live TV application panel is at least partially transparent, and wherein the presented live TV content is visible beneath the presented EPG information (the Bluetooth communication link established through the interactive TV 100 is disabled allowing the metadata (EPG, para. 0026) to overlap the current broadcast program displayed, fig. 1, para. 0036).

Regarding claim 6, Hwang disclose the method of claim 1, wherein the EPG presentation input is provided via an input device associated with the intelligent TV (mobile terminal 300 can communicate with interactive TV 100, the viewer may request and receive metadata from the mobile device 300, fig. 1, para. 0036 and fig. 6, para. 0064).

Regarding claim 7, Hwang disclose the method of claim 1, but fails to specifically teach wherein the EPG presentation layout is arranged to present the EPG information in a tabular format. However, Klosterman et al. teaches wherein the EPG presentation layout is arranged to present the EPG information in a tabular format (a grid format for the schedule guide display output based on an x-y axis layout, fig. 1 & fig. 3a, col. 5, lines 44-46). It would have been obvious to one of ordinary skill at the time of the invention to use the teachings of a grid format arrangement for the EPG layout displayed on the interactive TV as taught by Klosterman et al. to incorporate the above EPG presentation layout in the invention of Hwang in order to provide multiple options for viewing and selecting EPG information for user, providing an easier access to information or by providing a user a customization experience.

Regarding claim 8, Hwang disclose the method of claim 7, but fails to specifically teach wherein the tabular format is ordered by at least one of channel number and time associated with the EPG information. However, Klosterman et al. teaches wherein the tabular format is ordered by at least one of channel number and time associated with the EPG information (guide screen 200 contains cells 245 and each cell may contain channel number 32, program service name, and Program Broadcast Service name, fig. 2, col. 6, lines 46-52; an EPG layout format that includes channel name, time and additional information as it relates to the EPG information provided (fig. 4a, col. 8, lines 17-25). It would have been obvious to one of ordinary skill at the time of the invention to use the teaching of a program guide with program detail information such as time, name and channel of the program information as taught by Klosterman et al. to incorporate the above features in the invention of Hwang in order to provide user with detailed information and options for easy manipulation by user in an electronic program guide system and method.

Regarding claim 9, Hwang disclose the method of claim 8, wherein the EPG information is associated with preferred content (controller 370 detects and determines user commands and user selection command of metadata (EPG) associated with broadcast program, fig. 6, para. 0064-0066).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055294

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 10, Hwang disclose the method of claim 1, further comprising:
Determining a select-focus is associated with an EPG entry in the presented EPG information (Controller 370 determines user selection command input based on the received metadata (EPG) information, fig. 6, para. 0065-0066).
Hwang fails to specifically teach initiating a timer associated with the determined select-focus, wherein the timer includes a goal timer. However, Klosterman et al. teaches initiating a timer associated with the determined select-focus, wherein the timer includes a goal timer (a guide screen 400 having an interactive information region where the user can select a program that has a later scheduled time and may select the recording option or the auto tune option to view upcoming program or the description of the program content, fig. 4,col. 8, lines 26-41).
Hwang also fails to specifically teach presenting, upon reaching the goal time, an EPG preview window adjacent to the EPG entry associated with the select-focus, wherein the EPG preview window includes at least one of a thumbnail graphic, a description, and a time associated with the EPG entry. However, Klosterman et al. teaches presenting, upon reaching the goal time, an EPG preview window adjacent to the EPG entry associated with the select-focus, wherein the EPG preview window includes at least one of a thumbnail graphic, a description, and a time associated with the EPG entry (a guide screen 500 that has an interactive region 520 where message screen 550 displays description of the program content and may contain an icon linked to a short video preview and the preview may be in the form of picture-in-picture displaying possible information about upcoming program, fig. 5a-b, col. 8, lines 43-59). It would have been obvious to one of ordinary skill at the time of the invention to use the teachings of a timer and a preview window capable of recording or auto tuning broadcast programs along with EPG information displayed in a preview window as taught by Klosterman et al. to incorporate the above EPG features in the invention of Hwang in order to provide users with the convenience of viewing a program at a later time or to preview a program to determine the user's preference.

Regarding claim 11, Hwang discloses the method of claim 10, wherein the EPG preview window includes a preview indicator, and wherein the preview indicator is linked to the EPG entry (the Interactive TV 100 displays a query message asking whether to receive the metadata (EPG) in the form of pop-up window, for example a user selects a channel on the interactive TV 100, then a pop-up window is displayed presenting a querying message asking whether to receive metadata (EPG) associated with broadcast program on display, fig. 5, para. 0056-0057).

Regarding claim 12, Hwang disclose a tangible, non-transitory computer readable medium having instructions stored there on that, when executed by a processor (storage unit 360 stores application programs, metadata and sub metadata, fig. 3, para.0048), perform the method comprising:
Presenting, via a display of an intelligent television (TV), live TV content, wherein the live TV content is presented to a first portion of the display (The display unit 140 displays the video data of the broadcast program transmitted by the broadcast station, fig.1-2, para. 0033);
Receiving an electronic program guide (EPG) presentation input at the intelligent TV (Electronic Program Guide (EPG) is referred to as "Metadata", para. 0026; Interactive TV 100 receives the broadcast programs and Metadata associated with broadcast program, fig. 2, para. 0036); and
Determining, by a processor associated with the intelligent TV and in response to receiving the EPG presentation input, EPG information that corresponds to at least one of the presented live TV content and the EPG presentation input received (the metadata is transmitted to the mobile terminal 300 through a Bluetooth link established between the interactive TV 100 and the mobile terminal 300, para. 0036, 0037; the controller 370 monitors to detect user command input by the viewer and determines , if a user command is detected, once determined if the metadata is received, the metadata (EPG) associated with the broadcast program is displayed, fig. 6, para. 0064-0065); and
Retrieving, from at least one source, the EPG information (the control unit 160 of the interactive TV 100 receives metadata (EPG) associated broadcast programs provided by the broadcast station or broadcast service provider, fig. 1, para. 0035).
Hwang fails to specifically teach determining, by processor, an EPG presentation layout, wherein the EPG presentation layout includes at least one position associated with content of the EPG information within a live TV application panel. However, Klosterman et al. discloses a system/method for displaying an electronic program guide (Abstract) and teaches determining an EPG presentation layout, wherein the EPG presentation layout includes at least one position associated with content of the EPG information within a live TV application panel (a program guide data processor 1205 and a plug-in program guide controller module 1240 wherein the module 1240 determines the program guide 1205 capabilities by allowing user to customize the program guide layout, fig. 12, col.12, lines 65-67 and col. 13, lines 10-21; a user may evoke a preview screen within the display content where the user can view EPG information within a live TV application panel which can be referred to a hypertune, fig. 6d, col. 10, lines 1-14).
Hwang teaches that the metadata (EPG) can overlap the broadcast program displayed on screen of the interactive TV 100 (fig. 2, para. 0036), but fails to specifically teach presenting, via the display, the EPG information in the EPG presentation layout to a second portion of the display, wherein the second portion of the display is associated with the live TV application panel, and wherein the live TV application panel overlaps at least a portion of the presented live TV content. However, Klosterman et al. teaches presenting, via the display, the EPG information in the EPG presentation layout to a second portion of the display, wherein the second portion of the display is associated with the live TV application panel, and wherein the live TV application panel overlaps at least a portion of the presented live TV content (a preview window or a pop-up window that can overlap the current live program while searching or messaging the program guide via user interaction, fig. 2, col. 7, lines 62-67 and fig. 5a, col. 8, lines 42-59 and fig. 6d, col. 10, lines 1-14). Therefore, it would have been obvious to one of ordinary skill at the time of the invention to use the teaching the teaching of an Electronic Program Guide display system and method that includes a processor capable of processing the user command for EPG layout presentation and output displays overlays, picture-in-picture, and pop-up windows while responding to user commands during live content broadcast as taught by Klosterman et al. to incorporate the above EPG displaying features in the invention of Hwang in order to provide an easy and convenient way to manipulate the electronic program guide based on user command and preferences (Klosterman et al., col. 1, line 64 - col. 2, line 7).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055294

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 13, Hwang disclose the tangible, non-transitory computer readable medium of claim 12, wherein determining the EPG presentation layout further comprises:

Referring to rules stored in a memory, wherein the rules include one or more EPG information layout templates, wherein the one or more EPG information layout templates correspond to one or more EPG presentation inputs (storage 360 stores application programs associated with functions of the mobile terminal 300, metadata and sub-metadata from interactive TV or user data and may be divided into program region and a data region, fig. 4, para. 0048);

Matching the received EPG presentation input to one of the one or more EPG presentation inputs (user selects one of the items constituting the metadata, controller 370 transmits the information of the selected item to the interactive TV 100 and the metadata is displayed currently, when channel is switched or program ended, fig. 4, para.0050).

Hwang fails to specifically teach determining, based on the match, a select EPG information layout template for the EPG presentation layout from the one or more EPG information layout templates. However, Klosterman et al. teaches determining, based on the match, a select EPG information layout template for the EPG presentation layout from the one or more EPG information layout templates (an electronic program guide that can have different display arrangements such as different typeface, different color, given additional space for program description or other graphic enhancements, thereby one can conclude that such preference is stored in a computer readable medium of the device 100, fig. 2, col. 6, lines 59-63; User can upgrade/change program guides based on preferences, col. 13, lines 10-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of the use of EPG layout choices stored in memory based on user or provider as taught by Klosterman et al. to incorporate the above desired EPG features in the invention of Hwang in order to allow modification and alterations to the program guide without requiring major hardware changes.

Regarding claim 14, Hwang discloses the tangible, non-transitory computer readable medium of claim 12, wherein the EPG information is retrieved from two or more signal sources (EPG information is retrieved from interactive TV control system includes broadcast receiver unit 110, data processing unit 115, a feedback data transmitter 120, Bluetooth unit 130, storage unit 120 and a control unit 160, Fig. 2, para, 0028).

Regarding claim 15, Hwang discloses the tangible, non-transitory computer readable medium of claim 12, wherein the at least one source is at least one of a local memory, a remote memory, a broadcast signal, and a memory located across a network (broadcast receiver unit 110 receives and processes the broadcast signals and transmitter 120 receives and transmits channel data via IP network, fig. 2, para. 0029 and para. 0031).

Regarding claim 16, Hwang discloses the tangible, non-transitory computer readable medium of claim 12, wherein at least one of EPG information and the live TV application panel is at least partially transparent, and wherein the presented live TV content is visible beneath the presented EPG information (the Bluetooth communication link established through the interactive TV 100 is disabled allowing the metadata (EPG, para. 0026) to overlap the current broadcast program displayed, fig. 1, para. 0036).

Regarding claim 17, Hwang disclose the tangible, non-transitory computer readable medium of claim 12, but fails to specifically teach wherein the EPG presentation layout is arranged to present the EPG information in a tabular format. However, Klosterman et al. teaches wherein the EPG presentation layout is arranged to present the EPG information in a tabular format (a grid format for the schedule guide display output based on an x-y axis layout, fig. 1 & fig. 3a, col. 5, lines 44-46). ITherefore, it would have been obvious to one of ordinary skill at the time of the invention to combine a grid format arrangement for the EPG layout displayed on the interactive TV as taught by Klosterman et al. to incorporate the above desired EPG displaying format in the invention of Hwang in order to provide multiple options for viewing and selecting EPG information for user, providing an easier access to information or by providing a user a customization experience.

Regarding claim 18, Hwang disclose the tangible, non-transitory computer readable medium of claim 12, wherein the method further comprising:

Determining a select-focus is associated with an EPG entry in the presented EPG information (Controller 370 determines user selection command input based on the received metadata (EPG) information, fig. 6, para. 0065-0066).

Hwang fails to specifically teach initiating a timer associated with the determined select-focus, wherein the timer includes a goal timer. However, Klosterman et al. teaches initiating a timer associated with the determined select-focus, wherein the timer includes a goal timer (a guide screen 400 having an interactive information region where the user can select a program that has a later scheduled time and may select the recording option or the auto tune option to view upcoming program or the description of the program content, fig. 4,col. 8, lines 26-41).

Hwang also fails to specifically teach presenting, upon reaching the goal time, an EPG preview window adjacent to the EPG entry associated with the select-focus, wherein the EPG preview window includes at least one of a thumbnail graphic, a description, and a time associated with the EPG entry. However, Klosterman et al. teaches presenting, upon reaching the goal time, an EPG preview window adjacent to the EPG entry associated with the select-focus, wherein the EPG preview window includes at least one of a thumbnail graphic, a description, and a time associated with the EPG entry (a guide screen 500 that has an interactive region 520 where message screen 550 displays description of the program content and may contain an icon linked to a short video preview and the preview may be in the form of picture-in-picture displaying possible information about upcoming program, fig. 5a-b, col. 8, lines 43-59). Therefore, it would have been obvious to one of ordinary skill at the time of the invention to use the teachings of a timer and a preview window capable of recording or auto tuning broadcast programs along with EPG information displayed in a preview window as taught by Klosterman et al. to incorporate the above desired EPG features in the invention of Hwang in order to provide users with the convenience of viewing a program at a later time or to preview a program to determine the user's preference.

Regarding claim 19, Hwang discloses the tangible, non-transitory computer readable medium of claim 12, wherein the EPG preview window includes a preview indicator, and wherein the preview indicator is linked to the EPG entry (the Interactive TV 100 displays a query message asking whether to receive the metadata (EPG) in the form of pop-up window, for example a user selects a channel on the interactive TV 100, then a pop-up window is displayed presenting a querying message asking whether to receive metadata (EPG) associated with broadcast program on display, fig. 5, para. 0056-0057).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055294

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 20, Hwang disclose a system (Interactive TV of a metadata display control system, abstract, fig.1) comprising:
An intelligent television (TV) having a display and a tuner, wherein the tuner is configured to receive and convert broadcast content signals to be displayed by the display (Interactive TV 100 having display unit 140 and broadcast receiver unit 110 includes a tuner and demodulator which receives and converts broadcast signal to be outputted to the display unit 140, fig. 2, para. 0029-0030);
An input device associated with the intelligent TV (mobile terminal 300, fig. 1, para. 0032);
A memory (storage unit 150 and storage 360 stores application programs, metadata, sub metadata, and recorded broadcast programs fig. 2, para. 0034 and fig. 4, para. 0048); and
A microprocessor (Data processing unit 115, fig. 2, para. 0030) operable to:
Present, via a display of an intelligent television (TV), live TV content, wherein the live TV content is presented to a first portion of the display (The display unit 140 displays the video data of the broadcast program transmitted by the broadcast station, fig.1-2, para. 0033);
Receive an electronic program guide (EPG) presentation input at the intelligent TV (Electronic Program Guide (EPG) is referred to as "Metadata", para. 0005, 0026; Interactive TV 100 receives the broadcast programs and Metadata associated with broadcast program, fig. 2, para. 0036); and
Determine, in response to receiving the EPG presentation input, EPG information that corresponds to at least one of the presented live TV content and the EPG presentation input received (the metadata is transmitted to the mobile terminal 300 through a Bluetooth link established between the interactive TV 100 and the mobile terminal 300, para. 0036, 0037; the controller 370 monitors to detect user command input by the viewer and determines , if a user command is detected, once determined if the metadata is received, the metadata (EPG) associated with the broadcast program is displayed, fig. 6, para. 0064-0065); and
Retrieve, from at least one source, the EPG information (the control unit 160 of the interactive TV 100 receives metadata (EPG) associated broadcast programs provided by the broadcast station or broadcast service provider, fig. 1, para. 0035).
Hwang fails to specifically teach determine, an EPG presentation layout, wherein the EPG presentation layout includes at least one position associated with content of the EPG information within a live TV application panel. However, Klosterman et al. discloses a system/method for displaying an electronic program guide (Abstract) and teaches determine an EPG presentation layout, wherein the EPG presentation layout includes at least one position associated with content of the EPG information within a live TV application panel (a program guide data processor 1205 and a plug-in program guide controller module 1240 wherein the module 1240 determines the program guide 1205 capabilities by allowing user to customize the program guide layout, fig. 12, col.12, lines 65-67 and col. 13, lines 10-21; a user may evoke a preview screen within the display content where the user can view EPG information within a live TV application panel which can be referred to a hypertune, fig. 6d, col. 10, lines 1-14).
Hwang teaches that the metadata (EPG) can overlap the broadcast program displayed on screen of the interactive TV 100 (fig. 2, para. 0036), but fails to specifically teach present, via the display, the EPG information in the EPG presentation layout to a second portion of the display, wherein the second portion of the display is associated with the live TV application panel, and wherein the live TV application panel overlaps at least a portion of the presented live TV content. However, Klosterman et al. teaches resent, via the display, the EPG information in the EPG presentation layout to a second portion of the display, wherein the second portion of the display is associated with the live TV application panel, and wherein the live TV application panel overlaps at least a portion of the presented live TV content (a preview window or a pop-up window that can overlap the current live program while searching or messaging the program guide via user interaction, fig. 2, col. 7, lines 62-67 and fig. 5a, col. 8, lines 42-59 and fig. 6d, col. 10, lines 1-14). Therefore, it would have been obvious to one of ordinary skill at the time of the invention to use the teaching of an Electronic Program Guide display system and method that includes a processor capable of processing the user command for EPG layout presentation and output displays overlays, picture-in-picture, and pop-up windows while responding to user commands during live content broadcast as taught by Klosterman et al. to incorporate the above EPG displaying features in the invention of Hwang in order to provide an easy and convenient way to manipulate the electronic program guide based on user command and preferences (Klosterman et al., col. 1, line 64 - col. 2, line 7).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	29 NOV 2013
Applicant's or agent's file reference: 6583-451-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US2013/055296	International filing date *(day/month/year)*: 16 August 2013
Applicant: FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-451-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055296	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 21

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT PCT/US2013/055296 29.11.2013

International application No.
PCT/US2013/055296

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/39
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(8) - H04N 5/445, 7/173 (2013.01)
USPC - 348/E5.104, E5.105, E5.112; 725/39, 40, 43, 44, 47

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - H04N 5/45, 5/44543, 21/47, 21/482, 21/4316, 21/4626 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0067376 A1 (MARTIN et al) 06 June 2002 (06.06.2002) entire document	1-20
A	US 2001/0056577 A1 (GORDON et al) 27 December 2001 (27.12.2001) entire document	1-20
A	US 2011/0145860 A1 (WEI) 16 June 2011 (16.06.2011) entire document	1-20
A	US 8,220,021 B1 (LOOK et al) 10 July 2012 (10.07.2012) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
14 November 2013	29 NOV 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	29 NOV 2013
Applicant's or agent's file reference 6583-451-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055296	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/39

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	14 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055296

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055296

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	None	YES
	Claims	1-20	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-20 lack novelty under PCT Article 33(2) as being anticipated by Martin et al. hereinafter referred to as Martin.
Regarding Claim 1, Martin discloses a method, comprising: presenting, via a display of an intelligent television (TV) (Para. [0005] regarding systems and methods described herein relate to a portal for simultaneously viewing video channels, launching interactive applications, and/or interfacing with locally or remotely stored content), live TV broadcast content (Fig. 7A regarding talkshow video 700; Para. [0088] regarding A given page may display a composite program consisting entirely of live video cells, a composite program containing some live video combined with locally displayed content), wherein the live TV broadcast content is presented to a first portion of the display (Fig. 7A regarding talkshow video 700 over the entire display); receiving an informational input at the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); determining, by a processor associated with the intelligent TV and in response to receiving the informational input, live TV informational content that corresponds to at least one of the presented live TV broadcast content and the informational input received (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject); retrieving, from at least one source, the live TV informational content (Para. [0035] regarding multiplexer 1040 handles audio and video data received from a number of parallel sources and interacts with transmitter 1080 to broadcast the information along a number of channels. In addition to audio and video data, messages, applications); and presenting, via the display, the live TV informational content to a second portion of the display (Fig. 7A regarding info content 704, 706, 708 within semitransparent bar 702; Fig. 7B regarding info cell 710, overlay 712), wherein the second portion of the display is associated with a live TV application panel (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject), and wherein the live TV application panel overlaps at least a portion of the presented live TV broadcast content (Para. [0122] regarding a semi-transparent bar 702 across the bottom of the screen that includes an information icon... the text may be in a semi-transparent background overlaid in the upper left corner of screen 700).

Regarding Claim 2, Martin discloses the method of claim 1, and further discloses wherein determining the live TV informational content further comprises: referring to rules stored in a memory (Para. [0049] regarding STB 1140 includes a central processor 220 including associated memory elements and adapted to receive input data from...remote; Para. [0051] regarding The memory of STB 1140 may include EEPROM, host RAM, flash memory for software and data), wherein the rules include one or more informational content fields mapped to at least one live TV broadcast content type (Para. [0051] regarding The memory of STB 1140 may include EEPROM, host RAM, flash memory for software and data; Para. [0052] regarding Graphics processor 252 is preferably designed to generate a screen display combining moving images together with overlaid text or other images. More specifically, graphics processor 252 can combine four layers; Para. [0122] regarding a new overlay 712 is displayed with details on the selected subject); comparing a live TV broadcast content type associated with the presented live TV broadcast content with the one or more mapped informational content fields (Para. [0052] regarding central processor 220 and combines this information with information received from video decoder 248 to generate the screen display; Para. [0122] regarding a new overlay 712 is displayed with details on the selected subject); determining select informational content fields from the one or more mapped informational content fields (Para. [0122] regarding a new overlay 712 is displayed with details on the selected subject), wherein the select informational content fields are associated with the live TV broadcast content type associated with the presented live TV broadcast content (Para. [0122] regarding If the highlights icon 706 is selected, a composite video is shown with the talk show video in a window 730 positioned at the upper right corner of the screen and a highlight clip looping in a main window 732); and including the select informational content fields in the live TV informational content for retrieval (Para. [0122] regarding each entry in the information cell 710 can be highlighted using directional keys on remote control 230. When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed).

Regarding Claim 3, Martin discloses the method of claim 1, and further discloses wherein the live TV informational content is retrieved from two or more signal sources (Para. [0035] regarding multiplexer 1040 handles audio and video data received from a number of parallel sources and interacts with transmitter 1080 to broadcast the information along a number of channels. In addition to audio and video data, messages, applications (software programs), CD-quality audio data or any other type of digital data may be introduced into some or all of these channels intermixed).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055296

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 4, Martin discloses the method of claim 1, and further discloses wherein the at least one source is at least one of a local memory, a remote memory, a broadcast signal, and a memory located across a network (Para. [0035] regarding multiplexer 1040 handles audio and video data received from a number of parallel sources and interacts with transmitter 1080 to broadcast the information along a number of channels. In addition to audio and video data, messages, applications (software programs), CD-quality audio data or any other type of digital data may be introduced into some or all of these channels intermixed; Para. [0050] regarding STB 1140 also includes a tuner 242 and demodulator 244).

Regarding Claim 5, Martin discloses the method of claim 1, and further discloses wherein at least one of the live TV informational content and the live TV application panel is at least partially transparent, and wherein the presented live TV broadcast content is visible beneath the presented live TV informational content (Para. [0122] regarding a semi-transparent bar 702 across the bottom of the screen that includes an information icon 704... the text may be in a semi-transparent background overlaid in the upper left comer of screen 700).

Regarding Claim 6, Martin discloses the method of claim 1, and further discloses wherein a size of the first portion is maintained upon presenting the live TV informational content via the second portion of the display (Fig. 7A to Fig. 7B, wherein talkshow video 700 remains the same size while info 704, 706, 708, window 710, overlay 712 are displayed).

Regarding Claim 7, Martin discloses the method of claim 1, and further discloses wherein the informational input is provided via an input device associated with the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed).

Regarding Claim 8, Martin discloses the method of claim 1, and further discloses wherein the presented live TV broadcast content includes at least one of a movie, a TV program, a sport event, a TV special, and a radio program (Fig. 7A regarding talkshow video 700).

Regarding Claim 9, Martin discloses the method of claim 8, and further discloses wherein the presented live TV informational content includes at least one of a program description, a channel identifier, a thumbnail graphic, an electronic program guide (EPG), and preference information (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject; Para. [0055] regarding program guide applications).

Regarding Claim 10, Martin discloses a tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (Para. [0051] regarding The memory of STB 1140 may include EEPROM, host RAM, flash memory for software and data), perform the method comprising: presenting, via a display of an intelligent television (TV) (Para. [0005] regarding systems and methods described herein relate to a portal for simultaneously viewing video channels, launching interactive applications, and/or interfacing with locally or remotely stored content), live TV broadcast content (Fig. 7A regarding talkshow video 700; Para. [0088] regarding A given page may display a composite program consisting entirely of live video cells, a composite program containing some live video combined with locally displayed content), wherein the live TV broadcast content is presented to a first portion of the display (Fig. 7A regarding talkshow video 700 over the entire display); receiving an informational input at the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); determining, by a processor associated with the intelligent TV and in response to receiving the informational input, live TV informational content that corresponds to at least one of the presented live TV broadcast content and the informational input received (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject); retrieving, from at least one source, the live TV informational content (Para. [0035] regarding multiplexer 1040 handles audio and video data received from a number of parallel sources and interacts with transmitter 1080 to broadcast the information along a number of channels. In addition to audio and video data, messages, applications); and presenting, via the display, the live TV informational content to a second portion of the display (Fig. 7A regarding info content 704, 706, 708 within semitransparent bar 702; Fig. 7B regarding info cell 710, overlay 712), wherein the second portion of the display is associated with a live TV application panel (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject), and wherein the live TV application panel overlaps at least a portion of the presented live TV broadcast content (Para. [0122] regarding a semi-transparent bar 702 across the bottom of the screen that includes an information icon... the text may be in a semi-transparent background overlaid in the upper left comer of screen 700).

Regarding Claim 11, Martin discloses a tangible, non-transitory computer readable medium of claim 10, wherein determining the live TV informational content of the method further comprises: referring to rules stored in a memory (Para. [0049] regarding STB 1140 includes a central processor 220 including associated memory elements and adapted to receive input data from...remote; Para. [0051] regarding The memory of STB 1140 may include EEPROM, host RAM, flash memory for software and data), wherein the rules include one or more informational content fields mapped to at least one live TV broadcast content type (Para. [0051] regarding The memory of STB 1140 may include EEPROM, host RAM, flash memory for software and data; Para. [0052] regarding Graphics processor 252 is preferably designed to generate a screen display combining moving images together with overlaid text or other images. More specifically, graphics processor 252 can combine four layers; Para. [0122] regarding a new overlay 712 is displayed with details on the selected subject); comparing a live TV broadcast content type associated with the presented live TV broadcast content with the one or more mapped informational content fields (Para. [0052] regarding central processor 220 and combines this information with information received from video decoder 248 to generate the screen display; Para. [0122] regarding a new overlay 712 is displayed with details on the selected subject); determining select informational content fields from the one or more mapped informational content fields (Para. [0122] regarding a new overlay 712 is displayed with details on the selected subject), wherein the select informational content fields are associated with the live TV broadcast content type associated with the presented live TV broadcast content (Para. [0122] regarding If the highlights icon 706 is selected, a composite video is shown with the talk show video in a window 730 positioned at the upper right corner of the screen and a highlight clip looping in a main window 732); and including the select informational content fields in the live TV informational content for retrieval (Para. [0122] regarding each entry in the information cell 710 can be highlighted using directional keys on remote control 230. When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US2013/055296

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 12, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein the live TV informational content is retrieved from two or more signal sources (Para. [0035] regarding multiplexer 1040 handles audio and video data received from a number of parallel sources and interacts with transmitter 1080 to broadcast the information along a number of channels. In addition to audio and video data, messages, applications (software programs), CD-quality audio data or any other type of digital data may be introduced into some or all of these channels intermixed).

Regarding Claim 13, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein the at least one source is at least one of a local memory, a remote memory, a broadcast signal, and a memory located across a network (Para. [0035] regarding multiplexer 1040 handles audio and video data received from a number of parallel sources and interacts with transmitter 1080 to broadcast the information along a number of channels. In addition to audio and video data, messages, applications (software programs), CD-quality audio data or any other type of digital data may be introduced into some or all of these channels intermixed; Para. [0050] regarding STB 1140 also includes a tuner 242 and demodulator 244).

Regarding Claim 14, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein at least one of the live TV informational content and the live TV application panel is at least partially transparent, and wherein the presented live TV broadcast content is visible beneath the presented live TV informational content (Para. [0122] regarding a semi-transparent bar 702 across the bottom of the screen that includes an information icon 704... the text may be in a semi-transparent background overlaid in the upper left comer of screen 700).

Regarding Claim 15, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein a size of the first portion is maintained upon presenting the live TV informational content via the second portion of the display (Fig. 7A to Fig. 7B, wherein talkshow video 700 remains the same size while info 704, 706, 708, window 710, overlay 712 are displayed).

Regarding Claim 16, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein the informational input is provided via an input device associated with the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed).

Regarding Claim 17, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein the presented live TV broadcast content includes at least one of a movie, a TV program, a sport event, a TV special, and a radio program (Fig. 7A regarding talkshow video 700).

Regarding Claim 18, Martin discloses the tangible, non-transitory computer readable medium of claim 17, and further discloses wherein the presented live TV informational content includes at least one of a program description, a channel identifier, a thumbnail graphic, an electronic program guide (EPG), and preference information (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject; Para. [0055] regarding program guide applications).

Regarding Claim 19, Martin discloses a system, comprising: an intelligent television (TV) having a display (Para. [0005] regarding systems and methods described herein relate to a portal for simultaneously viewing video channels, launching interactive applications, and/or interfacing with locally or remotely stored content) and a tuner (Para. [0050] regarding STB 1140 also includes a tuner 24), wherein the tuner is configured to receive and convert broadcast content signals to be displayed by the display (Para. [0050] regarding STB 1140 also includes a tuner 242 and demodulator 244 (e.g., a 256 QAM demodulator) to receive and demodulate the received transmissions which are then filtered and demultiplexed by unit 240); an input device associated with the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); a memory (Para. [0049] regarding STB 1140 includes a central processor 220 including associated memory elements); and a microprocessor (Para. [0049] regarding STB 1140 includes a central processor 220 including associated memory elements and adapted to receive input data from...remote) operable to: present, via the display, live TV broadcast content (Para. [0117] regarding a live event broadcast on at least one channel into the data stream of at least one other channel), wherein the live TV broadcast content is presented to a first portion of the display (Fig. 7A regarding talkshow video 700); receive an informational input at the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); determine, in response to receiving the informational input, live TV informational content that corresponds to at least one of the presented live TV broadcast content and the informational input received (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject); retrieve, from at least one source, the live TV informational content (Para. [0035] regarding multiplexer 1040 handles audio and video data received from a number of parallel sources and interacts with transmitter 1080 to broadcast the information along a number of channels. In addition to audio and video data, messages, applications); and present, via the display, the live TV informational content to a second portion of the display (Fig. 7A regarding info content 704, 706, 708 within semitransparent bar 702; Fig. 7B regarding info cell 710, overlay 712), wherein the second portion of the display is associated with a live TV application panel (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject), and wherein the live TV application panel overlaps at least a portion of the presented live TV broadcast content (Para. [0122] regarding a semi-transparent bar 702 across the bottom of the screen that includes an information icon... the text may be in a semi-transparent background overlaid in the upper left comer of screen 700).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055296

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 20, Martin discloses the system of claim 19, and further discloses wherein determining the live TV informational content further comprises: referring to rules stored in the memory (Para. [0049] regarding STB 1140 includes a central processor 220 including associated memory elements and adapted to receive input data from...remote; Para. [0051] regarding The memory of STB 1140 may include EEPROM, host RAM, flash memory for software and data), wherein the rules include one or more informational content fields mapped to at least one live TV broadcast content type (Para. [0051] regarding The memory of STB 1140 may include EEPROM, host RAM, flash memory for software and data; Para. [0052] regarding Graphics processor 252 is preferably designed to generate a screen display combining moving images together with overlaid text or other images. More specifically, graphics processor 252 can combine four layers; Para. [0122] regarding a new overlay 712 is displayed with details on the selected subject); comparing a live TV broadcast content type associated with the presented live TV broadcast content with the one or more mapped informational content fields (Para. [0052] regarding central processor 220 and combines this information with information received from video decoder 248 to generate the screen display; Para. [0122] regarding a new overlay 712 is displayed with details on the selected subject); determining select informational content fields from the one or more mapped informational content fields (Para. [0122] regarding a new overlay 712 is displayed with details on the selected subject), wherein the select informational content fields are associated with the live TV broadcast content type associated with the presented live TV broadcast content (Para. [0122] regarding If the highlights icon 706 is selected, a composite video is shown with the talk show video in a window 730 positioned at the upper right corner of the screen and a highlight clip looping in a main window 732); and including the select informational content fields in the live TV informational content for retrieval (Para. [0122] regarding each entry in the information cell 710 can be highlighted using directional keys on remote control 230. When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus industrial applicability has been met because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Kendria E. Pearson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	07 NOV 2013
Applicant's or agent's file reference: 6583-452-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US13/55493	International filing date *(day/month/year)*: 18 August 2013 (18.08.2013)
Applicant: Flextronics AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-452-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55493	International filing date *(day/month/year)* 18 August 2013 (18.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 23B

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55493

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/00, 13/00; H04N 5/445, 7/14 (2013.01)
USPC - 725/037, 39; 348/14.07
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(8):G06T 15/00; G06F 3/00, 13/00; H04N 5/445, 7/14 (2013.01); USPC: 345/419; 725/037, 39; 348/14.03, 14.07

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPro (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; Google Scholar; intelligent, tv, television, smart, panel, display, detect, location, transparent, opaque, overlay, background, menu, guide

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5,539,479 A (BERTRAM, R) July 23, 1996, column 2, lines 38-40, column 33, lines 28-33, column 37, lines 52-66, column 38, lines 45-49, column 37, line 66 through column 38, line 2	1-20
A	US 6,661,468 B2 (ALTEN, J et al.) December 9, 2003, entire document	1, 9, 18

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
30 October 2013 (30.10.2013)	07 NOV 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Kendria E. Pearson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	07 NOV 2013
Applicant's or agent's file reference 6583-452-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55493	18 August 2013 (18.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/00, 13/00; H04N 5/445, 7/14 (2013.01)
USPC - 725/037, 39; 348/14.07

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to th IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	30 October 2013 (30.10.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55493

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55493

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1-20	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-20 lack novelty under PCT Article 33(2) as being anticipated by US 5,539,479 A Bertram.

As to claim 1, Bertram discloses a method, comprising: presenting, via a display of an intelligent television (TV) (set top devices used as accessories to television receivers may be incorporated directly into which are here called intelligent television receivers, column 33, lines 29-33), live TV broadcast content, wherein the live TV broadcast content is presented to a first portion of the display (the video stream images is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices, Figure 17, column 41, lines 34-39); receiving an application panel input at the intelligent TV, wherein the application panel input corresponds to at least one of a categories input, a favorites input, and a search input (When viewed channels or signal sources are thus constructed into a list, the list may be named such as "Fri Night" for favorite programs (favorites input) viewed that evening or "Kids" for programming specifically selected by or for children (categories input) and saved in system memory, Figure 17, column 41, lines 42-47); determining, by a processor associated with the intelligent TV and in response to receiving the application panel input, live TV application panel content that corresponds to a live TV application and the application panel input received (a processor controlling the video display to execute a control program formulated in a particularly concise language and controlling the display of menus and the like. Menus are displayed as overlays onto a live motion video image, Abstract); retrieving, from at least one source, the live TV application panel content (the display controller modifies displayed visual images by displaying over a portion of a live video images a menu display from which the human observer may select further modifications, FIGS. 13 through 15 column 40, lines 64-67); and presenting; via the display, the live TV application panel content to a second portion of the display, wherein the second portion of the display is associated with a live TV application panel, and wherein the live TV application panel overlaps at least a portion of the presented live TV broadcast content (the video stream images (live TV) is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices (TV application panel), Figure 17, column 41, lines 34-39).

As to claim 2, Bertram discloses the method of claim 1, wherein determining the live TV application panel content further comprises: referring to rules stored in a memory (the CPU may access control programs stored, for example, in the set top device system memory 45 so as to be accessible to the processor, for controlling the display of visual images by said video display device, column 8, lines 34-39), wherein the rules include one or more application panel content fields mapped to at least one live TV application panel content type (a human observer may cause a processor controlling the video display to execute a control program formulated in a particularly concise language (rules) and controlling the display of menus (TV application panel), Abstract); comparing a live TV application panel content type associated with the presented live TV broadcast content with the one or more mapped application panel content fields (a processor controlling the video display to execute a control program formulated in a particularly concise language and controlling the display of menus and the like. Menus are displayed as overlays onto a live motion video image, Abstract); determining select application panel content fields from the one or more mapped application panel content fields (The application begins by displaying Card1. The title of the Card is "Menu 1" and the selectable items are "Weather" (Selection A) and "Sports" (Selection B). If "Weather" is selected, it creates Card2, since this is the action in the "Selection A" line. Card2 is a flow card which immediately displays Card3 since the condition "1=-1" is true, column 37, line 52 through column 38, line 2); and including the select application panel content fields in the live TV application panel content for retrieval (selecting "Menu" (select application panel) will take an observer to the screen of FIG. 17, where the video stream images is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices, column 41, lines 33-38).

As to claim 3, Bertram discloses the method of claim 1, wherein the live TV application panel content is retrieved from two or more signal sources (the video stream images (source 1) is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices (source 2), column 41, lines 33-38).

As to claim 4, Bertram discloses the method of claim 1, wherein the at least one source is at least one of a local memory, a remote memory, a broadcast signal, and a memory located across a network (The television receiver may be one configured to receive broadcast signals of NTSC or PAL standards, column 4, lines 62-64).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55493

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Box V: Citations and Explanations-***-

As to claim 5, Bertram discloses the method of claim 1, wherein at least one of the live TV application panel content and the live TV application panel is at least partially transparent, and wherein the presented live TV broadcast content is visible beneath the presented live TV application panel content (a user may cause a first level of menu to appear in overlay over the video stream and where the comparator may also be used to provide a pixel plane effect, to give transparent colors (partially transparent), column 37, lines 61-62 and column 19, lines 43-46).

As to claim 6, Bertram discloses the method of claim 1, wherein a size of the first portion is maintained upon presenting the live TV application panel content via the second portion of the display (a major portion (size) of the available field is occupied by the video stream image the image of a weather map, partially obscured in FIGS. 14 and 15 by the overlain menus and informational text while a minor portion (size) is occupied by the displayed menu(s), Figure 13, column 41, lines 1-5).

As to claim 7, Bertram discloses the method of claim 1, wherein the presented live TV broadcast content includes at least one of a movie, a TV program, a sport event, a TV special, and a radio program (The application begins by displaying Card1. The title of the Card is "Menu 1" and the selectable items are "Weather" Selection A and "Sports" Selection B, Figures 17 and 18, column 37, lines 62-66).

As to claim 8, Bertram discloses the method of claim 7, wherein the presented live TV application panel content includes at least one of a category, a channel identifier, a thumbnail graphic, an electronic program guide (EPG), a favorite, and a search term (the remote control functions enables use of the embodied icons (thumbnail graphic) such as the iconic representations of "channel up" or "channel down" (channel identifier) found in remote control functionality for navigation among programming choices. However, by selecting "List" or "Menu", other services may be accessed, Figures 17 and 18, column 41, lines 27-33).

As to claim 9, Bertram discloses a tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (the CPU may access control programs stored, for example, in the set top device system memory 45 so as to be accessible to the processor, for controlling the display of visual images by said video display device, column 8, lines 34-39), perform the method comprising: presenting, via a display of an intelligent television (TV) (set top devices used as accessories to television receivers may be incorporated directly into which are here called intelligent television receivers, column 33, lines 29-33), live TV broadcast content, wherein the live TV broadcast content is presented to a first portion of the display (the video stream images is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices, Figure 17, column 41, lines 34-39); receiving an application panel input at the intelligent TV, wherein the application panel input corresponds to at least one of a categories input, a favorites input, and a search input (When viewed channels or signal sources are thus constructed into a list, the list may be named such as "Fri Night" for favorite programs (favorites input) viewed that evening or "Kids" for programming specifically selected by or for children (categories input) and saved in system memory, Figure 17, column 41, lines 42-47); determining, by a processor associated with the intelligent TV and in response to receiving the application panel input, live TV application panel content that corresponds to a live TV application and the application panel input received (a processor controlling the video display to execute a control program formulated in a particularly concise language and controlling the display of menus and the like. Menus are displayed as overlays onto a live motion video image, Abstract); retrieving, from at least one source, the live TV application panel content (the display controller modifies displayed visual images by displaying over a portion of a live video images a menu display from which the human observer may select further modifications, FIGS. 13 through 15 column 40, lines 64-67); and presenting, via the display, the live TV application panel content to a second portion of the display, wherein the second portion of the display is associated with a live TV application panel, and wherein the live TV application panel overlaps at least a portion of the presented live TV broadcast content (the video stream images (live TV) is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices (TV application panel), Figure 17, column 41, lines 34-39).

As to claim 10, Bertram discloses the tangible, non-transitory computer readable medium of claim 9, wherein determining the live TV application panel content of the method further comprises: referring to rules stored in a memory (the CPU may access control programs stored, for example, in the set top device system memory 45 so as to be accessible to the processor, for controlling the display of visual images by said video display device, column 8, lines 34-39), wherein the rules include one or more application panel content fields mapped to at least one live TV application panel content type (a human observer may cause a processor controlling the video display to execute a control program formulated in a particularly concise language (rules) and controlling the display of menus (TV application panel), Abstract); comparing a live TV application panel content type associated with the presented live TV broadcast content with the one or more mapped application panel content fields (a processor controlling the video display to execute a control program formulated in a particularly concise language and controlling the display of menus and the like. Menus are displayed as overlays onto a live motion video image, Abstract); determining select application panel content fields from the one or more mapped application panel content fields (The application begins by displaying Card1. The title of the Card is "Menu 1" and the selectable items are "Weather" (Selection A) and "Sports" (Selection B). If "Weather" is selected, it creates Card2, since this is the action in the "Selection A" line. Card2 is a flow card which immediately displays Card3 since the condition "1=-1" is true, column 37, line 52 through column 38, line 2); and including the select application panel content fields in the live TV application panel content for retrieval (selecting "Menu" (select application panel) will take an observer to the screen of FIG. 17, where the video stream images is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices, column 41, lines 33-38).

As to claim 11, Bertram discloses the tangible, non-transitory computer readable medium of claim 9, wherein the live TV application panel content is retrieved from two or more signal sources (the video stream images (source 1) is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices (source 2), column 41, lines 33-38).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55493

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

-***-Continued from Previous Supplemental Box-***-

As to claim 12, Bertram discloses the tangible, non-transitory computer readable medium of claim 9, wherein the at least one source is at least one of a local memory, a remote memory, a broadcast signal, and a memory located across a network (The television receiver may be one configured to receive broadcast signals of NTSC or PAL standards, column 4, lines 62-64).

As to claim 13, Bertram discloses the tangible, non-transitory computer readable medium of claim 9, wherein at least one of the live TV application panel content and the live TV application panel is at least partially transparent, and wherein the presented live TV broadcast content is visible beneath the presented live TV application panel content (a user may cause a first level of menu to appear in overlay over the video stream and where the comparator may also be used to provide a pixel plane effect, to give transparent colors (partially transparent), column 37, lines 61-62 and column 19, lines 43-46).

As to claim 14, Bertram discloses the tangible, non-transitory computer readable medium of claim 9, wherein a size of the first portion is maintained upon presenting the live TV application panel content via the second portion of the display (a major portion (size) of the available field is occupied by the video stream image the image of a weather map, partially obscured in FIGS. 14 and 15 by the overlain menus and informational text while a minor portion (size) is occupied by the displayed menu(s), Figure 13, column 41, lines 1-5).

As to claim 15, Bertram discloses the tangible, non-transitory computer readable medium of claim 9, wherein the application panel input is provided via an input device associated with the intelligent TV information (the remote control functions enables use of the embodied icons such as the iconic representations of "channel up" or "channel down" found in remote control functionality for navigation among programming choices, Figures 17 and 18, column 41, lines 27-33).

As to claim 16, Bertram discloses the tangible, non-transitory computer readable medium of claim 9, wherein the presented live TV broadcast content includes at least one of a movie, a TV program, a sport event, a TV special, and a radio program (The application begins by displaying Card1. The title of the Card is "Menu 1" and the selectable items are "Weather" Selection A and "Sports" Selection B, Figures 17 and 18, column 37, lines 62-66).

As to claim 17, Bertram discloses the tangible, non-transitory computer readable medium of claim 16, wherein the presented live TV application panel content includes at least one of a program description, a channel identifier, a thumbnail graphic, an electronic program guide (EPG), and preference information (the remote control functions enables use of the embodied icons (thumbnail graphic) such as the iconic representations of "channel up" or "channel down" (channel identifier) found in remote control functionality for navigation among programming choices. However, by selecting "List" or "Menu", other services may be accessed, Figures 17 and 18, column 41, lines 27-33).

As to claim 18, Bertram discloses a system, comprising: an intelligent television (TV) having a display and a tuner, wherein the tuner is configured to receive and convert broadcast content signals to be displayed by the display (set top boxes which may be in the form of cable tuner systems, column 4 lines 28-34); an input device associated with the intelligent TV (set top devices used as accessories to television receivers may be incorporated directly into which are here called intelligent television receivers, column 33, lines 29-33); a memory (the processor 39 is operatively connected with system memory 45, column 6, lines 58-59); and a microprocessor operable to (a microprocessor 48 functioning as a central processing unit or CPU, column 6, lines 59-60): present, via a display of an intelligent television (TV) (set top devices used as accessories to television receivers may be incorporated directly into which are here called intelligent television receivers, column 33, lines 29-33), live TV broadcast content, wherein the live TV broadcast content is presented to a first portion of the display (the video stream images is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices, Figure 17, column 41, lines 34-39); receive an application panel input at the intelligent TV, wherein the application panel input corresponds to at least one of a categories input, a favorites input, and a search input (When viewed channels or signal sources are thus constructed into a list, the list may be named such as "Fri Night" for favorite programs (favorites input) viewed that evening or "Kids" for programming specifically selected by or for children (categories input) and saved in system memory, Figure 17, column 41, lines 42-47); determine, by a processor associated with the intelligent TV and in response to receiving the application panel input, live TV application panel content that corresponds to a live TV application and the application panel input received (a processor controlling the video display to execute a control program formulated in a particularly concise language and controlling the display of menus and the like. Menus are displayed as overlays onto a live motion video image, Abstract); retrieve, from at least one source, the live TV application panel content (the display controller modifies displayed visual images by displaying over a portion of a live video images a menu display from which the human observer may select further modifications, FIGS. 13 through 15 column 40, lines 64-67); and present, via the display, the live TV application panel content to a second portion of the display, wherein the second portion of the display is associated with a live TV application panel, and wherein the live TV application panel overlaps at least a portion of the presented live TV broadcast content (the video stream images (live TV) is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices (TV application panel), Figure 17, column 41, lines 34-39).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55493

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

-***-Continued from Previous Supplemental Box-***-

As to claim 19, Bertram discloses the system of claim 18, wherein the microprocessor is further operable to: refer to rules stored in a memory (the CPU may access control programs stored, for example, in the set top device system memory 45 so as to be accessible to the processor, for controlling the display of visual images by said video display device, column 8, lines 34-39), wherein the rules include one or more application panel content fields mapped to at least one live TV application panel content type (a human observer may cause a processor controlling the video display to execute a control program formulated in a particularly concise language (rules) and controlling the display of menus (TV application panel), Abstract); compare a live TV application panel content type associated with the presented live TV broadcast content with the one or more mapped application panel content fields (a processor controlling the video display to execute a control program formulated in a particularly concise language and controlling the display of menus and the like. Menus are displayed as overlays onto a live motion video image, Abstract); determine select application panel content fields from the one or more mapped application panel content fields (The application begins by displaying Card1. The title of the Card is "Menu 1" and the selectable items are "Weather" (Selection A) and "Sports" (Selection B). If "Weather" is selected, it creates Card2, since this is the action in the "Selection A" line. Card2 is a flow card which immediately displays Card3 since the condition "1=-1" is true, column 37, line 52 through column 38, line 2); and include the select application panel content fields in the live TV application panel content for retrieval (selecting "Menu" (select application panel) will take an observer to the screen of FIG. 17, where the video stream images is displayed in a minor portion of the available screen area (the upper right hand corner) almost as if it were a so-called "picture in picture", with the remainder of the viewing field being occupied by listing of available choices, column 41, lines 33-38).

As to claim 20, Bertram discloses the system of claim 18, wherein at least one of the live TV application panel content and the live TV application panel is at least partially transparent, and wherein the presented live TV broadcast content is visible beneath the presented live TV application panel content (a user may cause a first level of menu to appear in overlay over the video stream and where the comparator may also be used to provide a pixel plane effect, to give transparent colors (partially transparent), column 37, lines 61-62 and column 19, lines 43-46).

Claims 1-20 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-453-PCT	Date of mailing *(day/month/year)* 28 JUN 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/036828	International filing date *(day/month/year)* 16 April 2013
Applicant FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-453-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/036828	International filing date *(day/month/year)* 16 April 2013	(Earliest) Priority Date *(day/month/year)* 14 June 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 23

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/036828

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 7/173 (2013.01)
USPC - 725/24
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(8) - H04N 5/92, 5/445, 7/173 (2013.01)
USPC - 725/24, 40, 60

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC: H04N 5/44543, 21/4532, 21/44222 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0078745 A1 (MACRAE et al) 31 March 2011 (31.03.2011) entire document	1-24
Y	US 2003/0182659 A1 (ELLIS et al) 25 September 2003 (25.09.2003) entire document	1-24
Y	US 2012/0144423 A1 (KIM et al) 07 June 2012 (07.06.2012) entire document	11 and 13
A	US 2008/0086745 A1 (KNUDSON et al) 10 April 2008 (10.04.2008) entire document	1-24

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
05 June 2013	28 JUN 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	28 JUN 2013
Applicant's or agent's file reference 6583-453-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/036828	16 April 2013	14 June 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 7/173 (2013.01)
USPC - 725/34

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	05 June 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/036828

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/036828

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-24	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-24	NO
Industrial applicability (IA)	Claims	1-24	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-10, 12, and 14-24 lack an inventive step under PCT Article 33(3) as being obvious over Macrae et al, hereinafter Macrae in view of Ellis et al, hereinafter Ellis.

Regarding Claim 1, Macrae teaches a method for navigating through channels on a television (paragraph 29 for the user using a television channel guide and selecting a program to watch with figure 1A element 10 for an electronic program guide), comprising: receiving a first directional input via an input device associated with the television (paragraph 29 for using a remote control or user input device associated with the television and paragraph 33 for moving through the guide using arrows or a first directional input on arrow keys elements 28 and 30 for going up and down through the guide); determining, based on a first direction associated with the first directional input (paragraph 33 for moving the cursor on the guide using arrow keys elements 28 and 30 to highlight one of the nine program on the guide in the first vertical direction both upward and downwards), a display of at least one channel information card via the television (paragraph 35 for selecting the information key on the remote control to display an information box or channel information card for the given program and paragraph 36 for means to customize the location and size of the information on the screen); retrieving, from a memory, a first image that is representative of broadcast content playing on a first channel (figure 1A element 14 for having a grid guide with a first image of the stored freeze frame image, paragraph 58 for having the microprocessor having storing means to capture an image of Channel A or means to store an image and downloading the image or retrieving the image to access a website, with paragraph 78 for showing logos and graphics associated with channels), wherein the first image is retrieved from the memory in the absence of tuning to the first channel (paragraph 36 for having an advertisement or image for a future program as a virtual ad from RAM or memory for a channel, therefore not tuning to the future program but showing an image to the user see the advertisement for the future program and paragraph 78 for having a pointer associated with the logo and graphics to an episode of a show in a database); displaying, via the television, the first image on a first channel information card (paragraph 59 for using the first image on the first channel A as part of an interactive television display and figure 1A element 14 for a first advertisement card with information for other channels with paragraph 78 for the advertisement have episode and airtime information for a channel or show along with logo or first image information); receiving a second directional input via the input device (paragraph 33 for moving the cursor on the guide using arrow keys elements 32 and 34 to highlight one of the nine program on the guide in the horizontal direction or a second direction); determining, based on a second direction associated with the second directional input (paragraph 29 for using a remote control input device and paragraph 33 for using the arrows or directional input to move the guide cursor in a horizontal direction to view future programs), a second channel information card to display via the television (figure 1A element 16 for having a second image location for putting information on the electronic guide element 10 with paragraph 58 for means to retrieve a stored image of a live broadcast to display in the ad location element 16), wherein the second channel information card includes a second image that is representative of broadcast content playing on a second channel (figure 1A element 16 for having means to display a second stored image on the guide display with paragraph 36 for the image having information on future programs and paragraph 79 for using graphic logos along with the channel program information), and wherein the second image is retrieved from the memory in the absence of tuning to the second channel (paragraph 59 for storing the freeze frame image in RAM and using it as part of an interactive display anytime the microprocessor is triggered, paragraph 78 for having graphics and logo information in a database therefore accessing without having to tune to a channel such as accessing the NBC logo); and displaying, via the television, the second image on the second channel information card (figure 1A element 16 for displaying location for the second stored image and paragraph 36 for watching the selected program). Macrae does not explicitly teach a presentation layout for each of the channel information cards. Ellis has an electronic program schedule system with product ordering capability which includes a data processor for receiving program schedule information for a plurality of programs (abstract) and teaches a presentation layout for each of the channel information cards (figure 11 for a presentation display for an individual channel card with an image and channel information and paragraph 127 for having a multiple window or split screen operation for browsing channels and images or previews of channels with paragraph 218 for scrolling through different movies and formats or using directional movement to select channels). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the layout as taught by Ellis in the media method of Macrae in order to simultaneously display multiple broadcast programs on a single screen (Ellis, paragraph 127).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 2, Macrae teaches detecting a selection input (paragraph 29 for using a remote control as a selection input device), wherein the selection input is at least one of a timed response to a channel navigation condition and an active selection provided via the input device, and wherein the selection input corresponds to a selection of a channel associated with a displayed channel information card (paragraph 33 for selecting a channel by highlighting the channel using the cursor and the arrows to locate the desired program with the active channel shown in the PIP window figure 1A element 12); and tuning, in response to detecting the selection input (paragraph 29 for using the remote control to select a channel to view or to tune to using the selection input of the remote control with paragraph 37 for using the guide system to tune to a desired channel), the television to receive and display live broadcast content of the channel associated with the selected channel information card (paragraph 29 for pressing the select button on the remote control to watch a program in full screen mode).

Regarding Claim 3, Macrae teaches wherein the memory is associated with an electronic programming guide (EPG) (figure 1A element 10 for an electronic programming guide with channels element 52).

Regarding Claim 4, Macrae teaches wherein the first image is an enlarged thumbnail graphic retrieved from an EPG (figure 1A element 14 for the first image is a enlarged thumbnail graphic on the left side of the screen in the middle section under the picture in picture of the current program and above the second thumbnail image with paragraph 24 for having the positions and sizes of the elements of the guide on the screen being customizable).

Regarding Claim 5, Macrae teaches wherein the memory is associated with the television, and wherein the first image is configured to indicate at least one of (paragraph 58 for taking an image shot of Channel A or a first image and storing the image by capturing the video frame) an availability of broadcast content preview, an availability of broadcast content, and an availability of a broadcast signal associated with the first channel (paragraph 59 for taking the stored image in RAM and using it as part of an interactive screen display for selecting or purchasing a product; figure 1A element 16 for having means to display a second stored image on the guide display with paragraph 36 for the image having information on future programs).

Regarding Claim 6, Macrae teaches wherein the directional input is an upward directional input or a downward directional input (paragraph 33 for having a remote control to move the cursor in an upward direction element 30 or a downward direction element 32 using arrows on the remote control device), wherein the upward directional input has an upward direction, and the downward directional input has a downward direction (paragraph 33 for having a remote control to move the cursor in an upward direction element 30 or a downward direction element 32 using arrows on the remote control device covering both upward and downward directions).

Regarding Claim 7, Macrae teaches wherein the presentation layout is arranged to display a single channel information card via the television (paragraph 24 for showing an information box or information card for the single highlighted channel as shown in figure 1A for the highlighted single channel show prime time live highlighted with the cursor element 36 with the information card element 24).

Regarding Claim 8, Macrae teaches wherein the second directional input has an upward direction (paragraph 33 for having a remote control to move the cursor in an upward direction element 30 using arrows on the remote control device), and wherein the upward direction moves the first channel information card upwardly out of a selection focus area of the television while (figure 1A element 52 for a grid tile on the electronic guide element 10 for having the selected channels in the focus area with the highlighted channel element 36 along with the associated information card element 24). Macrae does not explicitly teach simultaneously moving the second channel information card upwardly into the selection focus area of the television. Ellis has an electronic program schedule system with product ordering capability which includes a data processor for receiving program schedule information for a plurality of programs (abstract) and teaches simultaneously moving the second channel information card upwardly into the selection focus area of the television (paragraph 127 for having a multiple window or split screen operation for browsing channels and images or previews of channels simultaneously using a browse feature or directional moving of information). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the layout as taught by Ellis in the media method of Macrae in order to simultaneously display multiple broadcast programs on a single screen (Ellis, paragraph 127).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 9, Macrae teaches wherein the second directional input has a downward direction (paragraph 33 for having a remote control to move the cursor in a downward direction element 32 using arrows on the remote control device), and wherein the downward direction moves the first channel information card downwardly out of a selection focus area of the television (figure 1A element 52 for a grid tile on the electronic guide element 10 for having the selected channels in the focus area with the highlighted channel element 36 along with the associated information card element 24). Macrae does not explicitly teach while simultaneously moving the second channel information card downwardly into the selection focus area of the television. Ellis has an electronic program schedule system with product ordering capability which includes a data processor for receiving program schedule information for a plurality of programs (abstract) and teaches while simultaneously moving the second channel information card downwardly into the selection focus area of the television (paragraph 127 for having a multiple window or split screen operation for browsing channels and images or previews of channels simultaneously using a browse feature or directional moving of information). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the layout as taught by Ellis in the media method of Macrae in order to simultaneously display multiple broadcast programs on a single screen (Ellis, paragraph 127).

Regarding Claim 10, Macrae teaches wherein the first and second directional inputs are provided via a channel up/down button of an input device (paragraph 33 for having a remote control to move the cursor in an upward direction element 30 or a downward direction element 32 using arrows on the remote control device).

Regarding Claim 12, Macrae teaches wherein the second channel information card determined to display via the television is selected from a first group of channel numbers (figure 1A element 16 for displaying a second channel information card with a second advertisement with paragraph 40 for using a specialized guide for sports or a first group of channels associated with sports information).

Regarding Claim 14, Macrae teaches wherein the directional input is a leftward directional input or a rightward directional input (paragraph 33 for having a remote control with left and right arrows for input to highlight channel titles on the grid television guide), wherein the leftward directional input has a leftward direction (paragraph 33 for going in the left horizontal direction element 34), and the rightward directional input has a rightward direction (paragraph 33 for going in the right horizontal directions element 32).

Regarding Claim 15, Macrae teaches wherein the presentation layout is arranged to display a plurality of channel information cards that are overlaid on content playing via the television (paragraph 24 for having all the information elements of the screen of the television display being customizable with information card element 24 and two additional image locations elements 14, and 16 and paragraph 49 for the programming guide being translucent and overlaid on screen).

Regarding Claim 16, Macrae teaches, wherein the second directional input has a leftward direction (paragraph 33 for having a remote control with left and right arrows for input to highlight channel titles on the grid television guide), and wherein the leftward direction moves a selection focus area associated with the first channel information card to the second channel information card (paragraph 33 for having arrows for moving the information left and right using elements 32 and 34), where the second channel information card is arranged on the left of the first channel information card (paragraph 33 for using the right and left arrow keys for moving horizontally around the guide grid with means to view the future listings for the highlighted channels).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 17, Macrae teaches a tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (paragraph 40 for having and interactive guide giving the user information on specialized channels and linking to external websites and storing information in a RAM or having instructions stored on a processor), perform the method comprising: receiving a first directional input via an input device associated with a television (paragraph 29 for using a remote control or user input device associated with the television and paragraph 33 for moving through the guide using arrows or a first directional input on arrow keys elements 28 and 30 for going up and down through the guide); determining, based on a first direction associated with the first directional input (paragraph 33 for moving the cursor on the guide using arrow keys elements 28 and 30 to highlight one of the nine program on the guide in the first vertical direction both upward and downwards), a display for at least one channel information card via the television (paragraph 35 for selecting the information key on the remote control to display an information box or channel information card for the given program and paragraph 36 for means to customize the location and size of the information on the screen); retrieving, from a memory, a first image that is representative of broadcast content playing on a first channel (figure 1A element 14 for having a grid guide with a first image of the stored freeze frame image, paragraph 58 for having the microprocessor having storing means to capture an image of Channel A or means to store an image and downloading the image or retrieving the image to access a website, with paragraph 78 for showing logos and graphics associated with channels), wherein the first image is retrieved from the memory in the absence of tuning to the first channel (figure 1A element 14 for having a grid guide with a first image of the stored freeze frame image, paragraph 58 for having the microprocessor having storing means to capture an image of Channel A or means to store an image and downloading the image or retrieving the image to access a website, with paragraph 78 for showing logos and graphics associated with channels); displaying, via the television, the first image on a first channel information (paragraph 59 for using the first image on the first channel A as part of an interactive television display and figure 1A element 14 for a first advertisement card with information for other channels with paragraph 78 for the advertisement have episode and airtime information for a channel or show along with logo or first image information); receiving a second directional input via the input device (paragraph 33 for moving the cursor on the guide using arrow keys elements 32 and 34 to highlight one of the nine program on the guide in the horizontal direction or a second direction); determining, based on a second direction associated with the second directional input (paragraph 29 for using a remote control input device and paragraph 33 for using the arrows or directional input to move the guide cursor in a horizontal direction to view future programs), a second channel information card to display via the television (figure 1A element 16 for having a second image location for putting information on the electronic guide element 10 with paragraph 58 for means to retrieve a stored image of a live broadcast to display in the ad location element 16), wherein the second channel information card includes a second image that is representative of broadcast content playing on a second channel (figure 1A element 16 for having means to display a second stored image on the guide display with paragraph 36 for the image having information on future programs and paragraph 79 for using graphic logos along with the channel program information), and wherein the second image is retrieved from the memory in the absence of tuning to the second channel (paragraph 59 for storing the freeze frame image in RAM and using it as part of an interactive display anytime the microprocessor is triggered, paragraph 78 for having graphics and logo information in a database therefore accessing without having to tune to a channel such as accessing the NBC logo); and displaying, via the television, the second image on the second channel information card (figure 1A element 16 for displaying location for the second stored image and paragraph 36 for watching the selected program). Macrae does not explicitly teach a presentation layout for each of the channel information cards. Ellis has an electronic program schedule system with product ordering capability which includes a data processor for receiving program schedule information for a plurality of programs (abstract) and teaches a presentation layout for each of the channel information cards (figure 11 for a presentation display for an individual channel card with an image and channel information and paragraph 127 for having a multiple window or split screen operation for browsing channels and images or previews of channels with paragraph 218 for scrolling through different movies and formats or using directional movement to select channels). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the layout as taught by Ellis in the media method of Macrae in order to simultaneously display multiple broadcast programs on a single screen (Ellis, paragraph 127).

Regarding Claim 18, Macrae wherein the method further comprises: detecting a selection input (paragraph 29 for using a remote control as a selection input device), wherein the selection input is at least one of a timed response to a channel navigation condition and an active selection provided via the input device, and wherein the selection input corresponds to a selection of a channel associated with a displayed channel information card (paragraph 33 for selecting a channel by highlighting the channel using the cursor and the arrows to locate the desired program with the active channel shown in the PIP window figure 1A element 12); and tuning, in response to detecting the selection input, the television to receive and display live broadcast content of the channel associated with the selected channel information card (paragraph 29 for pressing the select button on the remote control to watch a program in full screen mode).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 19, Macrae teaches wherein the first image is an enlarged thumbnail graphic retrieved from an EPG (figure 1A element 10 for an electronic programming guide with channels element 52).

Regarding Claim 20, Macrae teaches wherein the memory is associated with the television (paragraph 78 for having a database or memory means for storing images such as logos in the IPG database with the IPG associated with the television), and wherein the first image is configured to indicate at least one of an availability of broadcast content preview, an availability of broadcast content, and an availability of a broadcast signal associated with the first channel (paragraph 78 for having a logo or graphics or first image that represents an episode of a program or the availability of a broadcast with content information such as the network, episode, and title; figure 1A element 16 for having means to display a second stored image on the guide display with paragraph 36 for the image having information on future programs).

Regarding Claim 21, Macrae teaches wherein the directional input is an upward directional input or a downward directional input (paragraph 33 for having a remote control to move the cursor in an upward direction element 30 or a downward direction element 32 using arrows on the remote control device), wherein the upward directional input has an upward direction, and the downward directional input has a downward direction (paragraph 33 for having a remote control to move the cursor in an upward direction element 30 or a downward direction element 32 using arrows on the remote control device covering both upward and downward directions).

Regarding Claim 22, Macrae teaches wherein the second directional input has an upward direction (paragraph 33 for having a remote control to move the cursor in an upward direction element 30 or a downward direction element 32 using arrows on the remote control device), and wherein the upward direction moves the first channel information card upwardly out of a selection focus area of the television (figure 1A element 52 for a grid tile on the electronic guide element 10 for having the selected channels in the focus area with the highlighted channel element 36 along with the associated information card element 24 and paragraph). Macrae does not explicitly teach while simultaneously moving the second channel information card upwardly into the selection focus area of the television. Ellis has an electronic program schedule system with product ordering capability which includes a data processor for receiving program schedule information for a plurality of programs (abstract) and teaches while simultaneously moving the second channel information card upwardly into the selection focus area of the television (paragraph 127 for having a multiple window or split screen operation for browsing channels and images or previews of channels simultaneously using a browse feature or directional moving of information). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the layout as taught by Ellis in the media method of Macrae in order to simultaneously display multiple broadcast programs on a single screen (Ellis, paragraph 127).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claim 23, Macrae discloses a system for navigating through broadcast content channels (paragraph 29 for the user using a television channel guide and selecting a program to watch with figure 1A element 10 for an electronic program guide), comprising: a television having a display and a tuner (figure 1A element 10 for a television displayer showing a TV program in the window in element 12, and paragraph 28 for having a tuner for the TV with the last channel displayed in the PIP window), wherein the tuner is configured to receive and convert broadcast content signals to be displayed by the display (paragraph 28 for using the Tuner to display a television program or the last program watched in the PIP window of the guide and showing the currently telecast channel); an input device associated with the television (paragraph 29 for using a remote control device with a guide button to display the guide on the television); a memory (paragraph 40 for having and interactive guide giving the user information on specialized channels and linking to external websites and storing information in a RAM or having instructions stored on a processor); and a microprocessor operable to: receive a first directional input via the input device associated with the television (paragraph 29 for using a remote control or user input device associated with the television and paragraph 33 for moving through the guide using arrows or a first directional input on arrow keys elements 28 and 30 for going up and down through the guide); determine, based on a first direction associated with the first directional input (paragraph 33 for moving the cursor on the guide using arrow keys elements 28 and 30 to highlight one of the nine program on the guide in the first vertical direction both upward and downwards), a display for at least one channel information card via the display of the television (paragraph 35 for selecting the information key on the remote control to display an information box or channel information card for the given program and paragraph 36 for means to customize the location and size of the information on the screen); retrieve, from the memory, a first image that is representative of broadcast content playing on a first channel (figure 1A element 14 for having a grid guide with a first image of the stored freeze frame image, paragraph 58 for having the microprocessor having storing means to capture an image of Channel A or means to store an image and downloading the image or retrieving the image to access a website, with paragraph 78 for showing logos and graphics associated with channels), wherein the first image is retrieved from the memory in the absence of tuning to the first channel (figure 1A element 14 for having a grid guide with a first image of the stored freeze frame image, paragraph 58 for having the microprocessor having storing means to capture an image of Channel A or means to store an image and downloading the image or retrieving the image to access a website, with paragraph 78 for showing logos and graphics associated with channels); display, via the display of the television, the first image on a first channel information card (paragraph 59 for using the first image on the first channel A as part of an interactive television display and figure 1A element 14 for a first advertisement card with information for other channels with paragraph 78 for the advertisement have episode and airtime information for a channel or show along with logo or first image information); receive a second directional input via the input device (paragraph 33 for moving the cursor on the guide using arrow keys elements 32 and 34 to highlight one of the nine program on the guide in the horizontal direction or a second direction); determine, based on a second direction associated with the second directional input (paragraph 29 for using a remote control input device and paragraph 33 for using the arrows or directional input to move the guide cursor in a horizontal direction to view future programs), a second channel information card to display via the television (figure 1A element 16 for having a second image location for putting information on the electronic guide element 10 with paragraph 58 for means to retrieve a stored image of a live broadcast to display in the ad location element 16), wherein the second channel information card includes a second image that is representative of broadcast content playing on a second channel (figure 1A element 16 for having means to display a second stored image on the guide display with paragraph 36 for the image having information on future programs and paragraph 79 for using graphic logos along with the channel program information), and wherein the second image is retrieved from the memory in the absence of tuning to the second channel (paragraph 59 for storing the freeze frame image in RAM and using it as part of an interactive display anytime the microprocessor is triggered, paragraph 78 for having graphics and logo information in a database therefore accessing without having to tune to a channel such as accessing the NBC logo); and display, via the display of the television, the second image on the second channel information card (figure 1A element 16 for displaying location for the second stored image and paragraph 36 for watching the selected program). Macrae does not explicitly disclose a presentation layout for each of the channel information cards. Ellis has an electronic program schedule system with product ordering capability which includes a data processor for receiving program schedule information for a plurality of programs (abstract) and discloses a presentation layout for each of the channel information cards (figure 11 for a presentation display for an individual channel card with an image and channel information and paragraph 127 for having a multiple window or split screen operation for browsing channels and images or previews of channels with paragraph 218 for scrolling through different movies and formats or using directional movement to select channels). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the layout as taught by Ellis in the media system of Macrae in order to simultaneously display multiple broadcast programs on a single screen (Ellis, paragraph 127).

Regarding Claim 24, Macrae discloses wherein the input device includes at least one of a channel up button, a channel down button, a directional pad having an up, down, left, and right buttons, and wherein each of the buttons is configured to provide a directional input to the television (paragraph 33 for having a remote control or input device with four buttons including the up and down buttons 28 and 30, as well as the left and right horizontal buttons element 32 and 34).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Claims 11 and 13 lack an inventive step under PCT Article 33(3) as being obvious over Macrae in view of Ellis, and further in view of Kim et al, hereinafter Kim.

Regarding Claim 11, Macrae and Ellis teach the method as shown above. Macrae and Ellis do not explicitly teach wherein the first and second directional inputs are provided via a directional pad of an input device. Kim has a method for controlling display of information (abstract) and discloses wherein the first and second directional inputs are provided via a directional pad of an input device (paragraph 305 for using a directional keypad with the remote controller). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the input pad as taught by Kim in the media system of Macrae in order to remotely control the display device (Kim, paragraph 305).

Regarding Claim 13, Macrae teaches wherein the second channel information card determined to display via the television (figure 1A element 16 for displaying a second channel information card with a second advertisement) is selected from a second group of channel numbers (paragraph 51 for displaying a channel or program from a second group of channels that are selected based on the user profile and giving the user the option to watch or record the channel), and wherein the second group of channel numbers is associated with at least one stored user preference (paragraph 51 for determining a group of channels associated with the user's profile or stored preferences).

Claims 1-24 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: TADD F. WILSON
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	10 FEB 2014
Applicant's or agent's file reference: 6583-454-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US2013/055340	International filing date *(day/month/year)*: 16 August 2013
Applicant: FLEXTRONICS AP, LLC	

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

Filing of amendments and statement under Article 19:
The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-454-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055340	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 4 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☒ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

International application No.
PCT/US2013/055340

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
see extra sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-3

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT PCT/US2013/055340 10.02.2014

International application No.
PCT/US2013/055340

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 7/173 (2014.01)
USPC - 725/27
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(8) - G06F 3/00; H04N 7/16, 173 (2014.01)
USPC - 715/ 709, 738, 760; 725/27

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G06F 3/00; H04N 7/16, 173 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2006/0262116 A1 (MOSHIRI et al) 23 November 2006 (23.11.2006) entire document	1, 3 ---- 2
Y	US 2012/0210370 A1 (KIM et al) 16 August 2012 (16.08.2012) entire document	2
A	US 2011/0289419 A1 (YU et al) 24 November 2011 (24.11.2011) entire document	1-3
A	US 2012/0200574 A1 (HILL et al) 09 August 2012 (09.08.2012) entire document	1-3
A	WO 99/21308 (MUGURA et al) 29 April 1999 (29.04.1999) entire document	1-3
A	WO 2011/163481 A2 (ROUADY et al) 29 December 2011 (29.12.2011) entire document	1-3

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
28 January 2014	10 FEB 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

International application No.
PCT/US2013/055340

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-3, drawn to a method of automatically determining a live television source for scanning channels.
Group II, claims 4-6, 13-15, drawn to a method of storing user received media content according to a user defined organization criteria.
Group III, claims 7-9, drawn to a method of using electronic programming guide (EPG) information to present information on content listings.
Group IV, claims 10-12, drawn to a method of searching content in the television.

The inventions listed as Groups I, II, III or IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: automatically determining a live television source for scanning channels and providing a list of the scanned channels as claimed therein is not present in the invention of Groups II, III or IV. The special technical feature of the Group II invention: storing user received media content according to a user defined organization criteria and presenting to the user the stored media as claimed therein is not present in the invention of Groups I, III or IV. The special technical feature of the Group III invention: receiving electronic programming guide (EPG) information including a content listing including information about two or more items of content, receiving a user-defined attribute and storing the attribute with the EPG information in the content listing as claimed therein is not present in the invention of Groups I, II or IV. The special technical feature of the Group IV invention: receiving a search query for content that contains two or more terms, returning a result, parsing the terms, and storing the query and result as claimed therein is not present in the invention of Groups I, II or III.

Groups I, II, III and IV lack unity of invention because even though the inventions of these groups require the technical feature of a method/system/computer readable medium for storing instruction to manage data associated with an intelligent television, store social media data and content in a memory and provide a user interface on the intelligent television, this technical feature is not a special technical feature as it does not make a contribution over the prior art in view of US 2012/0210370 A1 (KIM et al) 16 August 2012 (16.08.2012).

US 2012/0210370 A1 to KIM et al. disclose a method/system/computer readable medium for storing instruction to manage data associated with an intelligent television (abstract, para 121, 124-125), store social media data and content in a memory (para 123, 132-133) and provide a user interface on the intelligent television (para 121, 340).

Since none of the special technical features of the Group I, II, III or IV inventions are found in more than one of the inventions, unity of invention is lacking.

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: TADD F. WILSON
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	10 FEB 2014
Applicant's or agent's file reference 6583-454-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055340	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 7/173 (2014.01)
USPC - 725/27

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	28 January 2014	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055340

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055340

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the appicable time limit:

   ☐ paid additional fees

   ☐ paid additional fees under protest and, where applicable, the protest fee

   ☐ paid additional fees under protest but the applicable protest fee was not paid

   ☒ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

   ☐ complied with

   ☒ not complied with for the following reasons:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-3, drawn to a method of automatically determining a live television source for scanning channels.
Group II, claims 4-6, 13-15, drawn to a method of storing user received media content according to a user defined organization criteria.
Group III, claims 7-9, drawn to a method of using electronic programming guide (EPG) information to present information on content listings.
Group IV, claims 10-12, drawn to a method of searching content in the television.

The inventions listed as Groups I, II, III or IV do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: automatically determining a live television source for scanning channels and providing a list of the scanned channels as claimed therein is not present in the invention of Groups II, III or IV. The special technical feature of the Group II invention: storing user received media content according to a user defined organization criteria and presenting to the user the stored media as claimed therein is not present in the invention of Groups I, III or IV. The special technical feature of the Group III invention: receiving electronic programming guide (EPG) information including a content listing including information about two or more items of content, receiving a user-defined attribute and storing the attribute with the EPG information in the content listing as claimed therein is not present in the invention of Groups I, II or IV. The special technical feature of the Group IV invention: receiving a search query for content that contains two or more terms, returning a result, parsing the terms, and storing the query and result as claimed therein is not present in the invention of Groups I, II or III.

Groups I, II, III and IV lack unity of invention because even though the inventions of these groups require the technical feature of a method/system/computer readable medium for storing instruction to manage data associated with an intelligent television, store social media data and content in a memory and provide a user interface on the intelligent television, this technical feature is not a special technical feature as it does not make a contribution over the prior art in view of US 2012/0210370 A1 (KIM et al) 16 August 2012 (16.08.2012).

US 2012/0210370 A1 to KIM et al. disclose a method/system/computer readable medium for storing instruction to manage data associated with an intelligent television (abstract, para 121, 124-125), store social media data and content in a memory (para 123, 132-133) and provide a user interface on the intelligent television (para 121, 340).

Since none of the special technical features of the Group I, II, III or IV inventions are found in more than one of the inventions, unity of invention is lacking.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

   ☐ all parts

   ☒ the parts relating to claims Nos. 1-3

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055340

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	2	YES
	Claims	1, 3	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-3	NO
Industrial applicability (IA)	Claims	1-3	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1, 3, lack novelty under PCT Article 33(2) as being anticipated by Moshiri et al., hereinafter referred to as Moshiri.

Regarding claims 1, 3, Moshiri discloses a method for managing data associated with an intelligent television, the method comprising [claim 1] (the fig.4 shows a method wherein the left most object 400 to be shortcut button to the home view screen and the object 406 is the Live TV button, upon selecting the 400 object the user interface immediately displays the home view shown in fig.3b, the fig.3b shows a GUI screen is a home view that refer to a currently displayed set of UI objects seen on a television 320, and displays applications 322 [intelligent television], "Live Tv", "Guide", "On Demand", "Photos", "Recorded" selectable by the user, abstract, para 0033-0035, 0048):
a computer readable medium having stored thereon processor executable instructions that cause a computing system to execute a method, the instructions comprising [claim 3] (the system includes a processor for executing sequences of instructions contained in a memory device, causes the processor to execute, para 0050):
automatically determining a live television source (the fig.4 shows the left most object 400 to be shortcut button to the home view screen and the object 406 is the Live TV button, upon selecting the 400 object the user interface immediately displays the home view shown in fig.3b, the fig.3b shows a GUI screen is a home view that refer to a currently displayed set of UI objects seen on a television 320, and displays applications 322, "Live Tv" [live television source], "Guide" [live television source], "On Demand", "Photos", "Recorded" selectable by the user [upon the user selects the home view tab which presents the user with the buttons "Live Tv" and "Guide" along with other contents, these buttons provide the user with access to live television content this requires/means the determination of live tv source "live tv" interpreted as automatically determining a live television source], para 0033-0035, 0041, 0048);
automatically scanning for one or more live television channels in the live television source (when the user selects the "guide" application of the fig.3b, it results in displaying an electronic program guide of fig.10, the EPG on the television screen provides a list of live TV channels to view [upon the selecting of the guide application the user is presented with live television channels this is interpreted as automatically scanning for one or more live television channels], para 0048; fig.4 shows the object 406 displayed which is a Live TV button, upon actuating the object 406 it results in the user interface to immediately display live TV UI view [immediately displaying a live TV channel feed requires/means the determination of and automatically scanning for a live television channel/feed] that enables a user to quickly view television programs, the live TV UI view/feed 700 is shown in fig.7, with a channel section overlay 800 of fig.8 presented which is used to change channels, para 0041);
and providing a list of the live television channels (when the user selects the "guide" application of the fig.3b, it results in displaying an electronic program guide of fig.10, on the television screen and provides a list of live TV channels to view, para 0048).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055340

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Claim 2 lacks an inventive step under PCT Article 33(3) as being obvious over Moshiri in view of Kim et al., hereinafter referred to as Kim.

Regarding claim 2, Moshiri discloses an intelligent television system comprising (fig.3b shows a system which includes a GUI screen is a home view that refer to a currently displayed set of UI objects seen on a television 320, and displays applications 322 [intelligent television], "Live Tv", "Guide", "On Demand", "Photos", "Recorded" selectable by the user, abstract, para 0033-0035, 0048):
a memory and a processor in communication with the memory, the processor operable to: execute a live television source plug-in operable to (the system includes a processor for executing sequences of instructions contained in a memory device, causes the processor to execute, para 0050; when the user selects the "guide" application of the fig.3b, it results in displaying an electronic program guide of fig.10, on the television screen and provides a list of live TV channels to view [execute a live television source plug-in], para 0048):
automatically determine a live television source (the fig.4 shows the left most object 400 to be shortcut button to the home view screen and the object 406 is the Live TV button, upon selecting the 400 object the user interface immediately displays [automatically determining] the home view shown in fig.3b, the fig.3b shows a GUI screen is a home view that refer to a currently displayed set of UI objects seen on a television 320, and displays applications 322, "Live Tv" [live television source], "Guide" [live television source], "On Demand", "Photos", "Recorded" selectable by the user, para 0033-0035, 0048); automatically scan for one or more live television channels in the live television source (fig.4 shows the object 406 displayed which is a Live TV button, upon actuating the object 406 it results in the user interface to immediately display live TV UI view that enables a user to quickly view television programs, the live TV UI view/feed 700 is shown in fig.7 [automatically scanning a live television channel], with a channel section overlay 800 of fig.8 presented which is used to change channels, para 0041; when the user selects the "guide" application of the fig.3b, it results in displaying an electronic program guide of fig.10, on the television screen and provides a list of live TV channels to view [automatically scanning for one or more live television channels], para 0048);
and execute a user interface application in communication with the live television source plug-in, the user interface application operable to provide a list of the live television channels (fig.4 shows the object/applications 406 displayed which is a Live TV button, upon actuating the object 406 it results in the user interface to immediately display live TV UI view that enables a user to quickly view live television programs, the live TV UI view/feed 700 is shown in fig.7 [actuating the Live Tv icon 406 provides the users with live television channels, the application 406 is interpreted as a live television source plug-in with reference to the Applicant's Specs para 316, 317], with a channel section overlay 800 of fig.8 presented which is used to change channels, para 0041; when the user selects the "guide" application of the fig.3b, it results in displaying an electronic program guide [a user interface] of fig.10, on the television screen and provides a list of live TV channels to view [execute a user interface in communication with a live television source plug-in], para 0048), but lacks the teaching of a memory operable to store social media data.
Kim is in the field of a multi-functional display having a channel scan interface accessing the social network service of individuals (abstract) and teaches a memory operable to store social media data (figs.1 & 3 shows that the electronic device 300 functions as a first broadcasts receiver 100, which is a television, and further includes a storage unit 345, para 0131, 0149, 150; a Social network service (SNS) provides online social network among different users for media sharing and fig.85 shows the GUI 8500 includes a list of SNS sites 8511 to 8519 previously stored in the storage unit 345 [store social media data], para 0123, 0626; a storage unit is configured to store SNS account assigned to at least one channel number, para 0132, 0883). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Kim to incorporate a memory operable to store social media data into the invention of Moshiri. The motivation would have been to provide the users with an optimized integration of social network service with television channels (see Kim para 0133).

Claims 1-3 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Kendria E. Pearson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-463-PCT	Date of mailing *(day/month/year)* 06 DEC 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/55551	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)
Applicant Flextronics AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-463-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55551	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 15B

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55551

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445 (2013.01)
USPC - 348/564
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(8): G06F 3/048; H04N 5/445, 5/50 (2013.01)
USPC: 348/564, 569; 715/854

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); Google/Google Scholar; IEEE; DialogPRO; intelligent, television, TV, smart, interactive, high-definition, HDTV, first, portion, screen, second, menu, table, list, user, interface, UI, none, overlap, non-overlap, split, divide, display, content, separate

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012/0174039 A1 (RHOADS J et al.) July 5, 2012, paragraphs [0028]-[0035], [0053], [0056]	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
12 November 2013 (12.11.2013)	06 DEC 2013

Name and mailing address of the ISA/US	Authorized officer:
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Kendria E. Pearson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	06 DEC 2013
Applicant's or agent's file reference 6583-463-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55551	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445 (2013.01)
USPC - 348/564

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to th IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	12 November 2013 (12.11.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55551

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55551

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1-20	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-20 lack novelty under PCT Article 33(2) as being anticipated by US 2012/0174039 A1 to Rhoads et al. (hereinafter 'Rhoads').

As per claim 1, Rhoads discloses a method, comprising: presenting a first content via a display of an intelligent television (TV) (content provided to HDTV (intelligent television) or 3D display TV, paragraph [0053]), wherein the first content is presented to a first portion and a second portion of the display (different type of contents are displayed on the HDTV screen and are presented as different regions such a first region 102 and a second region 126, figure 1 and paragraphs [0028]-[0035]); receiving a menu input at the intelligent TV (the HDTV receives a menu option as an input, paragraphs [0028] and [0053]), wherein the menu input corresponds to a user interface (a menu option corresponding to a user interface, paragraph [0028]); determining, by a processor associated with the intelligent TV and in response to receiving the menu input, menu content that corresponds to at least one of the first content and menu input received (a microprocessor is a cause of interaction between a menu on the HDTV and the user interface, paragraphs [0028], [0049] and [0053]); retrieving, from at least one source, the menu content (accessing media content source, paragraph [0056]); and presenting, via the display, the menu content to the second portion of the display (presenting menu content on a second region 126, paragraph [0035]), wherein the second portion of the display is associated with a menu (the second region 126 displays menu, paragraphs [0028] and [0035]), wherein the first content is shifted such that the first content is presented to the first portion of the display (the first region 102 is isolated or stands alone which contain a unique menu, paragraphs [0028]-[0035]), and wherein the first portion and the second portion of the display do not substantially overlap (the first region 102 and the second region 126 are separated, paragraphs [0028]-[0035]).

As per claim 9, Rhoads discloses a tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (a memory stores instructions executed by a processor, paragraphs [0049] and [0051]), perform the method comprising: presenting a first content via a display of an intelligent television (TV) (content provided to HDTV (intelligent television) or 3D display TV, paragraph [0053]), wherein the first content is presented to a first portion and a second portion of the display (different type of contents are displayed on the HDTV screen and are presented as different regions such a first region 102 and a second region 126, figure 1 and paragraphs [0028]-[0035]); receiving a menu input at the intelligent TV (the HDTV receives a menu option as an input, paragraphs [0028] and [0053]), wherein the menu input corresponds to a user interface (a menu option corresponding to a user interface, paragraph [0028]); determining, by a processor associated with the intelligent TV and in response to receiving the menu input, menu content that corresponds to at least one of the first content and menu input received (a microprocessor is a cause of interaction between a menu on the HDTV and the user interface, paragraphs [0028], [0049] and [0053]); retrieving, from at least one source, the menu content (accessing media content source, paragraph [0056]); and presenting, via the display, the menu content to the second portion of the display (presenting menu content on a second region 126, paragraph [0035]), wherein the second portion of the display is associated with a menu (the second region 126 displays menu, paragraphs [0028] and [0035]), wherein the first content is shifted such that the first content is presented to the first portion of the display (the first region 102 is isolated or stands alone which contain a unique menu, paragraphs [0028]-[0035]), and wherein the first portion and the second portion of the display do not substantially overlap (the first region 102 and the second region 126 are separated, paragraphs [0028]-[0035]).

As per claim 18, Rhoads discloses a system (a system, paragraphs [0023] and [0024]), comprising: an intelligent television (TV) having a display and a tuner (a HDTV having a tuner and a display, paragraphs [0052], [0053] and [0067]), wherein the tuner is configured to receive and convert broadcast content signals to be displayed by the display (a tuner receive analog signals and convert analog signals to digital signals for displaying, paragraphs [0052] and [0067]); an input device associated with the intelligent TV (an input device 310 associated with a display 312, paragraph [0053]); a memory (a memory, paragraphs [0049] and [0051]); and a microprocessor operable to: present a first content via a display of an intelligent television (TV) (a microprocessor provided content to HDTV (intelligent television) or 3D display TV, paragraphs [0049] and [0053]), wherein the first content is presented to a first portion and a second portion of the display (different type of contents are displayed on the HDTV screen and are presented as different regions such a first region 102 and a second region 126, figure 1 and paragraphs [0028]-[0035]); receive a menu input at the intelligent TV (the HDTV receives a menu option as an input, paragraphs [0028] and [0053]), wherein the menu input corresponds to a user interface (a menu option corresponding to a user interface, paragraph [0028]); determine, by a processor associated with the intelligent TV and in response to receiving the menu input, menu content that corresponds to at least one of the first content and menu input received (a microprocessor is a cause of interaction between a menu on the HDTV and the user interface, paragraphs [0028], [0049] and [0053]); retrieve, from at least one source, the menu content (retrieve from a source information to generate the guidance display (menu), paragraph [0056]); and present, via the display, the menu content to the second portion of the display (presenting menu content on a second region 126, paragraph [0035]), wherein the second portion of the display is associated with a menu (the second region 126 displays menu, paragraphs [0028] and [0035]),

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55551

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Previous Supplemental Box-***-

wherein the first content is shifted such that the first content is presented to the first portion of the display (the first region 102 is isolated or stands alone which contain a unique menu, paragraphs [0028]-[0035]), and wherein the first portion and the second portion of the display do not substantially overlap (the first region 102 and the second region 126 are separated, paragraphs [0028]-[0035]).

As per claims 2 and 10, Rhoads further discloses wherein determining the menu content of the method further comprises: referring to rules stored in a memory (a boot-up routine and other instructions (rules) stored in a memory), paragraph [0051]), wherein the rules include one or more menu fields mapped to at least one menu content type (menu identifiers (fields) specifying menu type, paragraph [0121]); comparing a menu content type associated with the first content with the one or more mapped menu fields (comparing selected media asset in a menu with the media identifiers (fields), paragraph [0148]); determining select menu fields from the one or more mapped menu fields (selecting media assets that are compatible to media identifiers, paragraphs [0148] and [0149]); and including the select menu fields in the menu content for retrieval (retrieve the media identifiers associated with the selected media asset, paragraph [0148]).

As per claims 3, 11 and 19, Rhoads further discloses receiving a menu selection at the intelligent TV (receiving a selection of menus on a HDTV, paragraphs [0028], [0035], [0043], [0053] and [0121]), wherein the menu selection corresponds to a selected content (a menu to select channels that display contents, paragraphs [0028], [0035] and [0121]); determine the selected content based on the menu selection (displaying (selecting) a menu to select channels that display contents, paragraphs [0028], [0035] and [0121]); and providing a focus on the selected content in the user interface (scroll through a menu channels in the user interface, [0028], [0035], [0121] and [0142]).

As per claims 4 and 16, Rhoads further discloses wherein the at least one source is at least one of a local memory, a remote memory, a broadcast signal, and a memory located across a network (a memory stores media asset associated with media source, paragraphs [0093] and [0137]).

As per claims 5 and 12, Rhoads further discloses receiving a menu selection at the intelligent TV (receiving a selection of menus on a HDTV, paragraphs [0028], [0035], [0043], [0053] and [0121]), wherein the menu selection corresponds to a selected content type (a menu to select channels that display different types of contents, paragraphs [0028], [0035] and [0121]); determining the selected content type based on the menu selection (displaying (selecting) a menu to select channels that display different types of contents, paragraphs [0028], [0035] and [0121]); determining which content of the first content is the selected content type (one typical type of media guidance application is selected as an interactive television program guide, paragraph [0025]); and providing a user interface with content of the selected content type highlighted in the first portion of the display (a user interface in the screen of the HDTV where a menu 102 is displayed, paragraphs [0028]-[0035] and [0053]).

As per claims 6 and 13, Rhoads further discloses receiving a second selection (receiving a second media navigation cue to be selected, paragraphs [0038], [0040] and [0059]); and rearranging content in at least one of the first portion of the display and the second portion of the display (arranging the media assets on the first region 102 and the second region 122, paragraphs [0027]-[0035], [0088] and [0139]); and presenting, via the display, the rearranged content (displaying the arranged media assets on a screen, paragraphs [0029] and [0036]).

As per claims 7 and 14, Rhoads further discloses wherein a size of the first portion of the display is larger than a size of the second portion of the display (on a display screen the region 102 is larger in size than the region 122, figure 1 and paragraphs [0028]-[0035]).

As per claims 8, 15 and 20, Rhoads further discloses receiving a menu selection at the intelligent TV (receiving a selection of menus on a HDTV, paragraphs [0028], [0035], [0043], [0053] and [0121]), wherein the menu selection corresponds to a specific selected content (a menu to select channels that display certain types of contents, paragraphs [0028], [0035] and [0121]); determining the metadata of the specific selected content (determining certain media (content), wherein the media can be distributed by a metadata source, paragraphs [0005] and [0139]); retrieving a secondary content based on the metadata of the specific selected content (acquire certain media based on media distributed by a metadata source, paragraphs [0005] and [0139]); providing, via the user interface, the secondary content within the second portion of the display (providing media on a user interface to be displayed s menu list on a region of display screen such as region 122, paragraphs [0028]-[0035]).

As per claim 17, Rhoads further discloses wherein the menu input is provided via an input device associated with the intelligent TV (the HDTV receives a menu option as an input, paragraphs [0028] and [0053]).

Claims 1-20 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

ASD/SAC

PATENT COOPERATION TREATY

RECEIVED
JUN 21 2013
SHERIDAN ROSS PC
DOCKETING DEPT

From the INTERNATIONAL SEARCHING AUTHORITY

To: DEAN N. REINHARDT
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day month year)* 17 JUN 2013
Applicant's or agent's file reference 6583-469-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/036819	International filing date *(day month year)* 16 April 2013
Applicant FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-469-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/036819	International filing date *(day/month/year)* 16 April 2013	(Earliest) Priority Date *(day/month/year)* 14 June 2012
Applicant FLEXTRONICS AP, LLC		

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

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

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

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 14A

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/036819

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04H 60/29 (2013.01)
USPC - 725/14
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04H 60/29, H04N 5/45 (2013.01)
USPC - 725/14, 39, 40, 52, 53, 56, 57, 61

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC- H04N 5/44543, 21/44222, 21/4821 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2010/0293497 A1 (PETERSON) 18 November 2010 (18.11.2010) entire document	18-20 --- 1-17
Y	US 6,704,062 B1 (AHIDA) 09 March 2004 (09.03.2004) entire document	1-17
A	US 2009/0249394 A1 (SCHWESINGER et al) 01 October 2009 (01.10.2009) entire document	1-17
A	US 2002/0056098 A1 (WHITE) 09 May 2002 (09.05.2002) entire document	1-17
A	US 2008/0288461 A1 (GLENNON et al) 20 November 2008 (20.11.2008) entire document	1-17

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
04 June 2013	17 JUN 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: DEAN N. REINHARDT
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	17 JUN 2013
Applicant's or agent's file reference 6583-469-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/036819	16 April 2013	14 June 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04H 60/29 (2013.01)
USPC - 725/14

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I. Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	04 June 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/036819

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/036819

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-17	YES
	Claims	18-20	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 18-20 lack novelty under PCT Article 33(2) as being anticipated by Peterson.

Regarding claim 18, Peterson teaches a method (systems and methods for simplifying text entry, [abstract]), comprising: sending by a user a command to a television to active an on screen channel changer (media guidance application which includes an interactive television program guide sometimes referred to as an electronic program guide which allows users to navigate among television programming, [0027]; media guidance application may be organized by time and channel in a grid, [0029]; a user may indicate a desire to access media information by selecting a selectable option provided in a display screen or pressing a dedicated GUIDE button on a remote control or other user input interface device, [0029]); navigating focus by the user to a show name in a list of one or more program listings displayed by the on screen channel changer (as the user is searching for a program title, all valid program titles currently accessible by the user may be indexed in a table and as the user inputs characters of the program title, candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; [figure 9 shows the candidate strings and figure 12 shows that the list of candidate strings is displayed 1212 to the user and the user may select one of the candidates in the list 1222]); and selecting by the user the show name that has focus (user can select program listings by moving highlight region 110, [0030]; fig.1).

Regarding claim 19, Peterson teaches the step of: selecting by the user one or more number buttons on a number (alphanumeric [letters and numbers] navigation and input, [0008]) entry bar (although visual keypad 500 is shown as a rectangular grid, the shape, size and letter layout of the visual keypads described herein may differ and may be square or a single row [bar] or column of lettered buttons, [0066]; fig.5A) of the on screen channel changer to determine the list that is displayed (as the user is searching for a program title, all valid program titles currently accessible by the user may be indexed in a table and as the user inputs characters of the program title, candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; [figure 9 shows the candidate strings and figure 12 shows that the list of candidate strings is displayed 1212 to the user and the user may select one of the candidates in the list 1222]).

Regarding claim 20, Peterson teaches the list is comprised of one or more previously viewed channel numbers ([figure 12 shows that the user's profile may determine which candidate strings to display 1220]; media guidance application may monitor user activity to determine various user preferences in order to create a personalized guidance application showing favorite [previously viewed] channel selections, [0037]).

Claims 1-17 lack an inventive step under PCT Article 33(3) as being obvious over Peterson in view of Ahida.

Regarding claim 1, Peterson teaches a non-transitory computer readable storage medium having stored thereon instructions that cause a processor to execute a method (control circuitry executes instructions for a media guidance application stored in memory, [0042]) for changing a channel number on a television (media guidance application which includes an interactive television program guide sometimes referred to as an electronic program guide which allows users to navigate among television programming, [0027]; media guidance application may be organized by time and channel in a grid, [0029]), the method comprising the steps of: receiving a command from a user to activate an on screen channel changer on the television (a user may indicate a desire to access media information by selecting a selectable option provided in a display screen or pressing a dedicated GUIDE button on a remote control or other user input interface device, [0029]); rendering the on screen channel changer on a screen of the television upon receiving the command from the user (in response to the user's indication, the media guidance application provides a display screen with media information organized by time and channel in a grid, [0029]); receiving a selection wherein the user makes the selection using the on screen channel changer (user can select program listings by moving highlight region 110, [0030]; fig.1); and presenting content associated with the selection on the screen upon receiving the selection (information relating to the program listing selected by highlight region 110 may be provided in program information region 112 wherein region 112 may include the program title, description, time, channel, rating, and other desired information, [0030]; fig.1), but does not disclose the selection is a channel number selection. However, Peterson does teach channel selection ([0027]; [0029]) and further teaches a numeric keypad (alphanumeric [letters and numbers] navigation and input, [0008]). Furthermore it is well known in the art of television to allow a user to input a channel selection number corresponding to a broadcast channel desired (see Ahida, [abstract]; [col.1 ln.5-10]; [col.2 ln.35-50]). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide channel number selection capabilities as taught by Ahida using the numeric keypad of Peterson in order to allow a user to quickly select broadcast channels with minimum operations required to reduce burden on the user (Ahida, [col.2 ln.26-34]).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 10, Peterson teaches a television system (media guidance application which includes an interactive television program guide sometimes referred to as an electronic program guide which allows users to navigate among television programming, [0027]; media guidance application may be organized by time and channel in a grid, [0029]), comprising: a memory (memory, [0042]); a screen (on-screen keypad, [0008]); a user input device (a user may indicate a desire to access media information by selecting a selectable option provided in a display screen or pressing a dedicated GUIDE button on a remote control or other user input interface device, [0029]); a processor in communication with the memory and the screen (control circuitry executes instructions for a media guidance application stored in memory, [0042]), the processor operable to: receive a command from a user to change a channel number on the television (a user may indicate a desire to access media information by selecting a selectable option provided in a display screen or pressing a dedicated GUIDE button on a remote control or other user input interface device, [0029]); render an on screen channel changer on the screen upon receiving the command from the user (in response to the user's indication, the media guidance application provides a display screen with media information organized by time and channel in a grid, [0029]); receive a selection when the user makes the selection using the on screen channel changer (user can select program listings by moving highlight region 110, [0030]; fig.1); and present content associated with the selection on the screen upon receiving the selection (information relating to the program listing selected by highlight region 110 may be provided in program information region 112 wherein region 112 may include the program title, description, time, channel, rating, and other desired information, [0030]; fig.1), but does not disclose the selection is a channel number selection. However, Peterson does teach channel selection ([0027]; [0029]) and further teaches a numeric keypad (alphanumeric [letters and numbers] navigation and input, [0008]). Furthermore it is well known in the art of television to allow a user to input a channel selection number corresponding to a broadcast channel desired (see Ahida, [abstract]; [col.1 ln.5-10]; [col.2 ln.35-50]). It would have been obvious to one of ordinary skill in the art at the time of the invention to provide channel number selection capabilities as taught by Ahida using the numeric keypad of Peterson in order to allow a user to quickly select broadcast channels with minimum operations required to reduce burden on the user (Ahida, [col.2 ln.26-34]).

Regarding claim 2, Peterson teaches the on screen channel changer includes a number entry bar with number buttons (alphanumeric [letters and numbers] navigation and input, [0008]; although visual keypad 500 is shown as a rectangular grid, the shape, size and letter layout of the visual keypads described herein may differ and may be square or a single row [bar] or column of lettered buttons, [0066]; fig.5A).

Regarding claim 3, modified Peterson teaches the selection is a channel number selection, per above discussion, and Peterson further teaches only number buttons that produce selectable selections are enabled on the number entry bar (characters that cannot possibly be the next user input selection may be grayed out or disabled in the visual keypad and in some embodiments, the grayed out or disabled keys are actually removed from the visual keypad display, [0013]).

Regarding claim 4, modified Peterson teaches the selection is a channel number selection, per above discussion, and Peterson further teaches the steps of: receiving one or more selections by the user (alphanumeric [letters and numbers] navigation and input, [0008]) from the number entry bar (although visual keypad 500 is shown as a rectangular grid, the shape, size and letter layout of the visual keypads described herein may differ and may be square or a single row [bar] or column of lettered buttons, [0066]; fig.5A); and rendering a dynamic electronic program guide in the on screen channel changer upon receiving a first of the one or more selections (as the user is searching for a program title, all valid program titles currently accessible by the user may be indexed in a table and as the user inputs characters of the program title, candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; [figure 9 shows the candidate strings and figure 12 shows that the list of candidate strings is displayed 1212 to the user and the user may select one of the candidates in the list 1222]), wherein: the dynamic electronic program guide displays a first list, the first list is comprised of program listings for a plurality of selectable content (media guidance application may be organized by time and channel in a grid, [0029]), and the plurality of selectable content are selectable content with a first number equal to the first of the one or more selections (after a user selects a character within the keypad for input, buttons corresponding to letters [since the keypad is alphanumeric, the character could be a number] that cannot possible be the next character in the user input string may be disabled wherein valid candidate strings are based on the program schedule database, [0081]; fig.9).

Regarding claim 5, modified Peterson teaches the selection is a channel number selection, per above discussion, and Peterson further teaches the steps of: receiving a second of the one or more selections (keypad is redisplayed with a greater or fewer number of buttons after each character input, [0082]; fig.9), wherein the dynamic electronic program guide replaces the first list with a second list (as the user is searching for a program title, all valid program titles currently accessible by the user may be indexed in a table and as the user inputs characters of the program title, candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; [figure 9 shows the candidate strings and figure 12 shows that the list of candidate strings is displayed 1212 to the user and the user may select one of the candidates in the list 1222]); wherein the second list is comprised of program listings for a plurality of selectable content (valid program titles currently accessible by the user, [0010]); and wherein the plurality of selectable content are selectable content with a first number equal to the first of the one or more selections and a second number equal to the second of the one or more selections (as the user inputs characters of the program title, candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; figure 9]).

Regarding claim 6, Peterson teaches the steps of: receiving one or more focus decisions from the user (user can select program listings by moving highlight region 110, [0030]; fig.1); and rendering a program preview in the on screen channel changer when a show name has focus, wherein the program preview provides program information for the show that has focus (information relating to the program listing selected by highlight region 110 may be provided in program information region 112 wherein region 112 may include the program title, description, time, channel, rating, and other desired information, [0030]; fig.1).

Regarding claim 7, Peterson teaches the on screen channel changer includes a mini electronic program guide (media guidance displays may be fully or partially overlaid over media content being displayed, [0029]), wherein the mini electronic program guide displays program listings for one or more previously viewed channel numbers (media guidance application may monitor user activity to determine various user preferences in order to create a personalized guidance application showing favorite [previously viewed] channel selections, [0037]).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 8, Peterson teaches only one number button (alphanumeric [letters and numbers] navigation and input, [0008]) may be selected by the user at a time ([see figure 9]).

Regarding claim 9, modified Peterson teaches the selection is a channel number selection, per above discussion, and Peterson further teaches the steps of: rendering in the on screen channel changer (in response to the user's indication, the media guidance application provides a display screen with media information organized by time and channel in a grid, [0029]) a dynamic electronic program guide when the user selects one or more of the number buttons (after a user selects a character within the keypad for input, buttons corresponding to letters [since the keypad is alphanumeric, the character could be a number] that cannot possible be the next character in the user input string may be disabled wherein valid candidate strings are based on the program schedule database, [0081]; fig.9; as the user is searching for a program title, all valid program titles currently accessible by the user may be indexed in a table and as the user inputs characters of the program title, candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; [figure 9 shows the candidate strings and figure 12 shows that the list of candidate strings is displayed 1212 to the user and the user may select one of the candidates in the list 1222]); displaying, by the dynamic electronic program guide, program listings for one or more channel numbers in response to the user selecting a first of the one or more number buttons; and changing the program listings in response to the user selecting a next of the one or more number buttons, where the one or more selectable selections are comprised of numbers represented by the one or more number buttons selected by the user (as the user is searching for a program title, all valid program titles currently accessible by the user may be indexed in a table and as the user inputs characters of the program title [each time a user enters a character, the guide is updated], candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; [figure 9 shows the candidate strings and figure 12 shows that the list of candidate strings is displayed 1212 to the user and the user may select one of the candidates in the list 1222]).

Regarding claim 11, Peterson teaches the on screen channel changer includes a number (alphanumeric [letters and numbers] navigation and input, [0008]) entry bar (although visual keypad 500 is shown as a rectangular grid, the shape, size and letter layout of the visual keypads described herein may differ and may be square or a single row [bar] or column of lettered buttons, [0066]; fig.5A).

Regarding claim 12, modified Peterson teaches the selection is a channel number selection, per above discussion, and Peterson further teaches receiving one or more selections by the user (user input, [0010]) from the number entry bar (although visual keypad 500 is shown as a rectangular grid, the shape, size and letter layout of the visual keypads described herein may differ and may be square or a single row [bar] or column of lettered buttons, [0066]; fig.5A); and rendering a dynamic electronic program guide (in response to the user's indication, the media guidance application provides a display screen with media information organized by time and channel in a grid, [0029]) in the on screen channel changer upon receiving a first selection (after a user selects a character within the keypad for input, buttons corresponding to letters [since the keypad is alphanumeric, the character could be a number] that cannot possible be the next character in the user input string may be disabled wherein valid candidate strings are based on the program schedule database, [0081]; fig.9; as the user is searching for a program title, all valid program titles currently accessible by the user may be indexed in a table and as the user inputs characters of the program title, candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; [figure 9 shows the candidate strings and figure 12 shows that the list of candidate strings is displayed 1212 to the user and the user may select one of the candidates in the list 1222]), the dynamic electronic program guide displaying lists of program listings for one or more channel numbers (valid program titles, [0010]; guidance application may be organized by time and channel in a grid, [0029]), wherein: a first list is comprised of one or more selectable content with a first number beginning with the first selection ([see figure 9 wherein the alphanumeric keypad may accept numeric input instead of alphabetic input]); a second list is comprised of one or more channels selectable content with the first number beginning with the first selection and a second number beginning with a second selection; and a third list is comprised of one or more selectable content with the first number beginning with the first selection, the second channel number beginning with the second selection, and a third number beginning with a third selection (as the user is searching for a program title, all valid program titles currently accessible by the user may be indexed in a table and as the user inputs characters of the program title [each time a user enters a character, the guide is updated], candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; [figure 9 shows the candidate strings and figure 12 shows that the list of candidate strings is displayed 1212 to the user and the user may select one of the candidates in the list 1222]).

Regarding claim 13, Peterson does not explicitly teach the one or more channel numbers includes eleven channel numbers. However, Ahida teaches 10 channel numbers ([see figure 1]). Furthermore, it is known in the art of on screen interfaces to include additional buttons for ease of user navigation. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide channel numbers as taught by Ahida including a total of eleven channel numbers in the invention of modified Peterson since the provision of adjustability, where needed, involves only routine skill in the art, and such a modification would allow a user to customize their interface with commonly used channel numbers.

Regarding claim 14, Peterson teaches the processor is further operable to: receive one or more selections by the user (user input, [0010]) from the number entry bar (although visual keypad 500 is shown as a rectangular grid, the shape, size and letter layout of the visual keypads described herein may differ and may be square or a single row [bar] or column of lettered buttons, [0066]; fig.5A); render a dynamic electronic program guide in the on screen channel changer upon receiving a first selection, the dynamic electronic program guide displaying a list of program listings for at least four channel numbers, the program listings including one or more show names (as the user is searching for a program title, all valid program titles currently accessible by the user may be indexed in a table and as the user inputs characters of the program title, candidate resultant strings that do not match the user's input may be removed or pruned from the list or tree, [0010]; [figure 9 shows the candidate strings and figure 12 shows that the list of candidate strings is displayed 1212 to the user and the user may select one of the candidates in the list 1222]); receive one or more focus decisions by the user (user can select program listings by moving highlight region 110, [0030]; fig.1); and render a program preview in the on screen channel changer when a show name has focus, wherein the program preview comprises at least one of: a show name; an episode number; an episode name; a start time; an end time; and a description of the show (information relating to the program listing selected by highlight region 110 may be provided in program information region 112 wherein region 112 may include the program title, description, time, channel, rating, and other desired information, [0030]; fig.1).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 15, Peterson teaches the program preview includes a thumbnail image (display may include a video region that allows a user to preview programs wherein the content of the video region corresponds to one of the listings displayed in the grid, [0033]).

Regarding claim 16, Peterson teaches the on screen channel changer includes a mini electronic program guide (media guidance displays may be fully or partially overlaid over media content being displayed, [0029]); and the mini electronic program guide displays program listings for one or more previously viewed channels (media guidance application may monitor user activity to determine various user preferences in order to create a personalized guidance application showing favorite [previously viewed] channel selections, [0037]).

Regarding claim 17, Peterson teaches the user input device comprises at least one of a remote control (a user may indicate a desire to access media information by selecting a selectable option provided in a display screen or pressing a dedicated GUIDE button on a remote control or other user input interface device, [0029]), a voice capture device, a gesture capture device, a touch screen, or a smart device.

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: DOUGLAS M. GROVER
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 28 JUN 2013
Applicant's or agent's file reference 6583-470-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/036782	International filing date *(day/month/year)* 16 April 2013
Applicant FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-470-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/036782	International filing date *(day/month/year)* 16 April 2013	(Earliest) Priority Date *(day/month/year)* 14 June 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

   a. With regard to the **language**, the international search was carried out on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

   b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

   c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

   ☒ the text is approved as submitted by the applicant.

   ☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

   a. the figure of the **drawings** to be published with the abstract is Figure No. 20

   ☒ as suggested by the applicant.

   ☐ as selected by this Authority, because the applicant failed to suggest a figure.

   ☐ as selected by this Authority, because this figure better characterizes the invention.

   b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/036782

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/00 (2013.01)
USPC - 725/46
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(8) - G06F 3/00, 13/00, H04N 5/445 (2013.01)
USPC - 725/46, 109, 110

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC: H04N 5/44543, 21/4532, 21/44222 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0321098 A1 (BANGALORE et al) 29 December 2011 (29.12.2011) entire document	1-20
Y	US 2011/0173657 A1 (THOMAS et al) 14 July 2011 (14.07.2011) entire document	1-20
Y	US 2011/0126251 A1 (LAFRENIERE et al) 26 May 2011 (26.05.2011) entire document	4, 9, 14, and 19
Y	US 2011/0154198 A1 (BACHMAN et al) 23 June 2011 (23.06.2011) entire document	6, 8, 16, and 18
Y	US 2003/0110234 A1 (EGLI et al) 12 June 2003 (12.06.2003) entire document	10
A	US 2012/0110623 A1 (HILL et al) 03 May 2012 (03.05.2012) entire document	1-20
A	WO 2011/148054 A1 (PEKONEN et al) 01 December 2011 (01.12.2011) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
31 May 2013	28 JUN 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: DOUGLAS M. GROVER
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	28 JUN 2013
Applicant's or agent's file reference 6583-470-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/036782	16 April 2013	14 June 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/00 (2013.01)
USPC - 725/46

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	31 May 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/036782

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/036782

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-3, 5, 7, 11-13, 15,17, and 20 lack an inventive step under PCT Article 33(3) as being obvious over Bangalore et al, hereinafter Bangalore in view of Thomas et al, hereinafter Thomas.

Regarding Claims 1, Bangalore teaches a method for accessing media comprising (paragraph 24 for having an IPTV system to access media and display on the TV device element 124): searching a network to identify a plurality of media sources (paragraph 29 for the IPTV system having a private network element 110, a public network element 112 and a search agent element 210 with paragraph 30 for the search agent element 210 searching video streams sent to the set top box element 116), and having media items associated with the media sources (paragraph 35 for the search agent element 210 finding items associated with a website for purchase and searching other media sources such as social network websites and news websites and outputting the results associated with the keywords); identifying metadata associated with the determined number of media items (paragraph 32 for receiving and analyzing metadata from the video stream and updating the user profile with the metadata and paragraph 37 for analyzing the metadata from the video streams); storing the metadata in a memory (paragraph 32 for storing the metadata to update the user profile and store the metadata in the user profile repository); receiving a request from a user to display one or more of the media items (paragraph 26 for the user requesting video on demand content and accessing the video from a set top box, or over the network on a computer) and displaying the one or more media items based on the stored metadata (page 26 for displaying the video to the user using user interface to access the TV2 server or displaying the media from the computer). Bangalore does not explicitly teach determining a number of media items associated with media sources. Thomas has methods for providing guidance to users for finding media (abstract) and teaches determining a number of media items associated with media sources (paragraph 74 for searching media items based on user's define search strings, and paragraph 77 for having a number of media items associated with groups or sub-groups of media sources based on user preferences). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the number determination as taught by Thomas in the media method of Bangalore in order to configuring a menu screen according to a user's preferences (Thomas, paragraph 77).

Regarding Claims 11, Bangalore discloses a system for accessing media comprising (paragraph 24 for having an IPTV system to access media and display on the TV device element 124): a search engine configured to search a network to identify a plurality of media sources (paragraph 29 for the IPTV system having a private network element 110, a public network element 112 and a search agent element 210 with paragraph 30 for the search agent or search engine means element 210 searching video streams sent to the set top box element 116), and having media items associated with the media sources (paragraph 35 for the search agent element 210 finding items associated with a website for purchase and searching other media sources such as social network websites and news websites and outputting the results associated with the keywords); a media module configured to identify metadata associated with the determined number of media items (paragraph 32 for getting metadata from the video stream and updating the user profile with the metadata and paragraph 37 for analyzing the metadata from the video streams); a memory configured to store the metadata (paragraph 32 for storing the metadata to update the user profile and store the metadata in the user profile repository); a user interface configured to receive a request from a user to display one or more of the media items (paragraph 26 for the user requesting video on demand content and accessing the video from a set top box, or over the network on a computer and the user interface to the TV2 server); and a display configured display the one or more media items based on the stored metadata (paragraph 35 for allowing users to navigate the information and purchase the products or select and offer and allowing the user to access a list of coupons, products or headlines or displayed items and paragraph 32 for displaying user profile or metadata collected from streaming video). Bangalore does not explicitly disclose determining a number of media items associated with media sources. Thomas has methods for providing guidance to users for finding media (abstract) and discloses determining a number of media items associated with media sources (paragraph 74 for searching media items based on user's define search strings, and paragraph 77 for having a number of media items associated with groups or sub-groups of media sources based on user preferences). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the number determination as taught by Thomas in the media system of Bangalore in order to configuring a menu screen according to a user's preferences (Thomas, paragraph 77).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claims 2, Bangalore teaches receiving a search request from the user for an individual media item (paragraph 35 for the search agent element 210 finding items associated with a website for purchase and searching other media sources such as social network websites and news websites and outputting the results associated with the keywords); in response to receiving the search request (paragraph 35 for performing a keyword search for news, social media or e-commerce), identifying multiple media sources in the plurality of media sources that have the individual media item (paragraph 35 for the search agent element 210 finding items associated with a website for purchase and displaying the results via the set top box by identifying the different websites that have the desired item); presenting a list of offers from the multiple media sources to the user for the individual item (paragraph 35 for offering the user advertisements, coupons, price comparisons and news headlines or a list of offers based on the keyword searches); receiving a selection by the user of an individual offer from the list of offers (paragraph 35 for the user having a list of searched offers with, paragraph 26 for the user requesting video on demand content and accessing the video from a set top box, or over the network on a computer); and in response to receiving the selection by the user (paragraph 35 for allowing users to navigate the information and purchase the products or select and offer), providing access to the individual item (paragraph 35 for allowing the user to access a list of coupons, products or headlines by navigating through the offers).

Regarding Claims 12, Bangalore discloses wherein: the search engine is further configured to receive a search request from the user for an individual media item (paragraph 35 for the search agent element 210 finding items associated with a website for purchase and searching other media sources such as social network websites and news websites and outputting the results associated with the keywords) and identify multiple media sources in the plurality of media sources that have the individual media item in response to receiving the search request (paragraph 35 for the search agent element 210 finding items associated with a website for purchase and displaying the results via the set top box by identifying the different websites that have the desired item); the media module is further configured to present a list of offers from the multiple media sources to the user for the individual item (paragraph 35 for offering the user advertisements, coupons, price comparisons and news headlines or a list of offers based on the keyword searches) and provide access to an individual item in response to receiving a selection by the user (paragraph 35 for the user having a list of searched offers with, paragraph 26 for the user requesting video on demand content and accessing the video from a set top box, or over the network on a computer or having access to desired video); and the user interface is further configured to receive the selection by the user of the individual offer from the list of offers (paragraph 35 for allowing the user to access a list of coupons, products or headlines by navigating through the search results and the key words).

Regarding Claims 3 and 13, Bangalore teaches wherein the list of offers comprise is at least one of: an offer to play the individual media item, an offer to view the individual media item, a pay per view offer to view the individual media item, an offer to rent the individual media item, an offer to purchase a ticket to a movie theater showing the individual media item, an offer to purchase the individual media item, a trial access offer to the individual media item, and an offer to access the individual media item on a social media site (paragraph 35 for presenting offers to obtain a coupon, purchase and item, or view headlines via a social media site).

Regarding Claims 5 and 15, Bangalore teaches wherein the plurality of media sources comprises at least two of a video server, an audio server, a Digital Video Recorder (DVR), a set-top box, a social media site, a voice mail server, a source marked by the user, a content provider, a Compact Disk (CD) player, a Digital Video Device (DVD) player, a cellular telephone, a personal digital assistant, a notebook, an audio player, a document server, a Personal Computer (PC), a Really Simple Syndication (RSS) feed, a social media site, a USB device, and a tablet device (paragraph 29 for using a search agent to search can access view streams sent to a set top box, a computer, and a mobile device that may be at another location as shown in figure 2 where the search agent element 210 goes through the network element 112 to search the mobile device element 220 and the computer element 168, see also paragraph 43 for the user network environment using tablets, PDAs and wireless phones on the network as mobile devices).

Regarding Claims 7 and 17, Bangalore teaches the method as shown above. Bangalore does not explicitly teach wherein the displayed one or more media items are organized based at least one of: a media type, a most viewed, a favorites list, a last viewed, a most recently added, a most recently visited, a most recently played, and a most recently purchased. Thomas has methods for providing guidance to users for finding media (abstract) and teaches wherein the displayed one or more media items are organized based at least one of: a media type, a most viewed, a favorites list, a last viewed, a most recently added, a most recently visited, a most recently played, and a most recently purchased (paragraph 75 for having a criteria for selecting media based on favorites list). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the number determination as taught by Thomas in the media method of Bangalore in order to configuring a menu screen according to a user's preferences (Thomas, paragraph 77).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding Claims 20, Bangalore discloses a non-transient computer readable medium having stored thereon instructions that cause a processor to execute a method (paragraph 24 for having an IPTV system to access media and display on the TV device element 124 with figure 1 element 104 for an application tier with applications or computer readable programs), the method comprising: instructions to search a network to identify a plurality media sources (paragraph 29 for the IPTV system having a private network element 110, a public network element 112 and a search agent element 210 with paragraph 30 for the search agent or search engine means element 210 searching video streams sent to the set top box element 116); instructions to have media items associated with the media sources (paragraph 35 for the search agent element 210 finding items associated with a website for purchase and searching other media sources such as social network websites and news websites and outputting the results associated with the keywords); instructions to identify metadata associated with the determined number of media items (paragraph 32 for getting metadata from the video stream and updating the user profile with the metadata and paragraph 37 for analyzing the metadata from the video streams); instructions to store the metadata in a memory (paragraph 32 for storing the metadata to update the user profile and store the metadata in the user profile repository); instructions to receive a request from a user to display the one or more media items (paragraph 26 for the user requesting video on demand content and accessing the video from a set top box, or over the network on a computer and the user interface to the TV2 server); and instructions to display the media items based on the stored metadata (paragraph 35 for allowing users to navigate the information and purchase the products or select and offer and allowing the user to access a list of coupons, products or headlines or displayed items and paragraph 32 for displaying user profile or metadata collected from streaming video). Bangalore does not explicitly disclose determining a number of media items associated with media sources. Thomas has methods for providing guidance to users for finding media (abstract) and discloses determining a number of media items associated with media sources (paragraph 74 for searching media items based on user's define search strings, and paragraph 77 for having a number of media items associated with groups or sub-groups of media sources based on user preferences). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the number determination as taught by Thomas in the media system of Bangalore in order to configuring a menu screen according to a user's preferences (Thomas, paragraph 77).

Claims 4, 9, 14, and 19 lack an inventive step under PCT Article 33(3) as being obvious over Bangalore in view of Thomas, and further in view of LaFreniere et al, hereinafter LaFreniere.

Regarding Claims 4 and 14, Bangalore teaches wherein at least one of the displayed one or more media items is a link to a social media site and wherein the link to the social media site (paragraph 35 for using keywords to search a social media site and providing the information to the set top box). Bangalore and Thomas do not explicitly teach comprises at least one of a link to a most recent posting by the user, a link to a most recently accessed social media site, a link to a favorite social media site, a link to a recently added social media site, a link to a last view social media site. LaFreniere has a system and method for updating viewing status between a set-top box and one or more social networks (abstract) and teaches teach comprises at least one of a link to a most recent posting by the user, a link to a most recently accessed social media site, a link to a favorite social media site, a link to a recently added social media site, a link to a last view social media site (paragraph 47 for using the television system for updating information on a social network and posting viewing information to the user's Facebook and Twitter account). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the link as taught by LaFreniere in the media system of Bangalore in order to update user's viewing information to a social network (LaFreniere, paragraph 47).

Regarding Claims 9 and 19, Bangalore teaches the method as shown above. Bangalore does not explicitly teach wherein the user approves the identified plurality of media sources. LaFreniere has a system and method for updating viewing status between a set-top box and one or more social networks (abstract) and teaches wherein the user approves the identified plurality of media sources (paragraph 51 for the user having permission rules or approval of the media that communicates with the set top box for allowing certain family member to see the media). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the permission as taught by LaFreniere in the media method of Bangalore in order to allow permission for family member to access the media (LaFreniere, paragraph 51).

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Claims 6, 8, 16, and 18 lack an inventive step under PCT Article 33(3) as being obvious over Bangalore in view of Thomas, and further in view of Bachman et al, hereinafter Bachman.

Regarding Claims 6 and 16, Bangalore and Thomas teach the method as shown above. Bangalore and Thomas do not explicitly teach wherein at least one of the media sources is a device that is temporarily connected to the network. Bachman has Playlists having media items from more than one source (abstract) and teaches wherein at least one of the media sources is a device that is temporarily connected to the network (paragraph 24 for having an online store where the user has temporary access to the media or temporary adding media to viewing options due to ownership by another source). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the permission as taught by LaFreniere in the media method of Bangalore in order to allow a second source to provide the media items (Bachman, paragraph 24).

Regarding Claims 8 and 18, Bangalore and Thomas teach the method as shown above. Bangalore and Thomas do not explicitly teach wherein the user can temporarily add a media source to the plurality of media sources. Bachman has Playlists having media items from more than one source (abstract) and teaches wherein the user can temporarily add a media source to the plurality of media sources (paragraph 24 for having an online store where the user has temporary access to the media or temporary adding media to viewing options due to ownership by another source). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the permission as taught by LaFreniere in the media method of Bangalore in order to allow a second source to provide the media items (Bachman, paragraph 24).

Claim 10 lacks an inventive step under PCT Article 33(3) as being obvious over Bangalore in view of Thomas, and further in view of Egli et al, hereinafter Egli.

Regarding Claims 10, Bangalore and Thomas teach the method as shown above. Bangalore and Thomas do not explicitly teach wherein the user can identify a media item to be translated when accessed in the future. Egli has an online media delivery system incorporating combining on-the-fly media reformatting (abstract) and teaches wherein the user can identify a media item to be translated when accessed in the future (paragraph 33 for translating a media object for storage on a target device and storing the media object in the front side cache, therefore having it available for future access with paragraph 70 for using the objects in future requests). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the translation as taught by Egli in the media method of Bangalore in order to transform media items to client devices (Egli, paragraph 33).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Scott Weitzel
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-471-PCT	Date of mailing *(day/month/year)* 30 AUG 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/36678	International filing date *(day/month/year)* 16 April 2013 (16.04.2013)
Applicant Flextronics AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-471-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/36678	International filing date *(day/month/year)* 16 April 2013 (16.04.2013)	(Earliest) Priority Date *(day/month/year)* 14 June 2012 (14.06.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 14

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

Form PCT/ISA/210 (first sheet) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/36678

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/0481, 3/0482 (2013.01)
USPC - 725/37
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(8): G06F 03/00, 03/02, 3/041, 3/0481, 3/0482, 3/0484, 13/00; H04N 5/445, 7/08, 7/16 (2013.01)
USPC: 345/169; 715/747; 725/25, 37, 39, 43, 52, 56, 57, 59, 61, 86, 87

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPRO; IEEE; Google/Google Scholar; displaying*, electronic*, *device*, user*, interface*, number*, setting*, operating*, parameter*, functional*, silo*, input*, event*, applying*, delay*, exit*, preserving*

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0093888 A1 (ARAKI, J et al.) April 21, 2011, Figures 1, 2, 3A, 3B, 4-8, Abstract, Paragraphs [0023], [0076], [0077], [0093], [0097], [0098], [0100], [0130], [0143]-[0146], [0180], [0197].	1-20
Y	US 2011/0016492 A1 (MORITA, Y) January 20, 2011, Figure 10, Paragraph [0157].	1-20
Y	US 2012/0120316 A1 (LEE, C) May 17, 2012, Paragraph [0257].	6, 20
Y	US 7,577,923 B2 (BEAM, TK et al.) August 18, 2009, Figures 8, 9, Column 9, Lines 20-38.	14
A	US 7,233,316 B2 (SMITH, GC et al.) June 19, 2007, entire document.	1-20
A	US 2011/0219395 A1 (MOSHIRI, N et al.) September 8, 2011, entire document.	1-20
A	US 2003/0151621 A1 (MCEVILLY, C et al.) August 14, 2003, entire document.	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
20 August 2013 (20.08.2013)	30 AUG 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Scott Weitzel
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	30 AUG 2013
Applicant's or agent's file reference 6583-471-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/36678	16 April 2013 (16.04.2013)	14 June 2012 (14.06.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/0481, 3/0482 (2013.01)
USPC - 725/37

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	20 August 2013 (20.08.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36678

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36678

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	NONE	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-5, 7-13, and 15-19 lack an inventive step under PCT Article 33(3) as being obvious over US 2011/0093888 A1 to Araki et al. (hereinafter 'Araki') in view of US 2011/0016492 A1 (Morita).

As to claims 1 and 15, Araki discloses a method, comprising and non-transitory machine readable medium with instructions to cause the machine to perform (a method, including and interactive television hardware and software; Abstract and paragraph [0180]): displaying, on an electronic device, a user interface of the electronic device, the user interface comprising a number of settings associated with a number of operating parameters of the electronic device and further associated with a functional silo of the electronic device (displaying, on an interactive television (electronic device), visual user interface of the interactive television, user interface includes settings related to the functions of the display of the interactive television associated including inputs, and device utility applications (silo of the electronic device); paragraphs [0076], [0100], [0197]); receiving, at an input interface of the electronic device, a user interface event associated with the user interface (providing, at an input to the user interface of the display's interactive television, a user-effected "click event" (user interface event) related to a graphical user interface; Figure 1 and paragraphs [0080], [0083]); upon the user interface event indicating a setting change to at least one setting, applying the setting change to the electronic device substantially without delay (user-effected "click event" representing an adjustment of settings (settings change) to a setting, selectable TV settings (applying the settings change) to the interactive television is responsive at all times (without delay); paragraphs [0097], [0100], [0143]). Araki fails to disclose upon receiving the user interface event indicating an exit function, preserving the setting change to the electronic device. Morita discloses upon receiving the user interface event indicating an exit function, preserving the setting change to the electronic device (selection (receiving the user interface event) of a done option (exit function) saves all the settings and changes made to the device parameters; paragraph [0157]). It would have been obvious to one skilled in the art at the time of the invention to modify the Araki system to include upon receiving the user interface event indicating an exit function, preserving the setting change to the electronic device, as taught by Morita, because doing so would make the Araki system provide for completion of the user adjusted settings function and return the user to the previous screen or the current program being watched.

As to claims 2 and 16, Araki, in view of Morita, discloses the method and instructions of claims 1 and 15, respectively. Additionally, Araki discloses wherein: the user interface, further comprises, a number of targets, substantially each of the number of targets being associated with at least one setting (Figure 8 shows where the user interface further includes a number of icons (targets), substantially each number of icons (targets) is associated with TV setting, parental control, network (settings); Figure 8 and paragraph [0097]) and the user interface event indicating a setting change, further comprises, the user interface event setting focus to a current target (and the user-effected "click event" (user interface event) representing a user adjustment of settings (settings change), further includes, the user-effected "click event" (user interface event) adjustment of setting selecting (focusing) a menu item/icon (target); Figure 8 and paragraphs [0097], [0100]); and the user interface event indicating the exit function, further comprises, the user interface event removing focus from the current target (and the user-effected "click event" (user interface event) representing the "exit input" (exit) function, further includes, the user-effected "click event" (user interface event) moving back to a prior navigation configuration (removing focus from the current target); paragraphs [0023], [0130], [0146]).

As to claims 3 and 17, Araki, in view of Morita, discloses the method and instructions of claims 2 and 16, respectively. Additionally, Araki discloses wherein displaying the user interface further comprises selectively presenting a number of sub-interfaces, each sub-interface presenting a portion of the number of targets (Figures 5-8 show when displaying the user interface further includes presenting a number of selectable sub-menus (sub-interfaces), each menu presenting a portion of the main icons (targets); Figures 5-8 and paragraphs [0097], [0098]).

As to claims 4 and 18, Araki, in view of Morita, discloses the method and instructions of claims 3 and 17, respectively. In addition, Araki discloses wherein the user interface event indicating the exit function (where the user-effected "click event" (user interface event) specifies an "exit input" function; paragraphs [0023], [0130], [0146]), further comprises, a user interface event removing focus from a current sub-interface (further includes, the user-effected "click event" (user interface event) moving back to the prior layer of the navigation GUI (removing focus from a current sub-interface); paragraphs [0023], [0130], [0146]).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36678

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

The description is objected to as containing the following defect(s) under PCT Rule 66.2(a)(iii) in the form or contents thereof: Paragraph [0007], line 2 recites the limitation "a silos", however, this limitation should recite "a silo".

Claim 10 is objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof: Claim 10, line 3 recites the limitation "a silos", however, this limitation should recite "a silo".

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36678

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Box No. V: Citations and Explanations-***-

As to claims 5 and 19, Araki, in view of Morita, discloses the method and instructions of claims 4 and 18, respectively. Araki fails to disclose wherein the user interface event indicating an exit function, further comprises a cancel function, whereby a settings change is backed out. Morita discloses wherein the user interface event indicating an exit function, further comprises a cancel function, whereby a settings change is backed out (user selection (user interface event) of cancel option (cancel function), where discard all the changes made in screen (settings changes is backed out); Figure 10 and paragraph [0157]). It would have been obvious to one skilled in the art at the time of the invention to modify the Araki system to include wherein the user interface event indicating an exit function, further comprises a cancel function, whereby a settings change is backed out, as taught by Morita, because doing so would make the Araki system discard of all the changes made in the user interface screen and return the user to the previous screen or show that was displayed.

As to claim 7, Araki, in view of Morita, discloses the method of claim 2. Additionally, Araki discloses wherein the user interface event indicating a setting change, further comprises, a supplemental user interface event indicating a value of the setting associated with the setting change (where the user interface for inputting elements specifying increasing or decreasing of a slide bar values (setting change), further includes, a inputting via a slider bar (supplemental user interface event) via a series of input elements specifying associated values of the controlled iTV function; paragraphs [0144]-[0145]).

As to claim 8, Araki, in view of Morita, discloses the method of claim 1. Additionally, Araki discloses wherein at least one silo is an input source to the electronic device (where device inputs (silo) is a device input such as an HDMI or USB to the interactive television (electronic device); paragraph [0100]).

As claim 9, Araki in view of Morita, discloses the method of claim 1. Araki discloses wherein at least one silo is an application executable by the electronic device (where an IP TV (silo) is an application executed by the interactive television (electronic device); paragraph [0100]).

As to claim 10, Araki discloses an electronic device (interactive television; Figures 1, 4-8 and paragraph [0076]), comprising: a display, operable to present a visual portion of a audio-visual presentation (a display, operable to show a visual part of an audio-video presentation; Figures 1, 2, 4-8 and paragraphs [0076], [0077]); a silo, representing at least one of an application and an source input (a silo, having applications and device source inputs such as an HDMI or USB to the interactive television (electronic device); paragraph [0100]); a settings dialog, operable to present a number of settings associated with the silo (Figure 8 shows a setting dialog, operable to present a number of setting related to an movies application and/or device input such as HDMI (silo); Figures 7, 8 and paragraph [0100]); the settings dialog further comprising a number of targets, at least one target associated with a value of a setting of an operating parameter of the electronic device (settings dialog including a number of hotspot menu options/icons (targets), a hotspot menu options/icons (target) related to a value of setting active pixels (operating parameter) of the interactive television (electronic device); Figures 3A, 3B and paragraphs [0093], [0144]); an input operable to receive a user input (an input device to activate a click event via a user; paragraph [0077]); and upon receiving a user input setting focus to first target, applying the associated value to the setting for the silo associated with the first target (and upon providing user selection of a menu option/icon (first target), setting the active pixel values via a slide bar (applying the associated value to the setting) for a movies application and device inputs such as HDMI (silo) related to a menu option/icon (first target); paragraphs [0100], [0144]).

As to claim 11, Araki, in view of Morita, discloses the electronic device of claim 10. In addition, Araki discloses wherein, upon receiving the user input deselecting the first target as part of a cancel function, removing the applied associated value from the setting for the silo (where, upon providing a click action input device (user input), such as an "exit input" (cancel) function, changing the values via decreasing and/or increasing slide bar values related to an application and/or a device source input such as HDMI (silo) and moving back to a prior navigation configuration; paragraphs [0144]-[0146]).

As to claim 12, Araki, in view of Morita, discloses the electronic device of claim 10. In addition, Araki discloses at least one of the number of targets further comprise a user-determined value associated with at least one setting of the electronic device (one of the menu options/icons (targets) further includes user setting active pixels via increasing and/or decreasing values of a slide-bar (user determined value) related to user controlled iTV functions (electronic device); paragraphs [0144]-[0145]).

As to claim 13, Araki, in view of Morita, discloses the electronic device of claim 10. In addition, Araki discloses at least one sub-interface visually containing the first target and additional targets (a hotspots of menu (sub-interface) visually having the menu/icon (first target) and additional menu items/icon (targets); Figures 4-8, paragraph [0097]), whereby setting focus from a first target within the sub-interface to a second target not within the sub-interface causes the applied value associated with the setting to be preserved (where selecting or mousing over the hotspots (setting focus from a first target) within the menu items/icons to another menu item/icon in various hotspots (second target not within the sub-interface) causes the user set values via the slide bar setting to be confirm (preserved); paragraphs [0130], [0144]).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36678

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Previous Supplemental Box-***-

Claims 6 and 20 lack an inventive step under PCT Article 33(3) as being obvious over Araki in view of Morita, and further in view of US 2012/0120316 A1 (Lee).

As to claims 6 and 20, Araki, in view of Morita, discloses the method and instructions of claims 2 and 16, respectively. Araki, in view of Morita, fails to disclose wherein at least one of the number of targets is associated with settings which are preset settings. Lee discloses wherein at least one of the number of targets is associated with settings which are preset settings (where a number of menu screens or icons (targets) is related to preset items (settings which are preset settings); paragraph [0257]). It would have been obvious to one skilled in the art at the time of the invention to modify the Araki in view of Morita system to include wherein at least one of the number of targets is associated with settings which are preset settings, as taught by Lee, because doing so would make the Araki in view of Morita system provide for menu item setting in which the user is not permitted to edit.

Claim 14 lacks an inventive step under PCT Article 33(3) as being obvious over Araki in view of Morita and in further view of US 7,577,923 B2 to Beam, et al. (hereinafter 'Beam').

As to claim 14, Araki, in view of Morita, discloses the electronic device of claim 13. Araki, in view of Morita, fails to disclose setting focus from the first target to a third target, the third target being one of the additional targets within the sub-interface, causes the settings associated with the first target to be overwritten by the settings associated with the third target. Beam discloses setting focus from the first target to a third target, the third target being one of the additional targets within the sub-interface, causes the settings associated with the first target to be overwritten by the settings associated with the third target (selecting a view mode with a preferred setting (setting focus from the first target) within that view mode (additional targets within the sub-interface), causes the settings related to a mode (first) to toggle between an available mode and a preferred setting when selected and changes upon activation to indicate the currently selected mode (first target to be overwritten by the settings associated with the third target); Column 9, Lines 20-38). It would have been obvious to one skilled in the art at the time of the invention to modify the Araki in view of Morita system to include setting focus from the first target to a third target, the third target being one of the additional targets within the sub-interface, causes the settings associated with the first target to be overwritten by the settings associated with the third target, as taught by Beam, because doing so would make the Araki in view of Morita system provide for a preferred setting for each available view mode by changing the preferred setting via a user selection.

Claims 1-20 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: DOUGLAS W. SWARTZ
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-472-PCT	Date of mailing *(day/month/year)* 01 JUL 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/036804	International filing date *(day/month/year)* 16 April 2013
Applicant FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-472-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/036804	International filing date *(day/month/year)* 16 April 2013	(Earliest) Priority Date *(day/month/year)* 14 June 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 14A

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☒ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/036804

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 7/173 (2013.01)
USPC - 725/43
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(8) - H04N 5/45, 5/445; H04N 7/173 (2013.01)
USPC - 348/564, 565; 725/43, 51

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC- H04N 5/45, 5/445; H04N 7/173 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2008/0098433 A1 (HARDACKER et al) 24 April 2008 (24.04.2008) entire document.	1, 5, 6, 14, 21 ----- 2-4, 7-13, 15-20
Y	US 6,493,038 B1 (SINGH et al) 10 December 2002 (10.12.2002) entire document.	2, 7-13, 16-20
Y	US 2004/0237108 A1 (DRAZIN et al) 25 November 2004 (25.11.2004) entire document.	3, 4, 15
Y	WO 01/06788 A1 (ELLIS et al) 25 January 2001 (25.01.2001) entire document.	12, 13, 18, 19

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
05 June 2013	01 JUL 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: DOUGLAS W. SWARTZ
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	01 JUL 2013
Applicant's or agent's file reference 6583-472-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/036804	16 April 2013	14 June 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 7/173 (2013.01)
USPC - 725/43

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	05 June 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/036804

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/036804

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	2-4, 7-13, 15-20	YES
	Claims	1,5, 6, 14, 21	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-21	NO
Industrial applicability (IA)	Claims	1-21	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1, 5, 6, 14, 21, lack novelty under PCT Article 33(2) as being anticipated by Hardacker et al., hereinafter referred to as Hardacker.

Regarding claim 1, Hardacker discloses an Electronic Programming Guide (EPG) display for an intelligent television (TV), comprising a display on the intelligent TV, (figs.5 & 8 shows a television device 102 that accesses websites by utilizing the internet 702 and further a server constructs an Electronic Programming Guide (EPG) which is displayed on the television display 102 [interpreted as intelligent television], para 0246, 0247; figs 2 & 3 shows an EPG screenshot that displays television programming schedule on the EPG screen of the on screen displays (OSD's), para 0045, 0048), the display comprising:
a schedule portion accessible and/or configurable using an input device to display a schedule including past, current, and/or upcoming TV programs (figs 2 & 3 show an EPG guide with a section 60 [schedule portion] which provides the users television programs at particular date and time over a two week period of time [interpreted as a schedule including upcoming TV programs] with options to page from right to left and top to bottom to access contents and also provides the channel names for the respective television programs, para 0043, 0045-0047; a remote control which includes hot keys to access the screen is used to send commands to the set top box 106 by accessing the EPG, para 0048, 0075, 0076; a remote control includes buttons and has the functionality of clicking on the screen to select an icon on the menu, and further when a guide button is pressed on a remote control device the recorder becomes aware of the scheduled content is to be browsed from the EPG [interpreted as schedule portion accessible using an input device], para 0100, 0193);
and a banner portion configured to display EPG information related to a selected TV program in the schedule portion (figs 2 & 3 show an EPG guide with a section 64 [banner portion] which provides information content related to the television program being highlighted by the users selection in the EPG section 60 [schedule portion], and the section 64 provides entire detailed program information for the highlighted program [as we can see in the fig.2 the section 64 provides information about the television program "THREE WISHES" which is selected on the section 60], para 0047, 0074),
wherein the schedule and the displayed EPG information are built using EPG information aggregated from a plurality of EPG information sources (the receiver device such as a TV creates a database from information provided by the access device such as a set top box, each screen of the EPG is run and data is extracted, data includes name of the programs [EPG information source], obtaining the virtual numbers for channels such as HBO or CNN [EPG information source] and their content [EPG information sources], the TV stores this information in its own metadata database [aggregated EPG information] it uses these information to create its own EPG [EPG is built] and creates timers, further all the data which includes the scheduling data required to create the EPG comes from the access device, para 0048-0050; fig. 8 shows a OCR process initialization at step 354 service provider channel database is initialized and at step 358 it is determined that the 2 week guide for television channel information is out of date and updates it by getting data from the service provider database, para 0144, 0150, 0156-0162; figs 2 & 3 shows an EPG guide with a section 60 [schedule portion] which provides the users television programs at particular date and time over a two week period of time [interpreted as a schedule including upcoming TV programs] with options to page from right to left and top to bottom to access contents and also provides the channel names for the respective television programs, para 0043, 0045-0047).

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Regarding claim 14, Hardacker discloses a method of displaying Electronic Programming Guide (EPG) information on a intelligent television (TV) (a method is shown in figs.5 & 8 for a television device 102 that accesses websites by utilizing the internet 702 and further a server constructs an Electronic Programming Guide (EPG) which is displayed on the television display 102 [interpreted as intelligent television], abstract, para 0246, 0247; figs 2 & 3 shows an EPG screenshot that displays television programming schedule on the EPG screen of the on screen displays (OSD's), para 0045, 0048), comprising:
building and displaying aggregated EPG information from a plurality of EPG sources on a screen of the intelligent TV, the EPG sources comprise one or more of embedded EPG information in a content feed, an Internet EPG information source, and an EPG channel (the receiver device such as a TV creates a database from information provided by the access device such as a set top box, each screen of the EPG is run and data is extracted, data includes name of the programs [in reference to the Applicant's Specification on para 0171 which states that the embedded EPG information contains information which includes show name interpreted as embedded EPG information in a content feed], obtaining the virtual numbers for channels such as HBO or CNN [EPG information source] and their content [EPG information sources], the TV stores this information in its own metadata database [aggregated EPG information] it uses these information to create its own EPG [EPG is built] and creates timers, further all the data which includes the scheduling data required to create the EPG comes from the access device, para 0048-0050; fig. 8 shows a OCR process initialization at step 354 service provider channel database is initialized and at step 358 it is determined that the 2 week guide for television channel information is out of date and updates it by getting data from the service provider database, para 0144, 0150, 0156-0162; figs 2 & 3 shows an EPG guide displayed with a section 60 which provides the users television programs at particular date and time over a two week period of time with options to page from right to left and top to bottom to access contents and also provides the channel names for the respective television programs, para 0043, 0045-0047).

Regarding claim 5, Hardacker further teaches wherein the banner portion comprises one or more of a thumbnail, a name, a detailed description, a start and stop time, and a video and/or audio format for the selected TV program (figs 2 & 3 show an EPG guide with a section 64 [banner portion] which provides information content related to the television program being highlighted by the users selection in the EPG section 60 [schedule portion], and the section 64 provides entire detailed program information for the highlighted program [as we can see in the fig.2 the section 64 provides information about the television program "THREE WISHES" [interpreted as a name of the television program] which is selected on the section 60], para 0047, 0074).

Regarding claim 6, Hardacker further teaches wherein the EPG information sources comprise one or more of embedded EPG information in a content feed, an Internet EPG information source, and an EPG channel (the receiver device such as a TV creates a database from information provided by the access device such as a set top box, each screen of the EPG is run and data is extracted, data includes name of the programs [in reference to the Applicant's Specification on para 0171 which states that the embedded EPG information contains information which includes show name interpreted as embedded EPG information in a content feed], obtaining the virtual numbers for channels such as HBO or CNN [EPG information source] and their content [EPG information sources], the TV stores this information in its own metadata database [aggregated EPG information] it uses these information to create its own EPG [EPG is built] and creates timers, further all the data which includes the scheduling data required to create the EPG comes from the access device, para 0048-0050).

Regarding claim 21, Hardacker further teaches a tangible and non-transient computer readable medium comprising microprocessor executable instructions that, when executed by the microprocessor, perform the steps of claim 14 (a computer readable storage medium includes a processor for executing programming instructions, para 0285).

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Claims 2, 7-11, 16, 17, 20, lack an inventive step under PCT Article 33(3) as being obvious over Hardacker in view of Singh et al., hereinafter referred to as Singh.

Regarding claim 7, Hardacker discloses an Electronic Programming Guide (EPG) display for an intelligent television (TV), comprising a partial-screen display of the intelligent TV (figs.5 & 8 shows a television device 102 that accesses websites by utilizing the internet 702 and further a server constructs an Electronic Programming Guide (EPG) which is displayed on the television display 102 [interpreted as intelligent television], para 0246, 0247; figs 2 & 3 shows an EPG screenshot that displays television programming schedule on the EPG screen of the on screen displays (OSD's) [fig 2 further shows a part of screen which includes an active video which is being played, and the other part includes the program channel guide information interpreted as partial screen display], para 0045, 0048),
the partial-screen display comprising displayed EPG information regarding a TV program (figs 2 & 3 show an EPG guide with a section 60 which provides the users television programs at particular date and time over a two week period of time with options to page from right to left and top to bottom to access contents and also provides the channel names for the respective television programs, and further section 64 provides information content related to the television program being highlighted by the users selection in the EPG section 60 [fig 2 further shows a part of screen which includes an active video which is being played, and the other part includes the program channel guide information interpreted as partial screen display], para 0043, 0045-0047),
wherein the displayed EPG information is built using EPG information aggregated from a plurality of EPG information sources, the EPG information sources comprising one or more of embedded EPG information in a content feed, an Internet EPG information source, and an EPG channel (the receiver device such as a TV creates a database from information provided by the access device such as a set top box, each screen of the EPG is run and data is extracted, data includes name of the programs [in reference to the Applicant's Specification on para 0171 which states that the embedded EPG information contains information which includes show name interpreted as embedded EPG information in a content feed], obtaining the virtual numbers for channels such as HBO or CNN [EPG information source] and their content [EPG information sources], the TV stores this information in its own metadata database [aggregated EPG information] it uses these information to create its own EPG [EPG is built] and creates timers, further all the data which includes the scheduling data required to create the EPG comes from the access device, para 0048-0050; fig. 8 shows a OCR process initialization at step 354 service provider channel database is initialized and at step 358 it is determined that the 2 week guide for television channel information is out of date and updates it by getting data from the service provider database, para 0144, 0150, 0156-0162; figs 2 & 3 shows an EPG guide with a section 60 which provides the users television programs at particular date and time over a two week period of time with options to page from right to left and top to bottom to access contents and also provides the channel names for the respective television programs, para 0043, 0045-0047), but lacks the teaching of a partial-screen display on an in-use display of the intelligent TV.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches a partial-screen display on an in-use display of the intelligent TV (fig. 4 shows a television receiver with two on board tuners [intelligent TV] provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG which the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed, col.2, lines 57- 67- col.3, lines 1-30), the partial-screen display comprises EPG information regarding a TV program (the right half screen 23 [a partial-screen display] contains the interactive EPG which the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed, col.2, lines 57- 67- col.3, lines 1-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate a partial-screen display on an in-use display of the intelligent TV, the partial-screen display comprising displayed EPG information regarding a TV program into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).

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Regarding claim 2, Hardacker further teaches wherein the display is a full-screen display and wherein the full-screen display further comprises a TV portion configured to display a TV program (figs 2 & 3 show an EPG guide [full screen display] with a section 60 which provides the users television programs at particular date and time over a two week period of time with options to page from right to left and top to bottom to access contents and also provides the channel names for the respective television programs, and further a window on the top right is show which provides active video [interpreted as TV portion configured to display a TV program], para 0043, 0045-0047), but lacks the teaching of comprises a live TV portion configured to display a selected TV program.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches comprises a live TV portion configured to display a selected TV program (fig. 4 shows a television receiver with two on board tuners [intelligent TV] provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, in the section 23 the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed, the EPG includes the PIP window and displays a currently telecast program and the viewer changes the program in the PIP by cursoring through the list of currently telecast programs [live TV portion] in the EPG, col.1, lines 39-49, col.2, lines 57- 67- col.3, lines 1-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate comprises a live TV portion configured to display a selected TV program into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).

Regarding claim 8, Hardacker lacks the teaching of wherein the partial-screen display overlays the in-use display of the intelligent TV.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches wherein the partial-screen display overlays the in-use display of the intelligent TV (fig. 4 shows a television receiver with two on board tuners [intelligent TV] provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG which the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed [fig. 4 shows the partial screen display overlays the in use display], col.2, lines 57- 67- col.3, lines 1-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate wherein the partial-screen display overlays the in-use display of the intelligent TV into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh Col. 1, lines 39-53).

Regarding claim 9, Hardacker lacks the teaching of wherein the in-use display comprises a currently playing TV program.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches wherein the in-use display comprises a playing TV program (fig. 4 shows a television receiver with two on board tuners [intelligent TV] provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG, the section 22 which is the in-use display receives a video program from an on board tuner and provides the video source 1 [interpreted as playing a TV program], col.2, lines 57- 67- col.3, lines 1-30). Furthermore, Singh teaches wherein the display comprises a currently playing TV program (in the section 23 the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed, the EPG includes the PIP window and displays a currently telecast program and the viewer changes the program in the PIP by cursoring through the list of currently telecast programs in the EPG, col.1, lines 39-49, col.2, lines 57- 67- col.3, lines 1-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate wherein the in-use display comprises a currently playing TV program into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).

Regarding claim 10, Hardacker lacks the teaching of wherein the partial-screen display resizes the in-use display.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches herein the partial-screen display resizes the in-use display (a television is provided with a remote control unit to control the television and scan through the EPG, the remote includes an EPG button upon pressing that button the EPG section of the screen comes up to present an multi window screen to the user as shown in fig.4 [as upon the user selection of the EPG button the screen becomes and multi window screen it is inherent that the partial screen display is resizes the in use display], col.3, lines 11-30; fig. 4 shows a television receiver with two on board tuners provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG, the section 22 which is the in-use display receives a video program from an on board tuner and provides the video source 1, col.2, lines 57- 67- col.3, lines 1-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate wherein the partial-screen display resizes the in-use display into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).

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Regarding claim 11, Hardacker lacks the teaching of wherein the partial-screen display comprises a banner located at a top of the in-use display.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches wherein the partial-screen display comprises a banner located at the top of the display (fig. 4 shows a television receiver with two on board tuners provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG which the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) display [the PIP is interpreted as banner located on the top of the display], col.2, lines 57- 67- col.3, lines 1-30; the PIP part of the image is arbitrarily positioned anywhere within the main picture and can be resized, col.1, lines 25-30). Furthermore, to establish the banner to be located on top of the in-use display is a matter of design choice and would have been a known practice in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate wherein the partial-screen display comprises a banner located at a top of the in-use display into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).

Regarding claim 16, Hardacker lacks the teaching of further comprising displaying an in-use portion on the screen, wherein displaying the aggregated EPG information comprises displaying the aggregated EPG information on a partial-screen portion of the screen in combination with the in-use portion.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches comprising displaying an in-use portion on the screen, wherein displaying the aggregated EPG information comprises displaying the aggregated EPG information on a partial-screen portion of the screen in combination with the in-use portion (fig. 4 shows a television receiver with two on board tuners provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG, the section 22 which is the in-use display receives a video program from an on board tuner and provides the video source 1 [interpreted as displaying in use portion in combination with the partial screen portion], col.2, lines 57- 67- col.3, lines 1-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate w comprising displaying an in-use portion on the screen, wherein displaying the aggregated EPG information comprises displaying the aggregated EPG information on a partial-screen portion of the screen in combination with the in-use portion into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).

Regarding claim 17, Hardacker lacks the teaching of wherein the in-use portion comprises a currently playing TV program.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches wherein the in-use display comprises a playing TV program (fig. 4 shows a television receiver with two on board tuners [intelligent TV] provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG, the section 22 which is the in-use display receives a video program from an on board tuner and provides the video source 1 [interpreted as playing a TV program], col.2, lines 57- 67- col.3, lines 1-30). Furthermore, Singh teaches wherein the display comprises a currently playing TV program (in the section 23the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed, the EPG includes the PIP window and displays a currently telecast program and the viewer changes the program in the PIP by cursoring through the list of currently telecast programs in the EPG, col.1, lines 39-49, col.2, lines 57- 67- col.3, lines 1-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate wherein the in-use display comprises a currently playing TV program into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).

Regarding claim 20, Hardacker lacks the teaching of wherein the partial-screen portion comprises a banner located at a top of the in-use portion.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches wherein the partial-screen display comprises a banner located at the top of the display portion (fig. 4 shows a television receiver with two on board tuners provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG which the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) display [the PIP is interpreted as banner located on the top of the display], col.2, lines 57- 67- col.3, lines 1-30; the PIP part of the image is arbitrarily positioned anywhere within the main picture and can be resized, col.1, lines 25-30). Furthermore, to establish the banner to be located on top of the in-use portion is a matter of design choice and would have been a known practice in the art. It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate wherein the partial-screen display comprises a banner located at a top of the in-use portion into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).

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Claims 3, 4, 15, lack an inventive step under PCT Article 33(3) as being obvious over Hardacker in view of Drazin et al., hereinafter referred to as Drazin.

Regarding claim 3, Hardacker lacks the teaching of wherein the display further comprises hot key functionalities accessible for one or more TV programs in the schedule.
Drazin is in the field of an electronic program guide for television programs presenting a list of programs on screen (abstract) and teaches wherein the display further comprises hot key functionalities accessible for one or more TV programs in the schedule (figs. 14b & 14c shows an EPG guide and which includes a button 720 "Keep" [interpreted as hot keys] which is displayed on the top of the screen here, a user selects the button 720 which results in action of labeling a program or series title which is in focus as kept and causes the programs to be kept in stack of 'kept' programs, para 0184). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Drazin to incorporate wherein the display further comprises hot key functionalities accessible for one or more TV programs in the schedule into the invention of Hardacker. The motivation would have been to provide an improved and effective EPG for a television system (see Drazin para 0001-0004).

Regarding claim 4, Hardacker lacks the teaching of wherein the hot key functionalities comprises one or more of displaying currently playing TV programs, assigning categories to the selected TV program, managing the selected TV program, and marking the selected TV program.
Drazin is in the field of an electronic program guide for television programs presenting a list of programs on screen (abstract) and teaches wherein the hot key functionalities comprises one or more of displaying currently playing TV programs, assigning categories to the selected TV program, managing the selected TV program, and marking the selected TV program (figs. 14b & 14c shows an EPG guide and which includes a button 720 "Keep" [interpreted as hot keys] which is displayed on the top of the screen here, a user selects the button 720 which results in action of labeling a program or series title which is in focus as kept and causes the programs to be kept in stack of 'kept' programs [the action of labeling is interpreted as marking the selected TV program], para 0184). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Drazin to incorporate wherein the hot key functionalities comprises one or more of displaying currently playing TV programs, assigning categories to the selected TV program, managing the selected TV program, and marking the selected TV program into the invention of Hardacker. The motivation would have been to provide an improved and effective EPG for a television system (see Drazin para 0001-0004).

Regarding claim 15, Hardacker further teaches wherein displaying the aggregated EPG information comprises displaying a combination of the aggregated EPG information and a schedule including current, and upcoming TV programs on a full-screen portion of the screen (figs 2 & 3 show an EPG guide with a section 60 [schedule portion] which provides the users television programs at particular date and time over a two week period of time [interpreted as a schedule including upcoming TV programs] with options to page from right to left and top to bottom to access future television programing contents and also provides the channel names for the respective television programs, para 0043, 0045-0047; the receiver device such as a TV creates a database from information provided by the access device such as a set top box, each screen of the EPG is run and data is extracted, data includes name of the programs, obtaining the virtual numbers for channels such as HBO or CNN and their content, the TV stores this information in its own metadata database [aggregated EPG information] it uses these information to create its own EPG which displays all the available current and future contents [current and upcoming TV programs], further all the data which includes the scheduling data required to create the EPG comes from the access device, para 0048-0050), wherein the schedule is accessible and configurable using an input device (a remote control which includes hot keys to access the screen is used to send commands to the set top box 106 by accessing the EPG, para 0048, 0075, 0076; a remote control includes buttons and has the functionality of clicking on the screen to select an icon on the menu, and further when a guide button is pressed on a remote control device the recorder becomes aware of the scheduled content is to be browsed from the EPG [interpreted as schedule portion accessible using an input device], para 0100, 0193), and wherein the schedule is built from the aggregated EPG information (the receiver device such as a TV creates a database from information provided by the access device such as a set top box, each screen of the EPG is run and data is extracted, data includes name of the programs, obtaining the virtual numbers for channels such as HBO or CNN [EPG information source] and their content, the TV stores this information in its own metadata database [aggregated EPG information] it uses these information to create its own EPG [EPG is built] and creates timers, further all the data which includes the scheduling data required to create the EPG comes from the access device, para 0048-0050), but lacks the teaching of the schedule includes past TV programs and wherein the schedule is accessible and configurable using an input device. Drazin is in the field of an electronic program guide for television programs presenting a list of programs on screen (abstract) and teaches wherein the schedule is accessible and configurable using an input device (a user moves a cursor [input device] onto a desired program and selects the "schedule" option in the EPG of fig.10, here the highlighted program "Football Italia" is to be repeated for the user and the viewer is presented with the option of recording the program and upon selection of "record" the program is setup to be recorded, para 0158, 0159, 0171). Furthermore, EPG schedules having past TV programs would have been a well known practice in the art and a matter of design choice. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Drazin to incorporate wherein the schedule is accessible and configurable using an input device into the invention of Hardacker. The motivation would have been to provide an improved and effective EPG for a television system and to provide the users informention on recently broadcast TV programs (see Drazin para 0001-0004).

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Claims 12, 13, 18, 19, lack an inventive step under PCT Article 33(3) as being obvious over Hardacker in view of Singh and further in view of Ellis et al., hereinafter referred to as Ellis.

Regarding claim 12, Hardacker lacks the teaching of wherein the partial-screen display comprises an EPG information portion displaying the displayed EPG information located to the side of the in-use display and comprising a button portion having selectable buttons for accessing one or more of scenes, audio tracks, and subtitle tracks in the currently playing TV program.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches wherein the partial-screen display comprises an EPG information portion displaying the displayed EPG information located to the side of the in-use display (fig. 4 shows a television receiver with two on board tuners provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG which the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed on the side, col.2, lines 57- 67- col.3, lines 1-30) and comprising a button portion having selectable buttons for accessing the currently playing TV program (in the section 23the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed, the EPG includes the PIP window and displays a currently telecast program and the viewer changes the program in the PIP by cursoring through the list of currently telecast programs in the EPG, col.1, lines 39-49, col.2, lines 57- 67- col.3, lines 1-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate wherein the partial-screen display comprises an EPG information portion displaying the displayed EPG information located to the side of the in-use display into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).
Ellis is in the field of an interactive television program guide that provides users with opportunity to select languages for playing television programs (abstract) and teaches wherein the display comprises information portion comprising a button portion having selectable buttons for accessing one or more of scenes, audio tracks, and subtitle tracks in the TV program (figs 7a & 7b shows a information screen 161 which provides information for a program, the user gets more information about a program that he is watching by the info key and the user accesses various program guide functions and this includes button 157 which provides the user to select different languages which the user desires from a list of languages available to the user [select from a list of language is interpreted as selectable buttons for accessing audio tracks], page 25, lines 7-35, page 26, lines 1-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Ellis to incorporate wherein the display comprises information portion comprising a button portion having selectable buttons for accessing one or more of scenes, audio tracks, and subtitle tracks in the TV program into the invention of Hardacker. The motivation would have been to provide the users with an optimized information guide for better accessibility.

Regarding claim 13, Hardacker further teaches comprising a schedule for a channel playing the currently playing TV program (figs 2 & 3 show an EPG guide with a section 60 [schedule portion] which provides the users television programs at particular date and time over a two week period of time [interpreted as a schedule] with options to page from right to left and top to bottom to access contents and also provides the channel names for the respective television programs [fig. 2 shows the schedule for currently selected channel 4 NBC which is currently playing the television program "Three Wishes"], para 0043, 0045-0047; fig. 14 shows an image displaying details of a currently playing program channel and provides the schedule for it, para 0195, 0222).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/036804

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 18, Hardacker lacks the teaching of wherein the partial-screen portion is located to the side of the in-use portion and further comprises a button portion having at least one selectable button for accessing one or more of scenes, audio tracks, and subtitle tracks in the currently playing TV program.
Singh is in the field of a television receiver that displays two video programs and an electronic program guide simultaneously as a split screen (abstract, fig.4) and teaches wherein the partial-screen display comprises an EPG information portion displaying the displayed EPG information located to the side of the in-use display (fig. 4 shows a television receiver with two on board tuners provides an output screen 21 with a left hand screen 22 [an in-use display] which contains a first video program received from a video source, and the right half screen 23 [a partial-screen display] contains the interactive EPG which the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed on the side, col.2, lines 57- 67- col.3, lines 1-30) and comprising a button portion having selectable buttons for accessing the currently playing TV program (in the section 23the user can scroll through and select a program from a plurality of program channels which is viewed on the picture in picture (PIP) simultaneously with the video source 1 being viewed, the EPG includes the PIP window and displays a currently telecast program and the viewer changes the program in the PIP by cursoring through the list of currently telecast programs in the EPG, col.1, lines 39-49, col.2, lines 57- 67- col.3, lines 1-30). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Singh to incorporate wherein the partial-screen display comprises an EPG information portion displaying the displayed EPG information located to the side of the in-use display into the invention of Hardacker. The motivation would have been to provide the user with the function to watch a video program while scrolling through an interactive EPG for selecting programs (see Singh, Col. 1, lines 39-53).
Ellis is in the field of an interactive television program guide that provides users with opportunity to select languages for playing television programs (abstract) and teaches wherein the display comprises information portion comprising a button portion having selectable buttons for accessing one or more of scenes, audio tracks, and subtitle tracks in the TV program (figs 7a & 7b shows a information screen 161 which provides information for a program, the user gets more information about a program that he is watching by the info key and the user accesses various program guide functions and this includes button 157 which provides the user to select different languages which the user desires from a list of languages available to the user [select from a list of language is interpreted as selectable buttons for accessing audio tracks], page 25, lines 7-35, page 26, lines 1-11). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Ellis to incorporate wherein the display comprises information portion comprising a button portion having selectable buttons for accessing one or more of scenes, audio tracks, and subtitle tracks in the TV program into the invention of Hardacker. The motivation would have been to provide the users with an optimized information guide for better accessibility.

Regarding claim 19, Hardacker further teaches wherein the partial-screen portion further comprises a schedule for a channel playing the currently playing TV program (figs 2 & 3 show an EPG guide with a section 60 [schedule portion] which provides the users television programs at particular date and time over a two week period of time [interpreted as a schedule] with options to page from right to left and top to bottom to access contents and also provides the channel names for the respective television programs [fig. 2 shows the schedule for currently selected channel 4 NBC which is currently playing the television program "Three Wishes"], para 0043, 0045-0047; fig. 14 shows an image displaying details of a currently playing program channel and provides the schedule for it, para 0195, 0222).

Claims 1-21 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Thaine Lennox-Gentle
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-478-PCT	Date of mailing *(day/month/year)* 17 JAN 2014 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/55405	International filing date *(day/month/year)* 16 August 2013 (16.08.2013)
Applicant Flextronics AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-478-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55405	International filing date *(day/month/year)* 16 August 2013 (16.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 14A

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55405

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/048; H04N 21/40; H04B 1/16 (2014.01)
USPC - 715/836; 715/835; 348/553
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(8) Classification(s): G06F 3/048; H04N 21/40; H04B 1/16 (2014.01)
USPC Classification(s): 715/836, 835; 348/553

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); Google Patents; Google Scholar; ProQuest; KEYWORDS: television, tv, selection, favorite, history, previous, system, channel

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2009/0204929 A1 (BAURMANN, T. et al.) August 13, 2009; figure 1-3; paragraph [0008, 0013, 0014, 0016-0020, 0024-0032, 0039, 0063]	1-4, 7-17 ---- 5, 6, 18-20
Y	US 6,629,077 B1 (ARLING, P. et al.) September 30, 2003; abstract; figure 3 and 4; column 2, line 16; column 3, line 25; column 4, lines 1-10	5, 6, 18, 19
Y	US 2009/0199237 (WHITE, S. et al.) August 6, 2009; figure 7; column 2, line 47	20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
5 January 2014 (05.01.2014)	17 JAN 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Thaine Lennox-Gentle
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	17 JAN 2014
Applicant's or agent's file reference 6583-478-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55405	16 August 2013 (16.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/048; H04N 21/40; H04B 1/16 (2014.01)
USPC - 715/836; 715/835; 348/553

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- [x] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [x] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	05 January 2014 (05.01.2014)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55405

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
   - ☒ the international application in the language in which it was filed.
   - ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
   a. (means)
      - ☐ on paper
      - ☐ in electronic form

   b. (time)
      - ☐ in the international application as filed
      - ☐ together with the international application in electronic form
      - ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55405

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	5, 6, 18-20	YES
	Claims	1-4, 7-17	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-4 and 7-17 lack novelty under PCT Article 33(2) as being anticipated by US 2009/0204929 A1 to BAURMANN, T. et al. (hereinafter 'Baurmann').

As per claim 1, Baurmann discloses a television system comprising: a screen (television screen [screen]; figure 2; paragraph [0008]); a memory (memory [memory]; figure 1; paragraph [0013]); a user input module for receiving a user navigation input from a user input source (IR receiver for receiving wireless signal from hand-held remote [user input module]; paragraph [0014]); a navigable user interface comprising: a list of two or more subsets of selectable channel tiles on the screen (favorite objects displayed in plurality of sub-groups on screen [two or more subsets]; figure 2; paragraph [0063]), the list being displayed laterally on the screen in a single row (list is displayed laterally [displayed laterally]; figure 2) and each of the subsets of selectable channel tiles containing at least one selectable channel tile (each sub-group contains one selectable tile [at least one selectable channel tile]; figure 2; paragraph [0063]); and a focus responsive to a user navigation input and indicating a selectable channel tile to be selected (focused icon in response to a user command [focus]; figure 2; paragraph [0008, 0018, 0019]); wherein each selectable channel tile is associated with a channel available for display by the television system (favorite objects are associated with respective TV channels to display [channel tile associated with channel]; figure 2, 3; paragraph [0016-0018]) and selection of a selectable channel tile causes the television system to display the channel associated with the selected channel tile (should the user manipulate, e.g., the enter key on the remote, the processor automatically causes the TV channel associated with the object to be tuned to and displayed [selection causes channel to be displayed]; figure 2; paragraph [0018]).

As per claim 2, Baurmann discloses the system of claim 1. Baurmann further discloses wherein only a portion of the list of two or more subsets of selectable channel tiles are displayed on the screen (only portion of favorite object displayed at edges of lateral menu [only portion displayed]; figure 2).

As per claim 3, Baurmann discloses the system of claim 1. Baurmann further discloses wherein the user data comprises at least a user-defined list of favorite channels (list of favorite channels selected by user [user-defined list of favorite channels]; figure 2, 3; paragraph [0016]) and a history of channels previously viewed by a user (history list [history of channels]; paragraph [0020, 0024]), and further wherein the two or more subsets of selectable channel tiles contain at least a first and second subset of selectable channel tiles (plurality of favorite objects contain plurality of selectable channel tiles [first and second subset of selectable channel tiles]; figure 2; paragraph [0063]), the first subset containing a list of selectable channel tiles corresponding to the user-defined list of favorite channels (favorite channel list displayed under TV channel favorite object [first subset favorite list]; figure 2; paragraph [0025-0032]) and the second subset containing a dynamically defined list of selectable channel tiles, the channel tiles of the second subset being defined based upon one or more of the user-defined list of favorite channels and a history of channels previously viewed by a user (favorite list and history list displayed under TV channel favorite object [second subset one or more of favorite list and history of channels]; figure 2, 3; paragraph [0020, 0024-0032, 0039]).

As per claim 4, Baurmann discloses the system of claim 1. Baurmann further discloses wherein the user input source is a remote control comprising a directional pad and a selection button (remote with D-pad [remote]; figure 1).

As per claim 7, Baurmann discloses a method of providing a user-interface for a television system comprising: displaying a list of two or more selectable channel tiles on a display (favorite objects displayed in plurality of sub-groups on screen [two or more subsets]; figure 2; paragraph [0063]); displaying a focus on a first of the two or more selectable channel tiles (focused icon in response to a user command [focus]; figure 2; paragraph [0008, 0018, 0019]); receiving a user input from a user input source (IR receiver for receiving wireless signal from hand-held remote [user input module]; paragraph [0014]); determining the type of user input received (processor determines the type of input received [determining input received]; figure 1, 3; paragraph [0014, 0017, 0018, 0022, 0024]); changing the focus from the first selectable channel tile to a second selectable channel tile when the user input indicates a directional change of the focus (user can manipulate remote control until object is focused object available for selection [changing focus using direction change]; figure 2; paragraph [0007]); displaying the channel associated with the currently focused selectable channel tile when the user input indicated selection of the currently focused selectable channel tile (should the user manipulate, e.g., the enter key on the remote, the processor automatically causes the TV channel associated with the object to be tuned to and displayed [selection causes channel to be displayed]; figure 2; paragraph [0018]).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55405

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

-***-Continued from Box V: Citations and Explanations-***-

As per claim 8, Baurmann discloses the method of claim 7. Baurmann further discloses wherein the step of displaying a list of two or more selectable channel tiles on a display further comprises: categorizing the list of two or more selectable channel tiles into two subsets of selectable channel tiles (plurality of favorite objects contain plurality of selectable channel tiles [first and second subset of selectable channel tiles]; figure 2; paragraph [0063]); defining the first subset from a list of favorite channels (favorite channel list displayed under TV channel favorite object [first subset favorite list]; figure 2; paragraph [0025-0032]) and defining the second subset based upon one or more of the list of favorite channels and a history of channels previously viewed by a user (favorite list and history list displayed under TV channel favorite object [second subset one or more of favorite list and history of channels]; figure 2, 3; paragraph [0020, 0024-0032, 0039]); displaying the two subsets of selectable channel tiles laterally on the display in a single row (list is displayed laterally [displayed laterally] in a single row; figure 2) and displaying a demarcation indicator between the two subsets of selectable channel tiles (focused channel separates plurality of unselected objects in lateral row [displaying demarcation indicator]; figure 2).

As per claim 9, Baurmann discloses the method of claim 7. Baurmann further discloses, wherein changing the focus to an adjacent selectable tile results in only a portion of the list of two or more selectable channel tiles being displayed on the screen (only portion of favorite object displayed at edges of lateral menu [only portion displayed]; figure 2).

As per claim 10, Baurmann discloses the method of claim 7. Baurmann further discloses wherein the user input source is a remote control comprising at least a directional pad and a selection button (remote with D-pad and selection button [remote]; figure 1), further wherein the user input indicating a directional change of the focus is indicated by the directional pad and the user input indicating a selection of the currently focused selectable channel tile is indicated by the selection button (user can manipulate remote control until object is focused object available for selection by selection button [changing focus using direction change and selecting with selection button]; figure 2; paragraph [0007]).

As per claim 11, Baurmann discloses a non-transitory, tangible computer readable storage medium (memory [memory]; figure 1; paragraph [0013]), encoded with processor readable instructions (processor for processing software [processor readable instructions]; paragraph [0013]) which cause a computer to perform a method of providing a user-interface for a television system, the instructions comprising: instructions to display a list of two or more selectable channel tiles on a display (favorite objects displayed in plurality of sub-groups on screen [two or more subsets]; figure 2; paragraph [0063]); instructions to display a focus on a first of the two or more selectable channel tiles (focused icon in response to a user command [focus]; figure 2; paragraph [0008, 0018, 0019]); instructions to receive a user input from a user input source (IR receiver for receiving wireless signal from hand-held remote [user input module]; paragraph [0014]); instructions to determine the type of user input received (processor determines the type of input received [determining input received]; figure 1, 3; paragraph [0014, 0017, 0018, 0022, 0024]); instructions to change the focus from the first selectable channel tile to a second selectable channel tile when the user input indicates a directional change of the focus (user can manipulate remote control until object is focused object available for selection by selection button [changing focus using direction change and selecting with selection button]; figure 2; paragraph [0007]); and instructions to display the channel associated with the currently focused selectable channel tile when the user input indicated selection of the currently focused selectable channel tile (should the user manipulate, e.g., the enter key on the remote, the processor automatically causes the TV channel associated with the object to be tuned to and displayed [selection causes channel to be displayed]; figure 2; paragraph [0018]).

As per claim 12, Baurmann discloses the non-transitory, tangible computer readable storage medium of claim 11. Baurmann further discloses wherein the list of two or more selectable channel tiles are displayed laterally on the display in a single row (list is displayed laterally [displayed laterally]; figure 2).

As per claim 13, Baurmann discloses the non-transitory, tangible computer readable storage medium of claim 11. Baurmann further discloses wherein changing the focus to an adjacent selectable tile results in only a portion of the list of two or more selectable channel tiles being displayed on the screen (only portion of favorite object displayed at edges of lateral menu [only portion displayed]; figure 2).

As per claim 14, Baurmann discloses the non-transitory, tangible computer readable storage medium of claim 12. Baurmann further discloses wherein the list of two or more selectable channel tiles contains at least two subsets of selectable channel tiles (plurality of favorite objects contain plurality of selectable channel tiles [first and second subset of selectable channel tiles]; figure 2; paragraph [0063]).

As per claim 15, Baurmann discloses the non-transitory, tangible computer readable storage medium of claim 14. Baurmann further discloses wherein the at least two subsets of selectable channel tiles contain a first and second subset of selectable channel tiles (plurality of favorite objects contain plurality of selectable channel tiles [first and second subset of selectable channel tiles]; figure 2; paragraph [0063]), the first subset containing a static list of selectable channel tiles (favorite channel list displayed under TV channel favorite object where list is specified by user and cannot be changed unless manually changed by user [first subset favorite list]; figure 2; paragraph [0025-0032]) and the second subset containing a dynamically chosen list of selectable tiles (favorite list and history list displayed under TV channel favorite object where history list continually changes based upon recently viewed channels [second subset one or more of favorite list and history of channels]; figure 2, 3; paragraph [0020, 0024-0032, 0039]).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55405

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

-***-Continued from Previous Supplemental Box-***-

As per claim 16, Baurmann discloses the non-transitory, tangible computer readable storage medium of claim 15. Baurmann further discloses the instructions including: instructions to define the first subset from a list of favorite channels (favorite channel list displayed under TV channel favorite object [first subset favorite list]; figure 2; paragraph [0025-0032]) and; instructions to define the second subset by recommending channels based upon one or more of the list of favorite channels and a history of channels previously viewed by a user (favorite list and history list displayed under TV channel favorite object [second subset one or more of favorite list and history of channels]; figure 2, 3; paragraph [0020, 0024-0032, 0039]).

As per claim 17, Baurmann discloses the non-transitory, tangible computer readable storage medium of claim 11. Baurmann further discloses wherein the user input source is a remote control comprising at least a directional pad and a selection button (remote with D-pad and selection button [remote]; figure 1), and further wherein the user input indicating a directional change of the focus is indicated by the directional pad and the user input indicating a selection of the currently focused selectable channel tile is indicated by the selection button (user can manipulate remote control until object is focused object available for selection by selection button [changing focus using direction change and selecting with selection button]; figure 2; paragraph [0007]).

Claims 5, 6, 18, and 19 lack an inventive step under PCT Article 33(3) as being obvious over Baurmann in view of US 6,629,077 B1 to ARLING, P. et al. (hereinafter 'Arling').

As per claims 5 and 18, Baurmann discloses the system and non-transitory, tangible computer readable storage medium of claims 1 and 11, respectively. However, Baurmann fails to disclose further comprising a microphone, and wherein the user input source is a voice command. However, Arling discloses further comprising a microphone, and wherein the user input source is a voice command (voice command received by microphone within universal remote [microphone for receiving voice command]; abstract; figure 3 and 4; column 4, lines 1-10). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system and non-transitory, tangible computer readable storage medium of Baurmann to include further comprising a microphone, and wherein the user input source is a voice command, as taught by Arling, because it is advantageous to have the ability to simplify remote input by utilizing voice commands.

As per claims 6 and 19, Baurmann discloses the system and non-transitory, tangible computer readable storage medium of claims 1 and 11, respectively. Baurmann fails to disclose wherein at least a portion of the screen is capable of receiving a touch input and the user input source is a touch input. However, Arling discloses wherein at least a portion of the screen is capable of receiving a touch input and the user input source is a touch input (touch screen input means [touch screen]; column 2, line 16; column 3, line 25). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system and non-transitory, tangible computer readable storage medium of Baurmann to include wherein at least a portion of the screen is capable of receiving a touch input and the user input source is a touch input, as taught by Arling, because it is advantageous to have the ability to simplify remote input by utilizing touch screen and touch screen input commands.

Claim 20 lacks an inventive step under PCT Article 33(3) as being obvious over Baurmann in view of US 2009/0199237 A1 to WHITE, S. et al. (hereinafter 'White').

As per claim 20, Baurmann discloses the non-transitory, tangible computer readable storage medium of claim 16. However, Baurmann fails to disclose wherein at least one of the channel tiles in the second subset of channel tiles is associated with a channel that is currently playing a program containing recommended content. However, White discloses wherein at least one of the channel tiles in the second subset of channel tiles is associated with a channel that is currently playing a program containing recommended content (outputting program recommendations to user via display [recommended content tile]; figure 7; column 2, line 47). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the non-transitory, tangible computer readable storage medium of Baurmann to include wherein at least one of the channel tiles in the second subset of channel tiles is associated with a channel that is currently playing a program containing recommended content, as taught by White, because it is advantageous to automatically suggest personalized recommendations to television users for the purpose of increasing ease of use for television users.

Claims 1-20 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: DEAN N. REINHARDT
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 11 MAR 2014
Applicant's or agent's file reference 6583-479-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/055278	International filing date *(day/month/year)* 16 August 2013
Applicant FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-479-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055278	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 14

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055278

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 7/00 (2014.01)
USPC - 725/46
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(8) - G06F 3/00; G06Q 30/00; H04N 5/00, 7/00 (2014.01)
USPC - 725/1, 37, 46, 86

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G06Q 30/00, H04N 5/00, 7/00 (2013.01)

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2010/0050219 A1 (ANGIOLILLO et al) 25 February 2010 (25.02.2010) entire document.	1-21
Y	US 2011/0047572 A1 (HILL et al) 24 February 2011 (24.02.2011) entire document.	1-21
Y	US 7,904,924 B1 (DE HEER et al) 08 March 2011 (08.03.2011) entire document.	7-9, 14-16, 19, 20
A	US 2010/0180292 A1 (EPSTEIN et al) 15 July 2010 (15.07.2010) entire document.	1-21
A	US 2007/0061724 A1 (SLOTHOUBER et al) 15 March 2007 (15.03.2007) entire document.	1-21
A	US 2003/0084449 A1 (CHANE et al) 01 May 2003 (01.05.2003) entire document.	1-21
A	US 2004/0117831 A1 (ELLIS et al) 17 June 2004 (17.06.2004) entire document.	1-21
A	US 2003/0226146 A1 (THURSTON et al) 04 December 2003 (04.12.2003) entire document.	1-21

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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 February 2014	11 MAR 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: DEAN N. REINHARDT
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	11 MAR 2014
Applicant's or agent's file reference 6583-479-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055278	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 7/00 (2014.01)
USPC - 725/46

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	17 February 2014	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055278

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055278

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	1-21	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-21	NO
Industrial applicability (IA)	Claims	1-21	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-6, 10-13, 17, 18, 21 lack an inventive step under PCT Article 33(3) as being obvious over Angiolillo et al., hereinafter referred to as Angiolillo and in view of Hill et al., hereinafter referred to as Hill.

Regarding claims 1, 12, 17 Angiolillo discloses a non-transitory computer readable storage medium having stored thereon instructions that cause a processor to execute a method (the last application system 100 includes hardware [last application system is interpreted as comprising a processor] and software with tangible physical media capable of storing software [i.e. storage storing instructions], para.0014, 0015) of organizing applications on a television display (the last application system 100 displays one or more applications on display device 108 such as television, based on user inputs and request messages, para.0020, Fig.1), the method comprising the steps of:
[Claim 12] A television system (the network is a cable television network, para.0024; Fig.1 shows display device 108 [interpreted as television], Fig.1), comprising: a display (a display module 206 is configured to control display of last application information and/or various graphical user interfaces at the display device 108, para.0052); a memory (the system 100 includes memory for storing software, para.0015); a processor in communication with the memory and the display (the last application system 100 includes a display device 108, hardware [last application system is interpreted as comprising a processor] and software with tangible physical media capable of storing software [i.e. storage storing instructions for execution], para.0014, 0015), the processor operable to:
[Claim 17] A method for organizing applications on a television (the last application system 100 displays one or more applications on display device 108 such as television, based on user inputs and request messages, para.0020, Fig.1), the method comprising:
receiving input to activate an application center (the last application graphical user interface is displayed in response to a viewer request to view the last applications graphical user interface 400. The viewer may use the input device 112 to generate a request for the set top box 106 to cause the display of the last applications graphical user interface 400 at the display device 108 [receiving request to display applications interface is interpreted as receiving input to activate application center], para.0059, Fig.1, 4);
retrieving application usage information from a storage medium (the last applications system may output to the user one or more last applications based on usage data, para.0018; The priority module 212 may include software and hardware configured to prioritize one or more last applications based on usage data. Usage data may include data that indicates the amount of time a user viewed or accessed a last application, the amount of time that has past since a user has viewed or accessed a last application, the number of times a user has viewed or accessed a last application, and any other data that may be used to indicate last application usage, para.0041);
determining which applications to display based on the retrieved application usage information (the priority module 212 may select a finite number of last applications to be displayed in a scroll bar of last applications based on the usage data. Usage data may include data that indicates the amount of time a user viewed or accessed a last application, the amount of time that has past since a user has viewed or accessed a last application, the number of times a user has viewed or accessed a last application, and any other data that may be used to indicate last application usage, para.0041, 0042); and
displaying on the television display one or more applications in the application center (The viewer may use the input device 112 to select the "Last Applications Scroll Bar" request field 402 or the "Last Applications Menu" request field 406. When the user selects "Last Applications Scroll Bar", the viewer is displayed and allowed to access and view a finite number of last applications stored based on priority determined by the priority module 212. The viewer may use the input device 112 to select a desired last application by moving the indicator 606 next to the last application of interest, para.0060, 0065, 0066, Fig.4, 6; the priority module 212 may select a finite number of last applications to be displayed in a scroll bar of last applications based on the usage, para.0042).
[Claim 12] wherein the application usage information comprises at least one of a last used application, a second last used application, a most used application, a second most used application, a newest application, and a second newest application (one or more last applications are displayed to user based on the usage data [thus usage information is interpreted as comprising information of last used application]. Usage data may include data that indicates the amount of time a user viewed or accessed a last application, the number of times a user has viewed or accessed a last application, and any other data that may be used to indicate last application usage [i.e. last used application], para.0041, 0042).
Angiolillo lacks the teaching of displaying application icons in the application center.
Hill discloses an internet enabled TV listing various content genres (Abstract) and teaches application icons in the application center (Fig.2 shows various application icons such as a photograph icon 34, a music icon 36, a video icon 38, a TV icon 40, a game icon 42, and a network icon 44 presented on cross media bar (XMB) 32 [cross media bar is interpreted as the application center on which application icons are displayed], para.0023, 0024, Fig.2).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Hill for displaying application icons in application center in the invention of Angiolillo.
The motivation would have been to organize and present the applications to users in the form of icons (para.0023, Hill).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055278

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 2, Angiolillo teaches that the application usage information comprises at least one of a last used application; a second last used application; a most used application; a second most used application; a newest application; and a second newest application (one or more last applications are displayed to user based on the usage data [thus usage information is interpreted as comprising information of last used application]. Usage data may include data that indicates the amount of time a user viewed or accessed a last application, the number of times a user has viewed or accessed a last application, and any other data that may be used to indicate last application usage [i.e. last used application], para.0041, 0042).

Regarding claim 3, Angiolillo teaches receiving input to launch an application selected from the one or more applications displayed in the application center [interface] (When the user selects "Last Applications Scroll Bar", the viewer is displayed and allowed to access and view a finite number of last applications stored based on priority determined by the priority module 212 [i.e. one or more applications displayed in the application center]. The viewer may use the input device 112 to select a desired last application by moving the indicator 606 next to the last application of interest and the viewer may press an input key on the input device 112 to generate a select message requesting that the set top box 106 access and display the last application associated with the request [i.e. receiving input to access or launch selected application from the one or more applications], para.0065, 0066, Fig.6); and launching the application selected (A user can access and view one or more last applications outputted by the last applications system [user accessing and view the last application is interpreted as last application system launching the user selected application], para.0019; the display module 206 receive instructions from the input device 112, and retrieves and tune to a particular last application based on the received instructions, and causes display of the particular last application at the display device 108 [i.e. launching selected application], para.0052).
Angiolillo lacks the teaching of application icons displayed in the application center.
Hill teaches application icons displayed in the application center (Fig.2 shows various application icons such as a photograph icon 34, a music icon 36, a video icon 38, a TV icon 40, a game icon 42, and a network icon 44 presented on cross media bar (XMB) 32 [cross media bar is interpreted as the application center on which application icons are displayed], para.0023, 0024, Fig.2).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Hill for displaying application icons in application center in the invention of Angiolillo.
The motivation would have been to organize and present the applications to users in the form of icons (para.0023, Hill).

Regarding claims 4, 13, 18 Angiolillo teaches receiving input for information about an application (upon receiving a request message from the user via the input device [i.e. receiving input], the update data associated with one or more last applications is displayed at the display device 108. Update data includes video data, audio data, text data, and/or other types of visual and/or audible information [update data is interpreted as the information about the application], para.0022) selected from the one or more applications displayed in the application center [interface] (The viewer may use the input device 112 to select a desired last application by moving the indicator 606 next to the last application of interest and the viewer may press an input key on the input device 112 to generate a select message requesting that the set top box 106 access and display the last application associated with the request [i.e. selecting application from the one or more applications in the last applications scroll bar GUI wherein last applications scroll bar GUI is interpreted as the application center], para.0066, Fig.6); retrieving application information about the selected application (upon receiving a request message from the user via the input device, the update data associated with one or more last applications is accessed and retrieved from the server 102 and displayed at the display device 108. Update data includes video data, audio data, text data, and/or other types of visual and/or audible information, para.0022); and displaying on the television display the retrieved application information (The display module 206 may include software and/or hardware configured to control display of last application information such as visual and audible representation of one or more last applications, para.0052) in an information panel (Fig.6 shows a rotatable scroll bar 602 displaying information about last applications [rotatable scroll bar is interpreted as the information panel displaying application information such as name and category], para.0066, Fig.6).
Angiolillo lacks the teaching of application icons displayed in the application center.
Hill teaches application icons displayed in the application center (Fig.2 shows various application icons such as a photograph icon 34, a music icon 36, a video icon 38, a TV icon 40, a game icon 42, and a network icon 44 presented on cross media bar (XMB) 32 [cross media bar is interpreted as the application center on which application icons are displayed], para.0023, 0024, Fig.2).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Hill for displaying application icons in application center in the invention of Angiolillo.
The motivation would have been to organize and present the applications to users in the form of icons (para.0023, Hill).

Regarding claims 5, 21 Angiolillo teaches receiving input to launch the application displayed in the information panel (Fig.6 shows a rotatable scroll bar 602 displaying information about last applications [rotatable scroll bar is interpreted as the information panel displaying application information such as name and category]. The viewer may use the input device 112 to select a desired last application by moving the indicator 606 next to the last application of interest and the viewer may press an input key on the input device 112 to generate a select message requesting that the set top box 106 access and display the last application associated with the request [i.e. receiving input to access or launch selected application from the one or more applications], para.0066, Fig.6); and launching the application (A user can access and view one or more last applications outputted by the last applications system [user accessing and view the last application is interpreted as last application system launching the user selected application], para.0019; the display module 206 receive instructions from the input device 112, and retrieves and tune to a particular last application based on the received instructions, and causes display of the particular last application at the display device 108 [i.e. launching selected application], para.0052).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055278

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claim 6, Angiolillo teaches that the application information comprises at least one of a thumbnail; a name; a description; a version; a revision date; a developer name; a category name; a user rating; and a content rating (Fig.6 shows a rotatable scroll bar 602 displaying information about last applications including name and category, para.0066, Fig.6; the last applications scroll bar graphical user interface 600 may display one or more images of one or more last applications. For example, the last applications scroll bar graphical user interface 600 may display the last frame viewed of a VOD Movie, the image of a Chat Session, the current image of a TV Channel broadcast program, etc. [i.e. displaying thumbnail], para.0067).

Regarding claim 10, Angiolillo lacks the teaching wherein if the selected application icon is a widget icon, retrieving widget information from a storage medium; determining which widgets to display based on the retrieved widget information; and displaying on the television display one or more widgets in a widget panel.
Angiolillo however teaches determining which applications to display based on the retrieved information (the priority module 212 may select a finite number of last applications to be displayed in a scroll bar of last applications based on the usage data. Usage data may include data that indicates the amount of time a user viewed or accessed a last application, the amount of time that has past since a user has viewed or accessed a last application, the number of times a user has viewed or accessed a last application, and any other data that may be used to indicate last application usage, para.0041, 0042); and displaying on the television display one or more applications in a panel (Fig.6 shows a rotatable scroll bar 602 [rotatable scroll bar is the panel] displaying last applications, para.0066, Fig.6).
Hill teaches application as widget icons (Widgets includes application such as clocks, event countdowns, auction-tickers, stock market tickers, flight arrival information, daily weather etc. Widget icon can be selected to display the selected widget on the display, para.0035, Fig.5); retrieving widget information (by hovering the cursor over weather widget icon, current weather information is provided by weather widget through the network interface, para.0041) from a storage medium (TV processor 18 can access one or more storage media 20 for retrieving information, para.0021, Fig.1); and displaying one or more widgets on television display (one or more widget icons are displayed on the display, para.0035, Fig.5).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Hill for incorporating widget icons in the invention of Angiolillo.
The motivation would have been for representing applications in a different form such as widgets as per user desire.

Regarding claim 11, Angiolillo teaches identifying a user associated with the request (a request module 210 receives one or more request messages to display and access one or more last applications. The system identifies each requesting user, as each user of the household has separate login identification and password, para.0050, 0038);
wherein the retrieved application usage information is associated with the identified user (each user of the household may be associated with a separate last application user profile indicating one or more last applications associated with that user. Once the set top box 106 receives login information and password associated with a particular user, the set top box 106 can store and retrieve the last application data associated with the user separate from other last application data associated with other users, para.0038).

Claims 7-9, 14-16, 19, 20 lack an inventive step under PCT Article 33(3) as being obvious over Angiolillo in view of Hill and in view of De Heer et al., hereinafter referred to as De Heer.

Regarding claims 7, 14, 19 Angiolillo teaches the information panel including a first list of one or more applications (Fig.6 shows a rotatable scroll bar 602 displaying information about last applications [rotatable scroll bar is interpreted as the information panel displaying list of applications with information such as name and category], para.0066, Fig.6) but lacks the teaching of recommended applications.
De Heer discloses generating video-on-demand recommendations based on television history data (Abstract) and teaches recommending applications (one or more lists of recommended VOD titles are displayed to user, col.6, lines 14-22, Fig.3, 4).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of De Heer for displaying recommendations in the invention of Angiolillo.
The motivation would have been for automatically generating recommendation to user based on user history (col.1, lines 46-56, De Heer).

Regarding claim 8, Angiolillo lacks the teaching of receiving a selection of a recommended application displayed in the first list; and connecting to an application store to purchase or rent the selected recommended application.
De Heer teaches of receiving a selection of a recommended application displayed in the first list (one or more lists of recommended VOD titles are displayed to user. The user selects one of the displayed recommended titles (e.g., "8 Mile") and a description of the VOD content is displayed in the description area 418 of the user interface, col.6, lines 14-22, 47-50, Fig.3, 4); and connecting to an application store to purchase or rent the selected recommended application (the user selects the purchase button 420 and a VOD purchase process is initiated for the title that is currently selected. Upon selecting the purchase button, VOD purchase application 220 is launched [launching application is interpreted as connecting to application store for purchasing recommendation], col.6, lines 51-55, Fig.4, 5, 6).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of De Heer for selecting and purchasing displayed recommendation in the invention of Angiolillo.
The motivation would have been allowing users to view and access recommended programs.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055278

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

Regarding claims 9, 15, 20 Angiolillo lacks the teaching of receiving input to list more recommended applications; and displaying on the television display a second list of one or more recommended applications in a recommended application panel.
De Heer teaches receiving input to list recommended applications (Fig.3 shows a user interface 302 through which user may request VOD recommendations. The user can select the VOD recommendations button 306 to cause one or more lists of recommended titles to be displayed, col5, lines 62-64, col.6, lines 14-16, Fig.3); and displaying on the television a list of one or more recommended applications in a recommended application panel (The VOD recommendations button 306, when selected, causes one or more lists of recommended VOD titles to be displayed. a viewer may be presented with three types of recommendations, represented by the recommendations tab 402, the critics' picks tab 404, and the last chance tab 406, col.6, lines 14-16, 26-28, Fig.4).
Furthermore, requesting more recommendations was a well-known practice in the art and the specifics would have been a matter of design choice.
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of De Heer for requesting and listing requested recommendations and providing more recommendations in the invention of Angiolillo.
The motivation would have been for allowing users to view and access more recommendations that can be purchased.

Regarding claim 16, Angiolillo teaches receiving input to launch the application displayed in the information panel (Fig.6 shows a rotatable scroll bar 602 displaying information about last applications [rotatable scroll bar is interpreted as the information panel displaying application information such as name and category]. The viewer may use the input device 112 to select a desired last application by moving the indicator 606 next to the last application of interest and the viewer may press an input key on the input device 112 to generate a select message requesting that the set top box 106 access and display the last application associated with the request [i.e. receiving input to access or launch selected application from the one or more applications], para.0066, Fig.6); and launching the selected application (A user can access and view one or more last applications outputted by the last applications system [user accessing and view the last application is interpreted as last application system launching the user selected application], para.0019; the display module 206 receive instructions from the input device 112, and retrieves and tune to a particular last application based on the received instructions, and causes display of the particular last application at the display device 108 [i.e. launching selected application], para.0052).

Claims 1-21 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Kristen Gruber
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	08 NOV 2013
Applicant's or agent's file reference: 6583-481-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US13/55509	International filing date *(day/month/year)*: 19 August 2013 (19.08.2013)
Applicant: Flextronics AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-481-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55509	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 2 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 16

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55509

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445, 71/73; G06F 13/14 (2013.01)
USPC - 725/43, 45, 47
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)
USPC Classifications: 725/37, 38, 39, 40, 43, 44, 45, 46, 47, 105, 110, 114, 115, 116, 117, 118, 131, 134
IPC(8) Classifications: G06F 3/01, 13/14; H04N 5/445, 71/73 (2013.01)

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); DialogPro (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; Google; display, show, present, television, TV, content, program, global panel, interface, menu, according, based, depend, user, viewer, person, select, indicate, identify

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 7900228 B2 (STARK, K et al.) March 1, 2011; abstract; figures 1-3, 16; column 2, lines 41-67; column 3, lines 1-66; column 4, lines 5-24, 53-61; column 5, lines 48-64; column 6, lines 3-67, 58-62; column 7, line 1; column 9, lines 34-37; column 10, lines 11-24; column 16, lines 60-67; column 17, lines 1-6; column 42, lines 15-40; claim 1	1, 4-7, 9, 11, 14-17, 19, 21, 22 --- 2, 3, 8, 10, 12, 13, 18, 20
Y	US 8166511 B2 (GRIGGS, T) April 24, 2012; figure 9; column 2, lines 50-56; column 9, lines 62-67; column 10, lines 1-9; claim 1	2, 3, 12, 13
Y	US 7685520 B2 (RASHKOVSKIY, O et al.) March 23, 2010; figure 1; column 1, lines 63-67; column 2, lines 1, 53-63	8, 10, 18, 20
A	US 7908635 B2 (BARTON, J et al.) March 15, 2011; see entire document	1-22
A	US 7880077 B2 (PAUWS, S et al.) February 1, 2011; see entire document	1-22

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent 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
30 October 2013 (30.10.2013)	08 NOV 2013

Name and mailing address of the ISA/US	Authorized officer:
Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Kristen Gruber
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	08 NOV 2013
Applicant's or agent's file reference 6583-481-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55509	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445, 71/73; G06F 13/14 (2013.01)
USPC - 725/43, 45, 47

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☒ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	30 October 2013 (30.10.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55509

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55509

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	2, 3, 8, 10, 12, 13, 18, 20	YES
	Claims	1, 4-7, 9, 11, 14-17, 19, 21, 22	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-22	NO
Industrial applicability (IA)	Claims	1-22	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1, 4-7, 9, 11, 14-17, 19, 21 and 22 lack novelty under PCT Article 33(2) as being anticipated by US 7,900,228 B2 to Stark et al. (hereinafter 'Stark').

As per claims 1, 11 and 21, Stark discloses a method of displaying content on a television, a non-transitory computer readable information storage medium having stored thereon instructions that cause a computing system to execute a method of displaying content on a television, and a system for displaying content on a television (a graphical user interface ("GUI") for a content management system is provided, such as to present television program information and/or information associated with other forms of multimedia content; abstract; figure 1; column 2, lines 41-50; column 5, lines 48-64), comprising: receiving an indication associated with a selection by a user (one or more users may make various types of selections that affect the information being displayed; abstract; column 2, lines 51-56); determining, based on the received indication, a global panel to display via the television (in some situations various techniques are employed to maintain a state of the GUI (global panel) that is focused on one or more current selections as changes occur, such as to coordinate information display between multiple distinct information panes or other view areas of the GUI, to alter the information to be displayed in the GUI based on a selected piece of content, and/or to enable identification of a selected piece of content from within a large number of pieces of content; abstract; column 2, lines 51-61); retrieving from memory, a first content information for display in the global panel (the computing system 300 interacts with the media center 350 in a variety of ways (e.g., via a direct connection, as part of local network 385, or as part of another network, not shown), including to receive information about current and/or future television programming related content 360a and/or other content 360a; in the illustrated embodiment, the computing system includes a CPU 305 or other processor(s), various I/O devices 310, storage 320, and memory 330, and the illustrated I/O devices include a display 311, a network connection 312, a computer-readable media drive 313, and other I/O devices 315; an embodiment of the CM system 335 is executing in memory 330; the CM system provides information about the available content to one or more users (e.g., one or more of the consumers in the home environment), such as via a GUI (global panel) that is displayed on the display device 311 and/or on one or more of the content presentation devices 370 or 380 or other computing systems 390; figure 1; column 6, lines 3-38); and displaying, via the television, the retrieved content information in the specified global panel (the home environment includes an STB or other media center 350 receiving external content 360a that is available to one or more consumers in the home environment 395, such as television programming-related content 360a for presentation on a television 370; in the illustrated embodiment, the CM system does not itself present the external content 360a to the user(s), instead interacting with the media center 350 to control the display of the content to the user via the TV and/or one or more of the other content presentation devices; figure 1; column 2, lines 41-64; column 5, lines 53-58; column 6, lines 31-38, 58-62).

As per claims 4 and 14, Stark discloses the method of claim 1 and the non-transitory computer-readable medium of claim 11, further comprising: receiving a second indication associated with a selection by a user (the primary content-type navigation tab for "Television" 110a (the first indication) continues to be currently selected, the secondary content type-specific navigation tab for "Live TV" 115a (second indication) continues to be currently selected; figure 3; column 10, lines 11-24); determining, based on the second indication, a source of content information to be displayed in the global panel (click the Guide View button to display a TV Guide-like grid of program bubbles; click the arrow next to the Guide View button to display the menu; figure 3; column 42, lines 15-35) based; retrieving at least a portion of content information from the determined source (menu selections are small, medium, or large; if you select Small, the program bubbles in the TV grid will show only the program title; by selecting Medium, the program bubbles expand to display information about the programs; by selecting Large, the program bubbles expand to display the maximum amount of information about the programs; figure 3; column 42, lines 15-40); and displaying, via the television, the content information associated with the determined source (the GUI is displaying program listing information for live TV in a view area 140; figures 2, 3; column 9, lines 34-37; column 10, lines 11-24).

As per claim 5, Stark discloses the method of claim 1, wherein the global panel comprises information from at least two different panel types (in some situations, the GUI (global panel) displays various types of information about multiple pieces of content that are currently appropriate for display, such as based on those pieces of content having presentation times or other associated times that correspond to a currently selected time period and/or based on those pieces of content having other appropriate characteristics; as one example, in at least some embodiments the metadata information displayed in a single view area for multiple pieces of content may be displayed using different types of views; abstract; column 2, lines 65-67 to column 3, lines 1-66).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55509

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

Defect: Claims Defective:

Claims 4 and 14 are objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof: the word "based" in line 4 of claim 4, and line 5 of claim 14, should be stricken.

Claim 16 is objected to under PCT Rule 66.2(a)(iii) as containing the following defect in the form or contents thereof: claim 16 should depend on claim 11 instead of claim 1.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55509

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

-***-Continued from Box V: Citations and Explanations-***-

As per claims 6, 16 and 22, Stark discloses the method of claim 1, the non-transitory computer-readable medium of claim 11, and the system of claim 21, further comprising: identifying at least one of a content source and a content information currently being displayed via a television (in at least some embodiments the CM system GUI displays information such that a state of the GUI is focused based on one or more current selections; for example, in some embodiments one or more pieces of content may be currently selected (e.g., based on one or more prior selections by a user), and if so, at least portions of the GUI may be focused to reflect those currently selected pieces of content, such as by simultaneously displaying various types of information related to the currently selected pieces of content in a coordinated manner in multiple distinct display areas of the GUI; column 4, lines 5-24); selecting a panel type based on the identified at least one of content source and content information currently being displayed via the television (in addition, when such information in one or more such display areas of the GUI changes, the changed information may also be displayed in such a manner as to include or emphasize a currently selected piece of content on which the GUI state is focused (e.g., when possible, such as when the changed information includes information for the currently selected piece of content, or instead always, such as to cause information for the currently selected piece of content to be included in the changed information); column 4, lines 53-61); retrieving, from memory, content information based on the selected panel type (an embodiment of the CM system 335 is executing in memory 330; the CM system may, for example, provide some or all of the stored content metadata 322 to the users and allow the user to manipulate the content in a variety of ways (e.g., to select content for current presentation, for future recording, etc.), as well as in some embodiments maintaining a state of the GUI as displayed information changes; column 6, lines 31-43); and displaying, via the television, the retrieved content information in the global panel based on the selected panel type (the CM system displays information about the retrieved content via a GUI (global panel) on a display device 370 (television), content presentation devices 380, or computing system 390; column 5, lines 48-64; column 6, lines 31-67 to column 7, line 1).

As per claims 7 and 17, Stark discloses the method of claim 6 and the non-transitory computer-readable medium of claim 16, further comprising: receiving a second indication associated with a selection by a user (the primary content-type navigation tab for "Television" 110a (the first indication) continues to be currently selected, the secondary content type-specific navigation tab for "Live TV" 115a (second indication) continues to be currently selected; figure 3; column 10, lines 11-24); selecting a panel type based on the second indication (the user clicks the LIVE TV tab 115a (panel type); figure 3; column 10, lines 21-23; column 42, lines 15-30); retrieving, from memory, content information based on the selected panel type and the second indication (an embodiment of the CM system is executing in memory 330; the CM system may, for example, provide some or all of the stored content metadata 322 to the users and allow the user to manipulate the content in a variety of ways (e.g., to select content for current presentation, for future recording, etc.), as well as in some embodiments maintaining a state of the GUI as displayed information changes; multimedia content metadata is received, such as if the computing system 300 receives EPG metadata information (i.e., as part of television programming-related content 360a) from a head-end and stores the information as content metadata 322 in the storage unit 320; column 6, lines 31-43; column 24, lines 31-36); and displaying, via the television, the retrieved content information in the global panel (when the user clicks the LIVE TV tab, the Navigation tabs Guide View screen appears and the GUI is rendered on a suitable display device; figure 3; column 24, lines 36-40; column 42, lines 15-30).

As per claims 9 and 19, Stark discloses the method of claim 7 and the non-transitory computer-readable medium of claim 17, wherein the retrieved content information comprises information associated with content information recently viewed (the information area 165 includes information about the current status of selected content, including content being currently recorded (if any), recently recorded programs, and upcoming scheduled recordings; figure 16; column 16, lines 60-67 to column 17, lines 1-6).

As per claim 15, Stark discloses the non-transitory computer-readable medium of claim 11, further comprising retrieving from memory a second content information for display in the global panel (receiving metadata information for multiple television programs (first and second content information); identifying a first distinct group of the multiple television programs for a graphical user interface such that received meta data information for the first distinct group of television programs will be included in the graphical user interface, the first distinct group including multiple television programs that satisfy a search request of television programs and that are identified based at least in part on a corresponding first category of television programs; claim 1); and displaying, via the television, the retrieved first content information and the retrieved second content information in the specified global panel (displaying to a user of the computing device a graphical window that includes the graphical user interface, the graphical user interface having a state based at least in part on the identified group, the displayed graphical user interface having: multiple distinct display areas including a first display area and a second display area, such that metadata information for a first portion of the identified first distinct group of television programs is displayed in the first display area and metadata information for a selected television program is displayable in the second display area; claim 1).

-***-Continued Within the Next Supplemental Box-***-

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55509

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Previous Supplemental Box-***-

Claims 2, 3, 12 and 13 lack an inventive step under PCT Article 33(3) as being obvious over Stark in view of US 8,166,511 B2 (GRIGGS).

As per claims 2 and 12, Stark discloses the method of claim 1 and the non-transitory computer-readable medium of claim 11. Stark does not disclose further comprising: identifying a user associated with the received indication; retrieving one or more settings associated with the identified user; retrieving, from memory, content information associated with the identified user; and displaying, via the television, the retrieved content information in the specified global panel. Griggs does disclose further comprising: identifying a user associated with the received indication (according to a preferred embodiment of the instant invention, an authorized user may access their account on the system server by a log-in process, whereby the user provides a unique user identification to identify themselves as an authorized user to the system; column 2, lines 50-54; claim 1); retrieving one or more settings associated with the identified user (once into the account, the user can preferably modify user preferences and preferably view other account information; column 2, lines 54-56; claim 1); retrieving, from memory, content information associated with the identified user (when a request is submitted from the control device 12, the display logic 16 creates a graphical display frame in its memory with the appropriate content; the display frame is sent to the streaming media mixer logic 13; figure 9; column 9, lines 62-65); and displaying, via the television, the retrieved content information in the specified global panel (the streaming media mixer logic 13 compresses the new combined display frame and sends the combine display frame to the viewing device 25; figure 9; column 9, lines 65-67 to column 10, lines 1-9). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system of Stark with Griggs's teaching, because by doing so, Stark's content management system would have provided for programming that is tailored to individual consumers needs, and provide the flexibility for consumers to quickly change the scope of services and/or program availabilities.

As per claims 3 and 13, Stark discloses the method of claim 1 and the non-transitory computer-readable medium of claim 11. Stark does not disclose further comprising: identifying a user associated with the received indication; retrieving, from memory, one or more settings associated with the identified user; retrieving, from memory, content information associated with the identified user and the one or more settings associated with the user; and displaying, via the television, the retrieved content information in the specified global panel. Griggs does disclose further comprising: identifying a user associated with the received indication (according to a preferred embodiment of the instant invention, an authorized user may access their account on the system server by a log-in process, whereby the user provides a unique user identification to identify themselves as an authorized user to the system; column 2, lines 50-54; claim 1); retrieving, from memory, one or more settings associated with the identified user (once into the account, the user can preferably modify user preferences and preferably view other account information; column 2, lines 54-56; claim 1); retrieving, from memory, content information associated with the identified user and the one or more settings associated with the user (granting access to the user account via the Internet; selecting the customized programming schedule from a plurality of customized programming schedules based on a determination that the separate device corresponds to the device indicator; transmitting, to the separate device, display data for displaying the customized programming schedule; column 9, lines 62-67 to column 10, lines 1-9; claim 1); and displaying, via the television, the retrieved content information in the specified global panel (the streaming media mixer logic 13 compresses the new combined display frame and sends the combine display frame to the viewing device 25; receiving, from the separate device, a selection signal for selecting one of the plurality of digital video programs; figure 9; column 9, lines 65-67 to column 10, lines 1-9; claim 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the system of Stark with Griggs's teaching, because by doing so, Stark's content management system would have provided for programming that is tailored to individual consumers needs, and provide the flexibility for consumers to quickly change the scope of services and/or program availabilities.

Claims 8, 10, 18 and 20 lack an inventive step under PCT Article 33(3) as being obvious over Stark in view of US 7,685,520 B2 to Rashkovskiy et al. (hereinafter 'Rashkovskiy').

As per claims 8 and 18, Stark discloses the method of claim 7 and the non-transitory computer-readable medium of claim 17. Stark does not disclose wherein the retrieved content information comprises information associated with content information marked as favorite. Rashkovskiy does disclose wherein the retrieved content information comprises information associated with content information marked as favorite (a graphical user interface 10 for implementing an electronic content guide includes a plurality of selectable category icons 12 represented as "virtual" file folders; each category icon 12 may be predefined or may be user definable; category icon 12a is provided for favorite programs; figure 1; column 1, lines 63-67 to column 2, line 1). It would have been obvious to a person of ordinary skill in the art at the time of the invention, to modify Stark's system and method with Rashkovskiy's user interface, because by doing so, Stark's platform would have been more user-friendly by enabling viewers to save a specific channel by marking it as a favorite.

As per claims 10 and 20, Stark discloses the method of claim 7 and the non-transitory computer-readable medium of claim 17. Stark does not disclose wherein the retrieved content information comprises information associated with content information marked as favorite and further comprises information associated with content information recently viewed. Rashkovskiy does disclose wherein the retrieved content information comprises information associated with content information marked as favorite and further comprises information associated with content information recently viewed (a graphical user interface 10 for implementing an electronic content guide includes a plurality of selectable category icons 12 represented as "virtual" file folders; each category icon 12 may be predefined or may be user definable; category icon 12a is provided for favorite programs; a plurality of programs 22 are listed as entries in two columns 20a and 20b; these programs 22 are either currently in progress or just beginning, in keeping with the selection of currently available programs, through the icon 12c, and favorites among currently available programs through the selection of the icon 14; thus, the X-Files program 22, runs from 7:00 to 9:00 as indicated by the indicia 18 and 19; the bar indicia 19 graphically indicates how much of the program has already been displayed or broadcast in the past using differently color indicia 18 and 19; figure 1; column 1, lines 63-67 to column 2, line 1; column 2, lines 53-63). It would have been obvious to a person of ordinary skill in the art at the time of the invention, to modify Stark's system and method with Rashkovskiy's user interface, because by doing so, Stark's platform would have been more user-friendly by enabling viewers to save a specific channel by marking it as a favorite, and a user would have been able to determine the program timing to determine how much of the program is left to view, and how much was missed.

Claims 1-22 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

Electronic Acknowledgement Receipt

EFS ID:	18695144
Application Number:	13968884
International Application Number:	
Confirmation Number:	1062
Title of Invention:	ON SCREEN METHOD AND SYSTEM FOR CHANGING TELEVISION CHANNELS
First Named Inventor/Applicant Name:	Mohammed Selim
Customer Number:	111285
Filer:	Douglas W. Swartz/robert roe-pachirat
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-445
Receipt Date:	07-APR-2014
Filing Date:	16-AUG-2013
Time Stamp:	17:20:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		6583-445_IDS_01.pdf	834405 43470b6acb955bf64a110bff033837d23f174201	yes	16

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	5
	Information Disclosure Statement (IDS) Form (SB08)	6	16

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2	Foreign Reference	CN1832534.pdf	778984 0be81925051284f3fa12887f73373f2c3366d0be	no	14
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3	Foreign Reference	CN101472102.pdf	857058 02b88116749bf64a5fe57856a71e508e3aba7367	no	20
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4	Foreign Reference	CN101540850.pdf	680825 75742f65ca8d332f5dc32dc2e297c519fd3f8129	no	16
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5	Foreign Reference	CN101567992.pdf	1194690 bf46f105611fa2484a7585b6f63161caebcd55bf	no	30
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6	Foreign Reference	CN201937743.pdf	545708 c256647860b47360dca0b1eeec558cd5eb75c742	no	9
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7	Foreign Reference	EP1031929.pdf	453330 d025d183bce10936e26fa1649196f70d1ba69605	no	11
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8	Foreign Reference	EP1067458.pdf	1272251 b7927884fa1672a7004a569ebc0548187691c8e3	no	25
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9	Foreign Reference	EP1770956.pdf	1027331 31ced4d6713b45de975eae153f455244d552fbc3	no	21
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10	Foreign Reference	EP1865723.pdf	1010546 b19ec29121477d06c60e0d38c0c626f83a8457d9	no	21
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11	Foreign Reference	EP2328346.pdf	4264682 15e2ef3dfb6462b5fa38ab4ecd228f6f8f97c19f	no	84
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12	Foreign Reference	EP2348724.pdf	1890757 aa6575dd022b3a686d9d753c7bf921004b2acc41	no	13
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13	Foreign Reference	EP2439935.pdf	3837306 1a9c5d6c07bd2a252a45da0d540ab9b14c510684	no	82
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14	Foreign Reference	EP2487922.pdf	6993060 a893123170fb9600e0dfc0c33d8b057fe5f303b9	no	165
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15	Foreign Reference	WO9921308.pdf	5557561 b97c49ac9a64891a6a22fd4ec555e5f0977c88e2	no	82
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16	Foreign Reference	WO9935849.pdf	1398584 30f739ebac6eb6269239aa0eb1e4709a5718867b	no	41
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17	Foreign Reference	WO0005884.pdf	1915309 5e4dc87ec62cce39f11dfc0bbc6b59cfb32c98f9	no	46
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18	Foreign Reference	WO0106784.pdf	2587052 79fe7e590b10c3c864ab74aa66b8794faec4ce46	no	87
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19	Foreign Reference	WO0106788.pdf	3723021 28f192f466175d1fe483b81e41285e5870746f17	no	105
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20	Foreign Reference	WO02080552.pdf	811244 0d93b26e771b79c000f5e2eb209c164cc8ab0a6d	no	15
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21	Foreign Reference	WO03044755.pdf	3364541 5df9a9f993c735e4fcc50bdae795c1023497f24c	no	74
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22	Foreign Reference	WO2007137611.pdf	1242364 b5aa611723609b65fc685e2fde728b626a1aa404	no	34
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23	Foreign Reference	WO2011148054.pdf	1359046 af6a68b17a9b889d90c5d2d3d662cc1f992fab53	no	32
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24	Foreign Reference	WO2011163481.pdf	1426882 d742ad628a748a86c07cf04c98132336b596fe82	no	42
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25	Foreign Reference	WO2012030024.pdf	5042326 0e2a497a47f6245e53b1a89de2f7a0f30c4e2fe0	no	120
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26	Foreign Reference	WO2012068438.pdf	1464188 c29493f396eebdea617bcae01f4ea2d45fe44654	no	32
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27	Foreign Reference	WO2012073027.pdf	16319897 f7476b18bf4423fc85ff61319ac4a7862d397f85	no	301
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28	Foreign Reference	WO2012094247.pdf	5903581 94e3a2c38c7c51ebca8fc0398bee53529bb4ca38	no	148
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29	Foreign Reference	WO2014026636.pdf	3482383 c74c91b29454529f678ab88b92eb0e77a675c06b	no	82
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30	Foreign Reference	WO2014026640.pdf	6403100 d6b14245914b21e4053c58320482638133 8f23f6	no	137
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31	Foreign Reference	WO2014028067.pdf	3778154 f21665eff3ff6e644d5cdffe0fe6a8e6dc3a493d	no	77
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32	Foreign Reference	WO2014028068.pdf	4149485 d1cdbcc34ef85783e40bcfb57971b2be19639d43	no	88
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33	Foreign Reference	WO2014028069.pdf	3760658 df9fb9920464aee9dfb6a11f161a1c808160b1ab	no	79
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34	Foreign Reference	WO2014028071.pdf	3612626 14915d2b99a528f3d3004eced349c2d7f7b53452	no	79
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35	Foreign Reference	WO2014028074.pdf	4340517 a6560fe3e4f7aa58102ce0fbb301c1b06c846848	no	98
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36	Non Patent Literature	TVONICSUK_TVonics_How_to_use_the_EPG.pdf	61177 63af30c7c6211a00d1f1b2d069700d8aa64569dd	no	1
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37	Non Patent Literature	6583-424-PCT_ISR-WO_06-28-2013.pdf	870524 9a15706e69cbee3eb1264a1adace0ce8b6a3ed35	no	8
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38	Non Patent Literature	6583-425-PCT_ISR-WO_06-28-2013.pdf	917587 a10100df496a3fa2357df6212309c00de3c5ab7a	no	8
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39	Non Patent Literature	6583-430-PCT_ISR-WO_06-17-2013.pdf	537850 48391f78da25db13e9d4ac10c6fd622a2903af4b	no	8
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40	Non Patent Literature	6583-436-PCT_ISR-WO_12-19-2013.pdf	460416 dc3fc0b2374843558824334faf0684d6e50ac9f5	no	9
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41	Non Patent Literature	6583-444-PCT_ISR-WO_12-02-2013.pdf	457550 04e5b59692938eab93608b27f5efdcb2d275a533	no	7
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42	Non Patent Literature	6583-445-PCT_ISR-WO_12-02-2013.pdf	586155 e65439b4e41ab080f398eb692f96a21b657ec6d8	no	9
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43	Non Patent Literature	6583-446-PCT_ISR-WO_12-02-2013.pdf	436946 00cca8c74ed17168ac08bbb7c7d4e6ab36d336b0	no	8
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44	Non Patent Literature	6583-447-PCT_ISR-WO_12-11-2013.pdf	515296 5e726d6ad1a88887d0f1498ec4fc282741bfbfb5	no	8
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45	Non Patent Literature	6583-448-PCT_ISR-WO_01-14-2014.pdf	610447 35dd3208b30fbecaa9ba399ca6ee029a2b6ca059	no	12
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46	Non Patent Literature	6583-449-PCT_ISR-WO_12-02-2013.pdf	758287 5199acba00f2c3d3ebb303539cc35cb13f7ef360	no	12
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47	Non Patent Literature	6583-450-PCT_ISR-WO_12-02-2013.pdf	749906 d9e802b8e78ab027aa18c6ab9b7930d6a7199f3a	no	10
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48	Non Patent Literature	6583-451-PCT_ISR-WO_11-29-2013.pdf	631308 b70a97b345b4ef4efd2f20af4d7aa07a3832303e	no	9
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49	Non Patent Literature	6583-452-PCT_ISR-WO_11-07-2013.pdf	595678 2183c6ca29ebb90785d255cc109adf01aa545bd8	no	9
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50	Non Patent Literature	6583-453-PCT_ISR-WO_06-28-2013.pdf	1688189 ec30effd39fbfbe76605f0237beb0cd383f298d7	no	12
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51	Non Patent Literature	6583-454-PCT_ISR-WO_02-10-2014.pdf	560582 2639ce02c2658422a6d53570c01dbdce52f2f1a8	no	10
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52	Non Patent Literature	6583-463-PCT_ISR-WO_12-06-2013.pdf	421266 88869e8495aacb1c21051b401b5edfdddc4e2899	no	7
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53	Non Patent Literature	6583-469-PCT_ISR-WO_06-17-2013.pdf	1343555 0dc13ffbe0cf8b5eedfdd679cdf53b337d3ddec6	no	9
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54	Non Patent Literature	6583-470-PCT_ISR-WO_06-28-2013.pdf	1115422 cf88f56579c2bbd4e784905739250485af18d6ef	no	9
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55	Non Patent Literature	6583-471-PCT_ISR-WO_08-30-2013.pdf	494204 bad31705e8a28f145402b38c71617883566c7714	no	9
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56	Non Patent Literature	6583-472-PCT_ISR-WO_07-01-2013.pdf	913982 9705acccbfd0012050c79b31865df280bcb6dc60	no	13
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57	Non Patent Literature	6583-478-PCT_ISR-WO_01-17-2014.pdf	505455 1102803c83cfbaac16eca5137f25bb8f2751a6cd	no	8
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58	Non Patent Literature	6583-479-PCT_ISR-WO_03-11-2014.pdf	595581 dcca0da05495a7ccc238f5a76b008b442ae9db2b	no	9
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59	Non Patent Literature	6583-481-PCT_ISR-WO_11-08-2013.pdf	573053 de7d06c195fb91fa9d2cd6297eb0643e0d16e6ea	no	9
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		Total Files Size (in bytes):	123683868		

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

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

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

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

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 2425
Mohammed Selim	)	Confirmation No.: 1062
Serial No.: 13/968,884	)	Examiner: Brian T Pendleton
Filed: August 16, 2013	)	INFORMATION DISCLOSURE STATEMENT
Atty. File No.: 6583-445	)	
Entitled: "On Screen Method and System for Changing Television Channels"	)	*Electronically Submitted*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.

☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.

☒ Copies of the cited U.S. patents/unpublished patent applications/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).

☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

☒ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.

☒ Examiner's attention is drawn to the following related applications:

- Serial No. 13/864,206 filed 04/16/13 (Attorney's Ref. No. 6583-425)
- Serial No. 13/969,846 filed 08/19/13 (Attorney's Ref. No. 6583-426)
- Serial No. 13/969,857 filed 08/19/13 (Attorney's Ref. No. 6583-427)
- Serial No. 13/969,869 filed 08/19/13 (Attorney's Ref. No. 6583-428)
- Serial No. 13/969,875 filed 08/19/13 (Attorney's Ref. No. 6583-429)
- Serial No. 13/969,880 filed 08/19/13 (Attorney's Ref. No. 6583-431)
- Serial No. 13/969,884 filed 08/19/13 (Attorney's Ref. No. 6583-432)

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LG Electronics, Inc. / Page 3185 of 3523

- Serial No. 13/969,887 filed 08/19/13 (Attorney's Ref. No. 6583-433)
- Serial No. 13/969,482 filed 08/16/13 (Attorney's Ref. No. 6583-434)
- Serial No. 13/969,485 filed 08/16/13 (Attorney's Ref. No. 6583-435)
- Serial No. 13/970,388 filed 08/19/13 (Attorney's Ref. No. 6583-436)
- Serial No. 13/970,398 filed 08/19/13 (Attorney's Ref. No. 6583-437)
- Serial No. 13/970,409 filed 08/19/13 (Attorney's Ref. No. 6583-438)
- Serial No. 13/970,420 filed 08/19/13 (Attorney's Ref. No. 6583-439)
- Serial No. 13/970,427 filed 08/19/13 (Attorney's Ref. No. 6583-440)
- Serial No. 13/970,442 filed 08/19/13 (Attorney's Ref. No. 6583-441)
- Serial No. 13/970,450 filed 08/19/13 (Attorney's Ref. No. 6583-442)
- Serial No. 13/970,453 filed 08/19/13 (Attorney's Ref. No. 6583-443)
- Serial No. 13/968,858 filed 08/16/13 (Attorney's Ref. No. 6583-444)
- Serial No. 13/968,876 filed 08/16/13 (Attorney's Ref. No. 6583-446)
- Serial No. 13/968,867 filed 08/16/13 (Attorney's Ref. No. 6583-447)
- Serial No. 13/968,913 filed 08/16/13 (Attorney's Ref. No. 6583-448)
- Serial No. 13/968,983 filed 08/16/13 (Attorney's Ref. No. 6583-449)
- Serial No. 13/968,948 filed 08/16/13 (Attorney's Ref. No. 6583-450)
- Serial No. 13/968,929 filed 08/16/13 (Attorney's Ref. No. 6583-451)
- Serial No. 13/969,588 filed 08/18/13 (Attorney's Ref. No. 6583-452)
- Serial No. 13/864,120 filed 04/16/13 (Attorney's Ref. No. 6583-453)
- Serial No. 13/969,505 filed 08/17/13 (Attorney's Ref. No. 6583-454)
- Serial No. 13/969,487 filed 08/16/13 (Attorney's Ref. No. 6583-455)
- Serial No. 13/969,490 filed 08/16/13 (Attorney's Ref. No. 6583-456)
- Serial No. 13/969,491 filed 08/16/13 (Attorney's Ref. No. 6583-457)
- Serial No. 13/969,492 filed 08/16/13 (Attorney's Ref. No. 6583-458)
- Serial No. 13/969,493 filed 08/16/13 (Attorney's Ref. No. 6583-459)
- Serial No. 13/969,494 filed 08/16/13 (Attorney's Ref. No. 6583-460)
- Serial No. 13/969,499 filed 08/16/13 (Attorney's Ref. No. 6583-461)
- Serial No. 13/969,502 filed 08/17/13 (Attorney's Ref. No. 6583-462)
- Serial No. 13/970,000 filed 08/19/13 (Attorney's Ref. No. 6583-463)
- Serial No. 13/970,355 filed 08/19/13 (Attorney's Ref. No. 6583-464)
- Serial No. 13/864,214 filed 04/16/13 (Attorney's Ref. No. 6583-469)
- Serial No. 13/969,503 filed 08/17/13 (Attorney's Ref. No. 6583-477)
- Serial No. 13/969,179 filed 08/16/13 (Attorney's Ref. No. 6583-478)
- Serial No. 13/968,767 filed 08/16/13 (Attorney's Ref. No. 6583-479)

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- Serial No. 13/969,506 filed 08/17/13 (Attorney's Ref. No. 6583-480)
- Serial No. 13/970,374 filed 08/19/13 (Attorney's Ref. No. 6583-481)
- Serial No. 13/968,665 filed 08/16/13 (Attorney's Ref. No. 6583-488)
- Serial No. 13/968,897 filed 08/16/13 (Attorney's Ref. No. 6583-489)
- Serial No. 13/968,969 filed 08/16/13 (Attorney's Ref. No. 6583-498)
- Serial No. 13/969,190 filed 08/16/13 (Attorney's Ref. No. 6583-490)
- Serial No. 13/968,652 filed 08/16/13 (Attorney's Ref. No. 6583-491)
- Serial No. 13/968,681 filed 08/16/13 (Attorney's Ref. No. 6583-492)
- Serial No. 13/968,709 filed 08/16/13 (Attorney's Ref. No. 6583-493)
- Serial No. 13/969,201 filed 08/16/13 (Attorney's Ref. No. 6583-494)
- Serial No. 13/968,903 filed 08/16/13 (Attorney's Ref. No. 6583-495)
- Serial No. 13/970,234 filed 08/19/13 (Attorney's Ref. No. 6583-496)
- Serial No. 13/969,205 filed 08/16/13 (Attorney's Ref. No. 6583-497)
- Serial No. 13/968,610 filed 08/16/13 (Attorney's Ref. No. 6583-499)
- Serial No. 13/968,732 filed 08/16/13 (Attorney's Ref. No. 6583-500)
- Serial No. 13/969,777 filed 08/19/13 (Attorney's Ref. No. 6583-501)
- Serial No. 13/968,618 filed 08/16/13 (Attorney's Ref. No. 6583-502)
- Serial No. 13/968,625 filed 08/16/13 (Attorney's Ref. No. 6583-503)
- Serial No. 13/968,630 filed 08/16/13 (Attorney's Ref. No. 6583-504)
- Serial No. 13/968,638 filed 08/16/13 (Attorney's Ref. No. 6583-505)
- Serial No. 13/968,644 filed 08/16/13 (Attorney's Ref. No. 6583-506)
- Serial No. 13/969,507 filed 08/17/13 (Attorney's Ref. No. 6583-508)
- Serial No. 13/968,937 filed 08/16/13 (Attorney's Ref. No. 6583-509)
- Serial No. 13/969,508 filed 08/17/13 (Attorney's Ref. No. 6583-510)
- Serial No. 13/969,510 filed 08/17/13 (Attorney's Ref. No. 6583-511)
- Serial No. 13/970,243 filed 08/19/13 (Attorney's Ref. No. 6583-519)
- Serial No. 13/970,247 filed 08/19/13 (Attorney's Ref. No. 6583-520)
- Serial No. 13/969,504 filed 08/17/13 (Attorney's Ref. No. 6583-526)

☐ Other:_____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☒	**37 CFR 1.97(b)**: No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☒ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☐	**37 CFR 1.97(c)**: The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☐ Please charge Deposit Account 19-1970 in the amount of $180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	**37 CFR 1.97(d)**: This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of $180.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

☐ The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement submitted herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).

☐ A copy of the communication from the foreign patent office is enclosed.

OR

☐ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /Douglas W. Swartz/
Douglas W. Swartz
Registration No. 37,739
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: April 07, 2014

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LG Electronics, Inc. / Page 3189 of 3523

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: **100101**

A0601,Huibin Building
No.8,Beichen Dong(East) Street Chao Yang District Beijing,China

LIU，SHEN&ASSOCIATES

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* **28 Nov. 2013 (28.11.2013)**
Applicant's or agent's file reference **F13W4862**	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. **PCT/CN2013/081639**	International filing date *(day/month/year)* **16 Aug. 2013(16.08.2013)**
Applicant **FLEXTRONICS AP, LLC et al.**	

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

Filing of amendments and statement under Article 19:

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

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

Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20,Switzerland, Facsimile No.: +41 22 338 82 70

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

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

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
   - ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
   - ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

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

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

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

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

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

Name and mailing address of the ISA/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. (86-10)62019451	Authorized officer **GAO,Jing** Telephone No. (86-10)**010-62413457**

Form PCT/ISA/220 (July 2009) *(See notes on accompanying sheet)*

NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*.

In these Notes, "Article," "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, paragraph 296).

What parts of the international application may be amended ?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Preliminary Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When ? Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments ?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How ? Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet or sheets containing a complete set of claims in replacement of all the claims previously filed must be submitted.

Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively in Arabic numerals (Section 205(a)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments ?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

(i) the claim is unchanged;
(ii) the claim is cancelled;
(iii) the claim is new;
(iv) the claim replaces one or more claims as filed;
(v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
   "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
   "Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
   "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
   "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
   "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under Article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1*bis*(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of FormPCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43*bis*.1(c)).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide*, National Chapters.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
F13W4862		
International application No.	International filing date *(day/month/year)*	(Earliest)Priority date *(day/month/year)*
PCT/CN2013/081639	16 Aug. 2013(16.08.2013)	17 Aug. 2012(17.08.2012)
Applicant		
FLEXTRONICS AP, LLC et al.		

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

This international search report consists of a total of 3 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed

☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6bis(a)).

c. ☐ With regard to any **nucleotide and /or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II)

3. ☐ **Unity of invention is lacking** (see Box No. III)

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

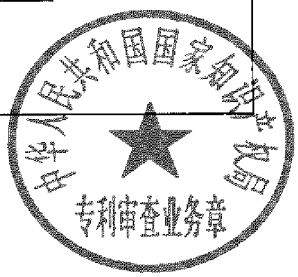
a. The figure of the **drawings** to be published with the abstract is Figure No. 17

☐ as suggested by the applicant

☒ as selected by this Authority, because the applicant failed to suggest a figure

☐ as selected by this Authority, because this figure better characterizes the invention

b. ☐ none of the figures is to be published with the abstract



Form PCT/ISA/210(first sheet)(July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2013/081639

A. CLASSIFICATION OF SUBJECT MATTER

H04N 5/445 (2011.01) i

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: 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 practicable, search terms used)

WPI; EPODOC; CPRS; CNKI; REMIND, PRESENT, TV, TELEVISION, DISPLAY, SCREEN, PORTION, CHANNEL, CONTENT, PROGRAM, SELECT, SOURCE, INPUT

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	CN 101540850 A (SHENZHEN TCL NEW TECHNOLOGY LTD.) 23 Sep. 2009 (23.09.2009) page 3, lines 4-9, lines 14-15, lines 20-21, page 4, lines 1-4, page 5, lines 19-22 in the description, figures 1, 2, 5	1-20
Y	CN 101567992 A (ALI CORP.) 28 Oct. 2009 (28.10.2009) page 5, lines 27-30 in the description	1-20
A	CN 201937743 U (SVA TECHNOLOGIES CO., LTD.) 17 Aug. 2011 (17.08.2011) the whole document	1-20

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

* Special categories of cited documents:

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

"E" earlier application or patent 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
05 Nov. 2013 (05.11.2013)	**28 Nov. 2013 (28.11.2013)**
Name and mailing address of the ISA/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	Authorized officer GAO,Jing Telephone No. (86-10)010-62413457

Form PCT/ISA /210 (second sheet) (July 2009)

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INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2013/081639

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 101540850 A	23.09.2009	WO 2009117009 A1	24.09.2009
		EP 2253133 A1	24.11.2010
		US 2011010738 A1	13.01.2011
CN 101567992 A	28.10.2009	US 2009265738 A1	22.10.2009
CN 201937743 U	17.08.2011	None	

Form PCT/ISA /210 (patent family annex) (July 2009)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

100101

A0601,Huibin Building No.8,Beichen Dong(East) Street Chao Yang District Beijing,China

LIU，SHEN&ASSOCIATES

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43 *bis*.1)

Date of mailing *(day/month/year)*	28 Nov. 2013 (28.11.2013)
Applicant's or agent's file reference: F13W4862	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/CN2013/081639	16 Aug. 2013(16.08.2013)	17 Aug. 2012(17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
H04N 5/445 (2011.01) i

Applicant
FLEXTRONICS AP, LLC et al.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No.II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No.VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No.VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of **3** months from the date of mailing of Form PCT/ISA/220 or before the expiration of **22** months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/CN	Date of completion of this opinion	Authorized officer
The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	14 Nov. 2013 (14.11.2013)	GAO,Jing Telephone No. (86-10)010-62413457

Form PCT/ISA/237(cover sheet)(July 2009)

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WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/CN2013/081639

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.
   ☐ a translation of the international application into _____ , which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91(Rule 43bis.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application ,this opinion has been established on the basis of :

   a. a sequence listing filed or furnished
      ☐ on paper
      ☐ in electronic form

   b. time of filing or furnishing
      ☐ contained in the applicant as filed
      ☐ filed together with the application in electronic form
      ☐ furnished subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/CN2013/081639

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement:

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations

Reference is made to the following documents:
D1: CN 101540850 A (SHENZHEN TCL NEW TECHNOLOGY LTD.) 23 Sep. 2009 (23.09.2009)
D2: CN 101567992 A (ALI CORP.) 28 Oct. 2009 (28.10.2009)

I. Novelty and Inventive step

I.1 Independent claim 1 relates to a method. D1 (see page 3, lines 4-9, lines 14-15, lines 20-21, page 4, lines 1-4, page 5, lines 19-22 in the description, figures 1, 2, 5) is regarded as the closest prior art, and discloses a method for selecting media source as follows.

The electronic device 100 comprises at least one receptor 102 (e.g., a cable inlet, device inlet, or an antenna), a tuner 104, a processor 106, a memory 108, a display 110, a controller 112 (e.g., remote control), and various peripheral inputs 114,116, and 118. The memory 108 may comprise a tangible machine-readable medium adapted to hold machine-readable computer code that causes the processor 106 to perform an exemplary method in accordance with present embodiments. For example, the memory 108 and the processor 106 may cooperate to operate as a control system that provides an on-screen selection interface (corresponding to "reminder") in accordance with present embodiments (see page 3, lines 4-9 in the description and figure 1 of D1).

This UI or on-screen selection interface may be referred to as a tab-based content source selection system (TCSSS) (see page 3, lines 14-15 in the description of D1).

An interpreted "content" command from a remote control may initiate or activate the TCSSS on a television (corresponding to "receiving a reminder presentation input at the intelligent TV") (see page 3, lines 20-21 in the description of D1).

The TCSSS may provide several graphic items that appear to be overlapping graphical shapes (e.g., columns or tabs) on the television display 110. For example, FIG 2 illustrates a screen 200 (corresponding to "the first portion of the display") of a television display (e.g., the display 110) that includes a menu 202 positioned on an edge of the display (corresponding to "the second portion of the display, wherein the second portion of the display at least partially overlaps the first portion"). The menu 202 includes four overlapping columns in accordance with present embodiments (see page 4, lines 1-4 in the description and figure 2 of D1).

FIG 5 is an illustration of the TCSSS when the fourth column 210 is active. As set forth above, the fourth column 210 displays user-selected channels referred to as "favorites" when it is active. The fourth column 210 of the illustrated embodiment enables users to define it to include any source of input and any channel on a single menu tab (corresponding to "the reminder presentation dialog includes information relative to a specific program"). This will enable a user to conveniently switch between favorite channels and favorite sources of input within a single menu tab or column (see page 5, lines 19-22 in the description and figure 5 of D1).

D1 does not disclose the following features of claim 1: TV content presented to a first portion of the display. Thus D1 does not disclose all the features of claim 1 and the subject matter of claim 1 is new in the sense of PCT Article 33(2).

However, D2 (see page 5, lines 27-30 in the description) provides a method for displaying assistance data and discloses the following features: when digital channel content is broadcast, assistance information is displayed to a portion the screen 400. That is, D2 gives the teach to display TV content in a first portion and to display reminding assistance information in a second portion which overlaps the first portion. Thus, it is obvious for a person skilled in the art to apply the teaching of the D2 to D1 and arrive at this solution. Therefore the solution of claim 1 does not involve an inventive step, and does not meet the criteria set out in PCT Article 33(3).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

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Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**

Continuation of : Box No. V Citations and explanations

I.2 Independent claim 13 relates to a tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, performed the method as the same as claim 1. D1 (see page 3, lines 7-8 in the description) also discloses that: The memory 108 may comprise a tangible machine-readable medium adapted to hold machine-readable computer code that causes the processor 106 to perform an exemplary method in accordance with present embodiments. Thus, referring to the explanations on claim 1, claim 13 is also new in the sense of PCT Article 33(2), and does not involve an inventive step in the sense of PCT Article 33(3).

I.3 Since the subject matter of claims 1, 13 involves novelty, the subject matter of their dependent claims 2-12, 14-19 also involves novelty in the sense of PCT Article 33(2).

Additional features of claims 2, 14 are also disclosed by D1(see page 5, lines 19-22 in the description and figure 5). Thus the subject matter of claims 2, 14 does not involve an inventive step in the sense of PCT Article 33(3).

Additional features of claims 3-12, 15-19 only relate to normal implementation measures or minor design details in the art. The features thus, either alone or in combination, do not seem to add anything of inventive significance to any of claims 3-12, 15-19, and they do not meet the criteria set out in PCT Article 33(3).

I.4 Independent claim 20 relates to a system. D1 (see page 3, lines 4-9, lines 14-15, lines 20-21, page 4, lines 1-4, page 5, lines 19-22 in the description, figure 1, 2, 5) is regarded as the closest prior art, and discloses a system for selecting media source as follows.

The electronic device 100 comprises at least one receptor 102 (e.g., a cable inlet, device inlet, or an antenna), a tuner 104, a processor 106, a memory 108, a display 110, a controller 112 (e.g., remote control), and various peripheral inputs 114,116, and 118. The memory 108 may comprise a tangible machine-readable medium adapted to hold machine-readable computer code that causes the processor 106 to perform an exemplary method in accordance with present embodiments. For example, the memory 108 and the processor 106 may cooperate to operate as a control system that provides an on-screen selection interface (corresponding to "reminder") in accordance with present embodiments (see page 3, lines 4-9 in the description and figure 1 of D1).

This UI or on-screen selection interface may be referred to as a tab-based content source selection system (TCSSS) (see page 3, lines 14-15 in the description of D1).

An interpreted "content" command from a remote control may initiate or activate the TCSSS on a television (corresponding to "receiving a reminder presentation input at the intelligent TV") (see page 3, lines 20-21 in the description of D1).

The TCSSS may provide several graphic items that appear to be overlapping graphical shapes (e.g., columns or tabs) on the television display 110. For example, FIG. 2 illustrates a screen 200 (corresponding to "the first portion of the display") of a television display (e.g., the display 110) that includes a menu 202 positioned on an edge of the display (corresponding to "the second portion of the display, wherein the second portion of the display at least partially overlaps the first portion"). The menu 202 includes four overlapping columns in accordance with present embodiments (see page 4, lines 1-4 in the description and figure 2 of D1).

FIG. 5 is an illustration of the TCSSS when the fourth column 210 is active. As set forth above, the fourth column 210 displays user-selected channels referred to as "favorites" when it is active. The fourth column 210 of the illustrated embodiment enables users to define it to include any source of input and any channel on a single menu tab (corresponding to "the reminder presentation dialog includes information relative to a specific program"). This will enable a user to conveniently switch between favorite channels and favorite sources of input within a single menu tab or column (see page 5, lines 19-22 in the description and figure 5 of D1).

D1 does not disclose the following features of claim 20: (1) the tuner is configured to receive and convert broadcast content signals to be displayed by the display; (2) TV content presented to a first portion of the display. Thus D1 does not disclose all the features of claim 20 and the subject matter of claim 20 is new in the sense of PCT Article 33(2).

However, the aforementioned feature (1) is common design in the art. As for feature (2), D2 (see page 5, lines 27-30 in the description) provides a method for displaying assistance data and discloses the following features: when digital channel content is broadcast, assistance information is displayed to a portion the screen 400. That is, D2 gives the teach to display TV content in a first portion and to display reminding assistance information in a second portion which overlaps the first portion. Thus, it is obvious for a person skilled in the art to apply the teaching of the D2 and common desigh in the art to D1 and arrive at this solution. Therefore the solution of claim 20 does not involve an inventive step, and does not meet the criteria set out in PCT Article 33(3).

II. Industrial applicability

The invention of claims 1-20 can find industrial applicability in the technical field of TV broadcast, and meets the criteria set out in PCT Article 33(4).

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PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: KENDRIA E. PEARSON
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 05 DEC 2013
Applicant's or agent's file reference 6583-488-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/055303	International filing date *(day/month/year)* 16 August 2013
Applicant FLEXTRONICS AP, LLC	

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

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

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

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

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

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

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

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

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)