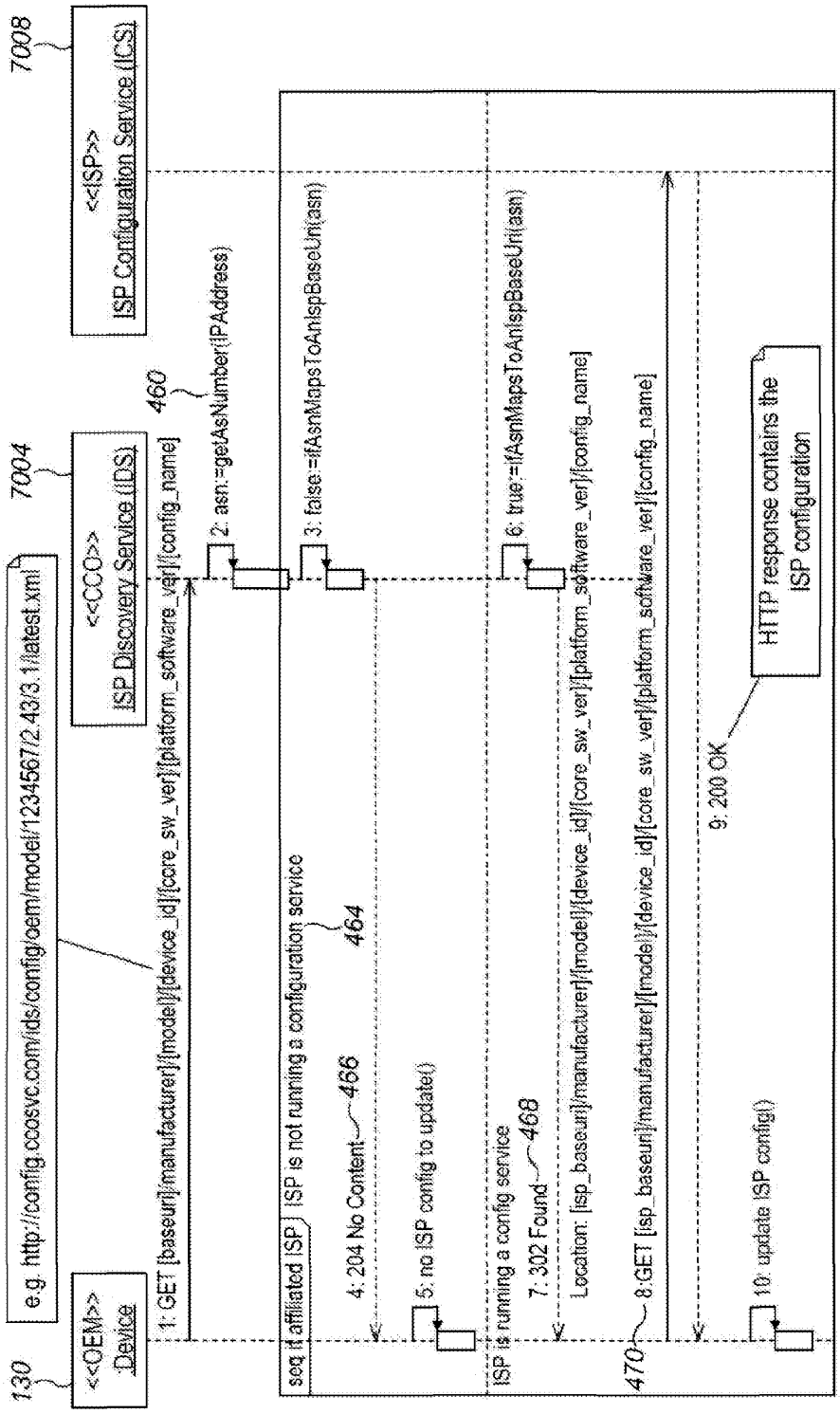

130
<<OEM>>
:Device
e.g. http://config.ccosvc.com/ids/config/oem/model/1234567/2.43/3.1/latest.xml
7004
<<CCO>>
ISP Discovery Service (IDS)
7008
<<ISP>>
ISP Configuration Service (ICS)
460
1: GET [baseuri]/manufacturer]/[model]/[device_id]/[core_sw_ver]/[platform_software_ver]/[config_name]
2: asn:=getAsNumber(IPAddress)
3: false:=ifAsnMapsToAnIspBaseUri(asn)
seq if affiliated ISP
ISP is not running a configuration service
464
4: 204 No Content
466
5: no ISP config to update()
6: true:=ifAsnMapsToAnIspBaseUri(asn)
ISP is running a config service
7: 302 Found
468
Location: [isp_baseuri]/manufacturer]/[model]/[device_id]/[core_sw_ver]/[platform_software_ver]/[config_name]
8:GET [isp_baseuri]/manufacturer]/[model]/[device_id]/[core_sw_ver]/[platform_software_ver]/[config_name]
470
9: 200 OK
HTTP response contains the ISP configuration
10: update ISP config()

FIG. 79

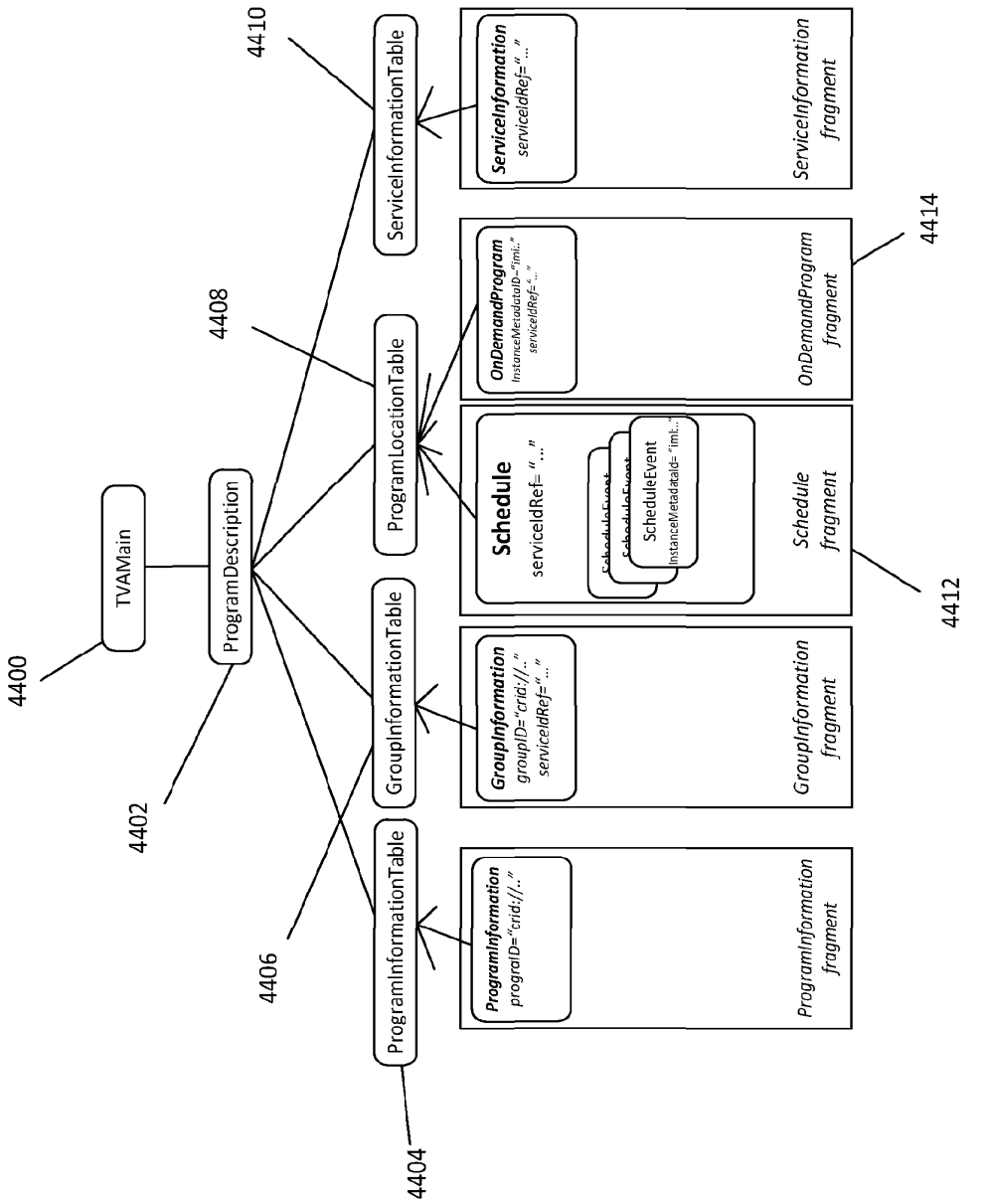

4400
TVAMain
4402
ProgramDescription
4404
ProgramInformationTable
4406
GroupInformationTable
4408
ProgramLocationTable
4410
ServiceInformationTable
ProgramInformation
progrID="crid://.."
ProgramInformation fragment
GroupInformation
groupID="crid://.."
serviceIdRef="..."
GroupInformation fragment
Schedule
serviceIdRef="..."
ScheduleEvent
InstanceMetadataId="imi:..."
Schedule fragment
4412
OnDemandProgram
InstanceMetadataID="imi:.."
serviceIdRef="..."
OnDemandProgram fragment
4414
ServiceInformation
serviceIdRef="..."
ServiceInformation fragment

Figure 80

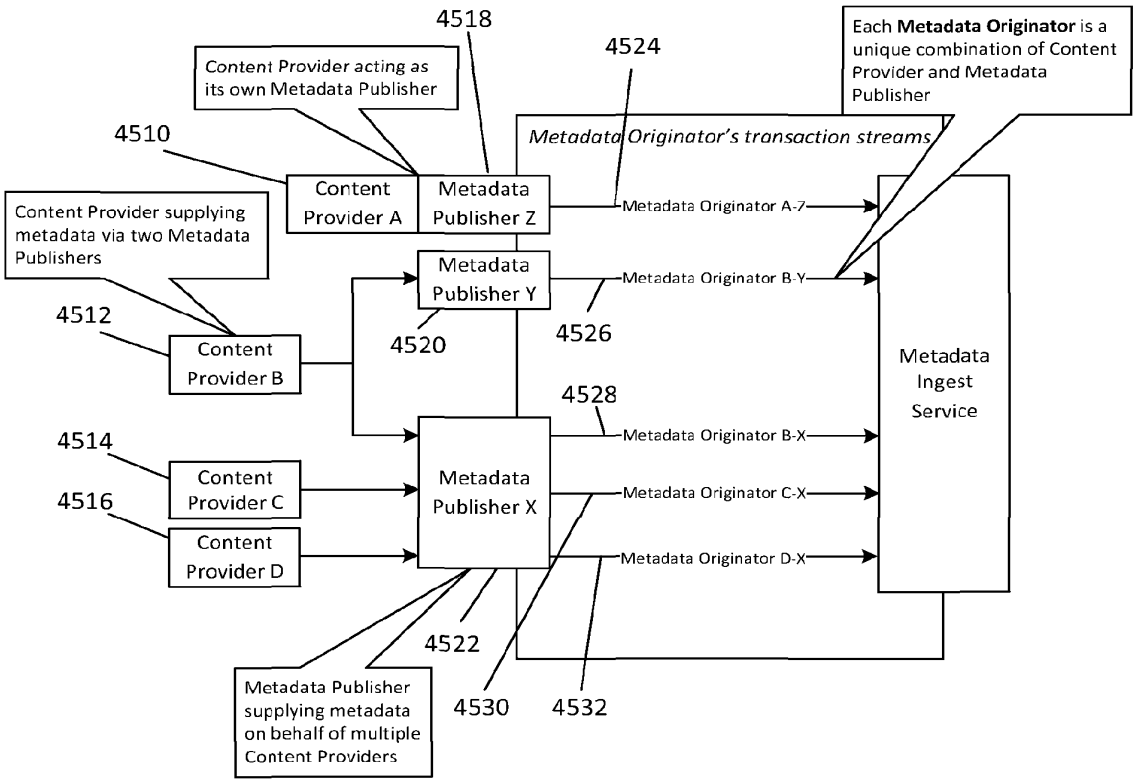

4518
4524
Each **Metadata Originator** is a unique combination of Content Provider and Metadata Publisher
Content Provider acting as its own Metadata Publisher
4510
Metadata Originator's transaction streams
Content Provider A
Metadata Publisher Z
Metadata Originator A-Z
Content Provider supplying metadata via two Metadata Publishers
Metadata Publisher Y
Metadata Originator B-Y
4512
4520
4526
Content Provider B
Metadata Ingest Service
4528
4514
Metadata Originator B-X
Content Provider C
Metadata Publisher X
Metadata Originator C-X
4516
Content Provider D
Metadata Originator D-X
4522
Metadata Publisher supplying metadata on behalf of multiple Content Providers
4530
4532

Figure 81

Sequence: Asynchronous operation mode

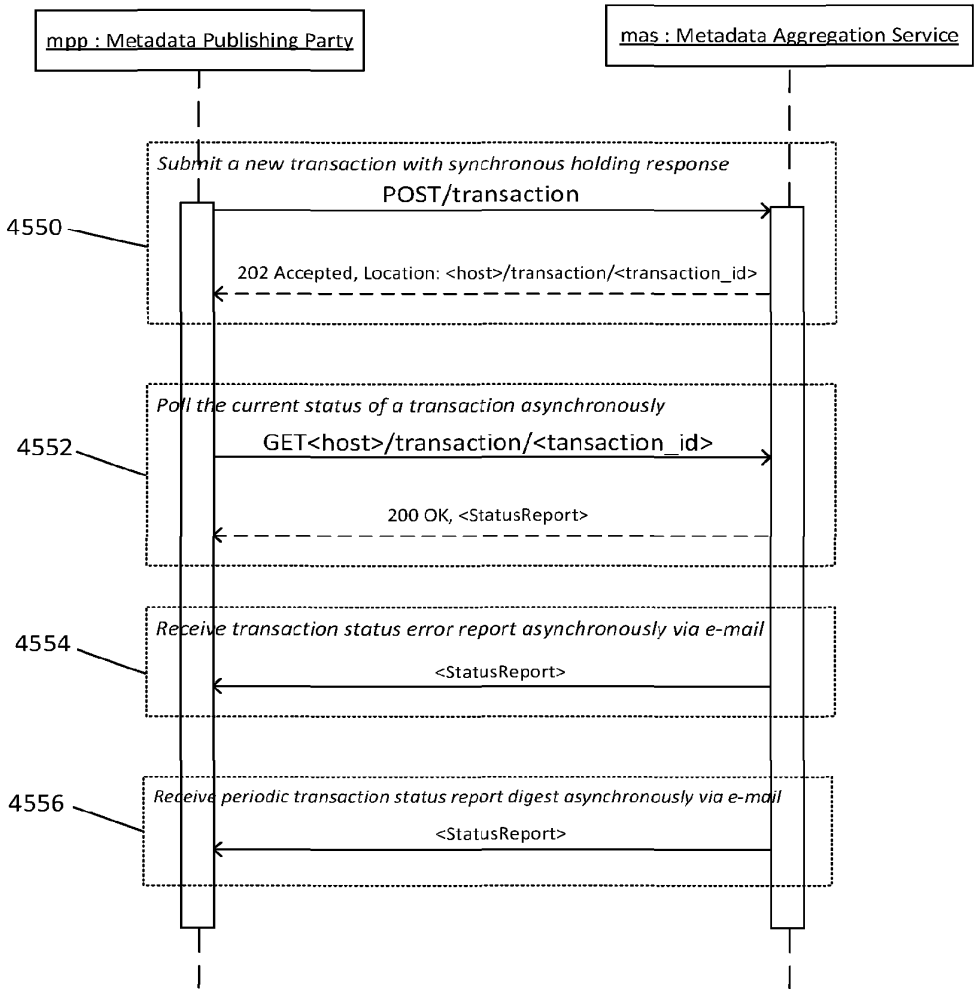


Figure 82

Sequence: Synchronous operation mode

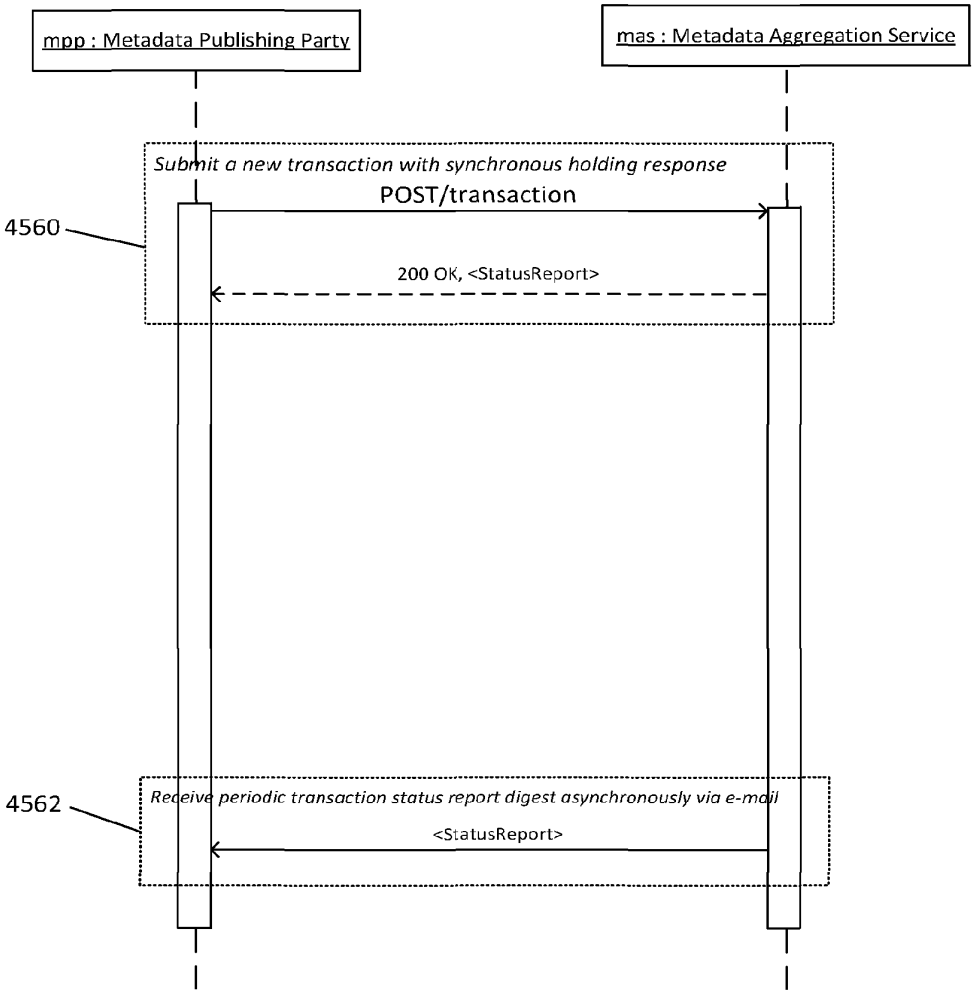


Figure 83

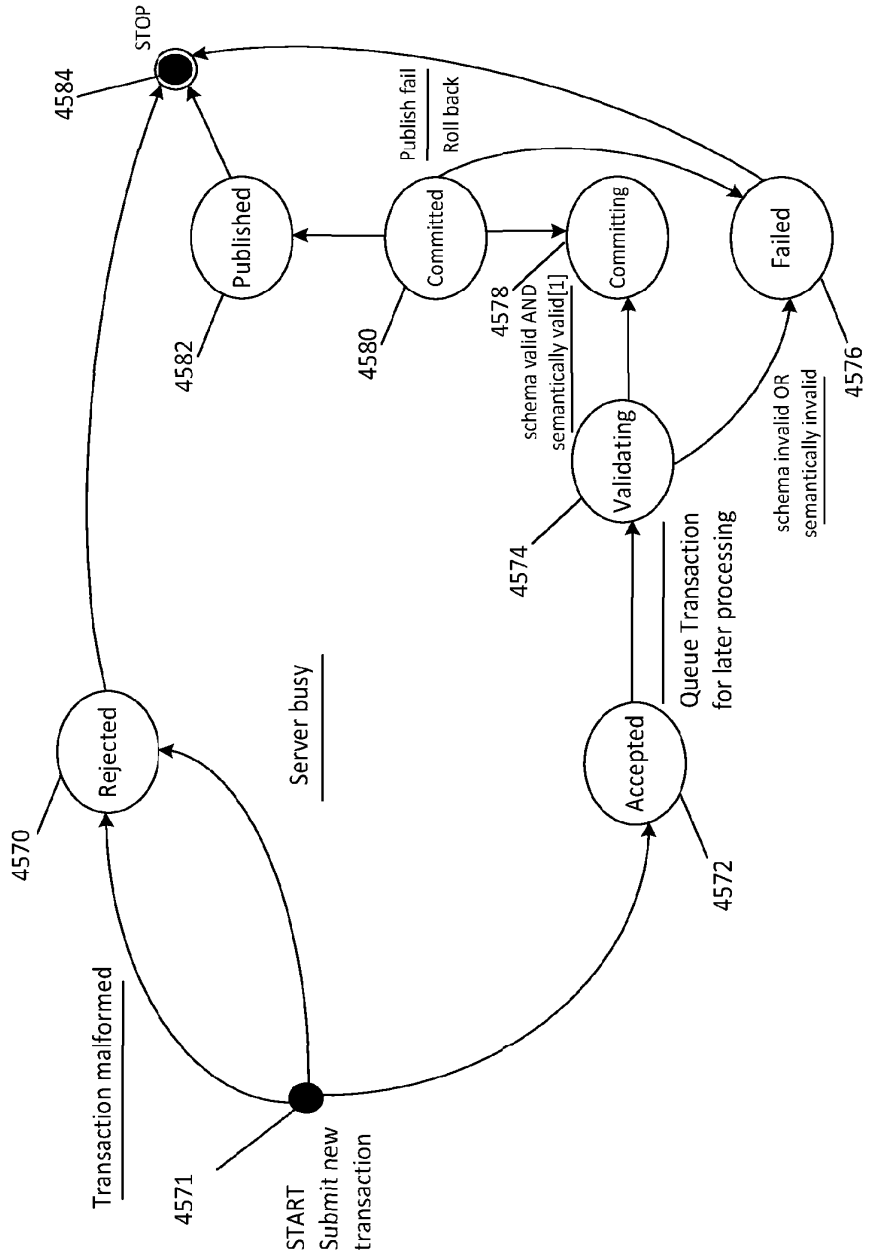

STOP
4584
Published
4582
Committed
4580
Publish fail
Roll back
Committing
4578
schema valid AND
semantically valid[1]
Failed
4576
Validating
4574
schema invalid OR
semantically invalid
Queue Transaction
for later processing
Rejected
4570
Server busy
Accepted
4572
Transaction malformed
4571
START
Submit new
transaction

Figure 84

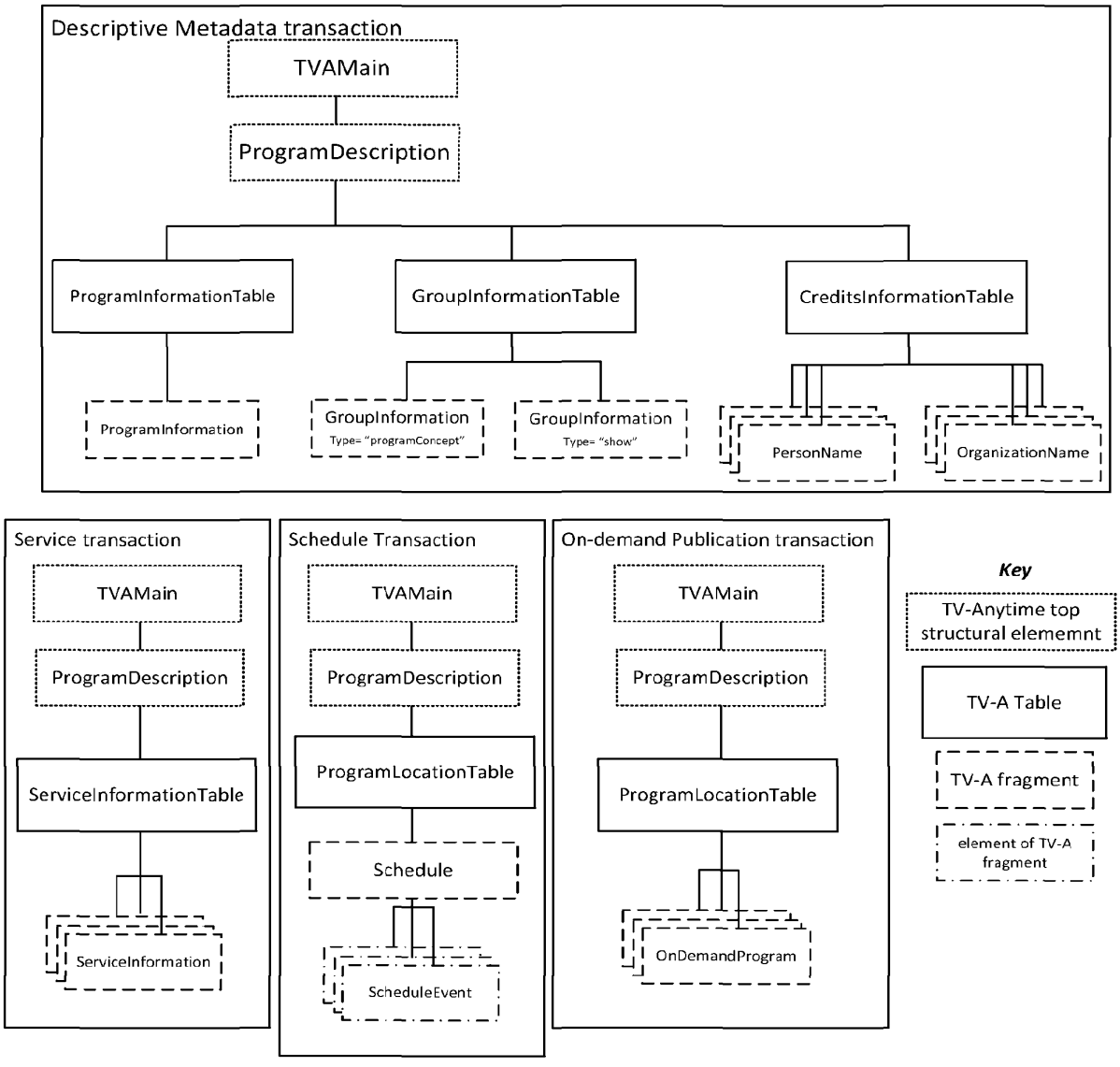

Descriptive Metadata transaction
TVAMain
ProgramDescription
ProgramInformationTable
GroupInformationTable
CreditsInformationTable
ProgramInformation
GroupInformation
Type= "programConcept"
GroupInformation
Type= "show"
PersonName
OrganizationName
Service transaction
TVAMain
ProgramDescription
ServiceInformationTable
ServiceInformation
Schedule Transaction
TVAMain
ProgramDescription
ProgramLocationTable
Schedule
ScheduleEvent
On-demand Publication transaction
TVAMain
ProgramDescription
ProgramLocationTable
OnDemandProgram
Key
TV-Anytime top structural elememnt
TV-A Table
TV-A fragment
element of TV-A fragment

Figure 85

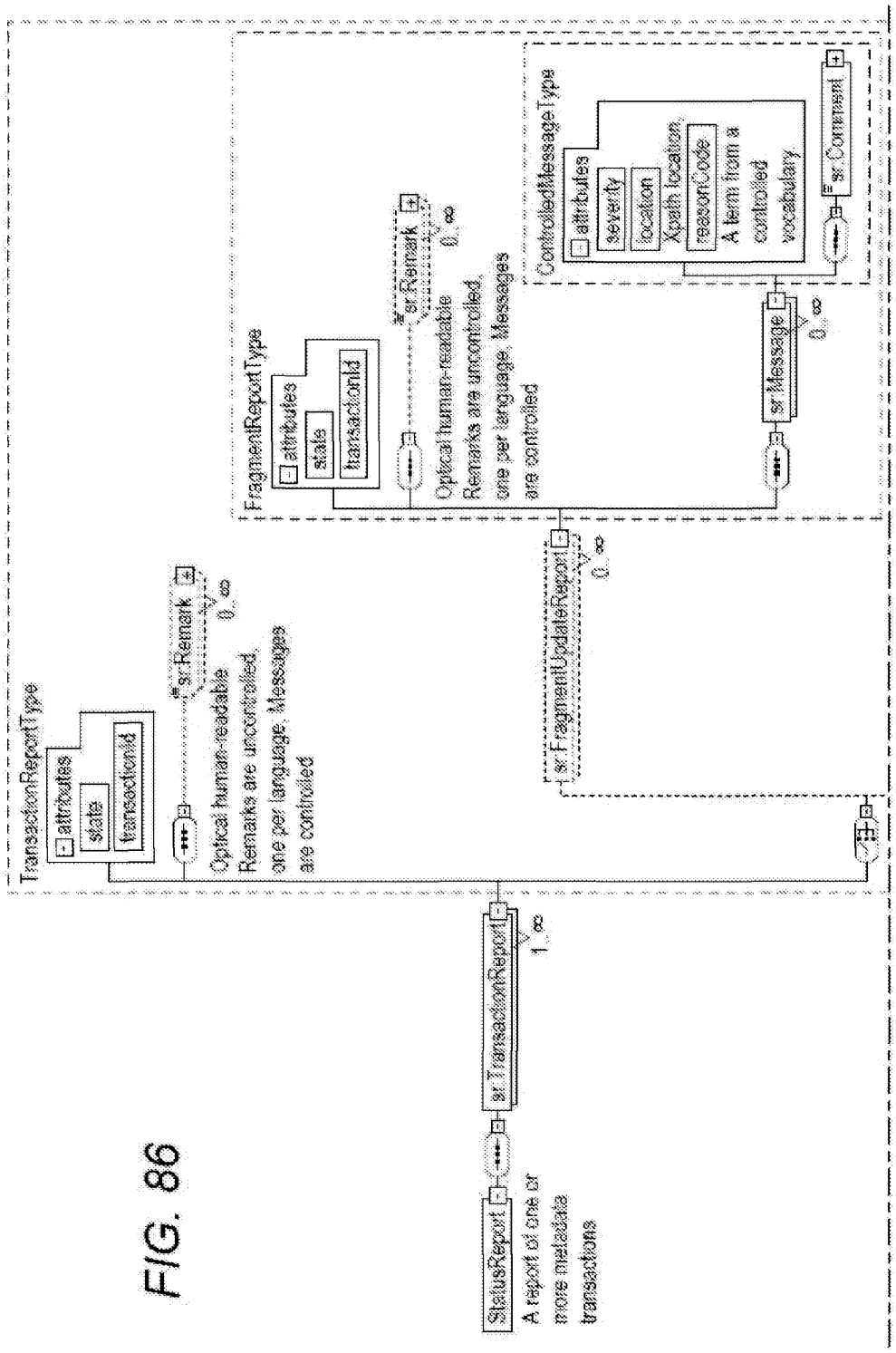

StatusReport
A report of one or more metadata transactions
sr TransactionReport
1..∞
TransactionReportType
attributes
state
transactionId
sr Remark
Optical human-readable Remarks are uncontrolled, one per language. Messages are controlled
0..∞
sr FragmentUpdateReport
0..∞
FragmentReportType
attributes
state
transactionId
sr Remark
Optical human-readable Remarks are uncontrolled, one per language. Messages are controlled
0..∞
sr Message
0..∞
ControlledMessageType
attributes
severity
location
Xpath location
reasonCode
A term from a controlled vocabulary
sr Comment

FIG. 86

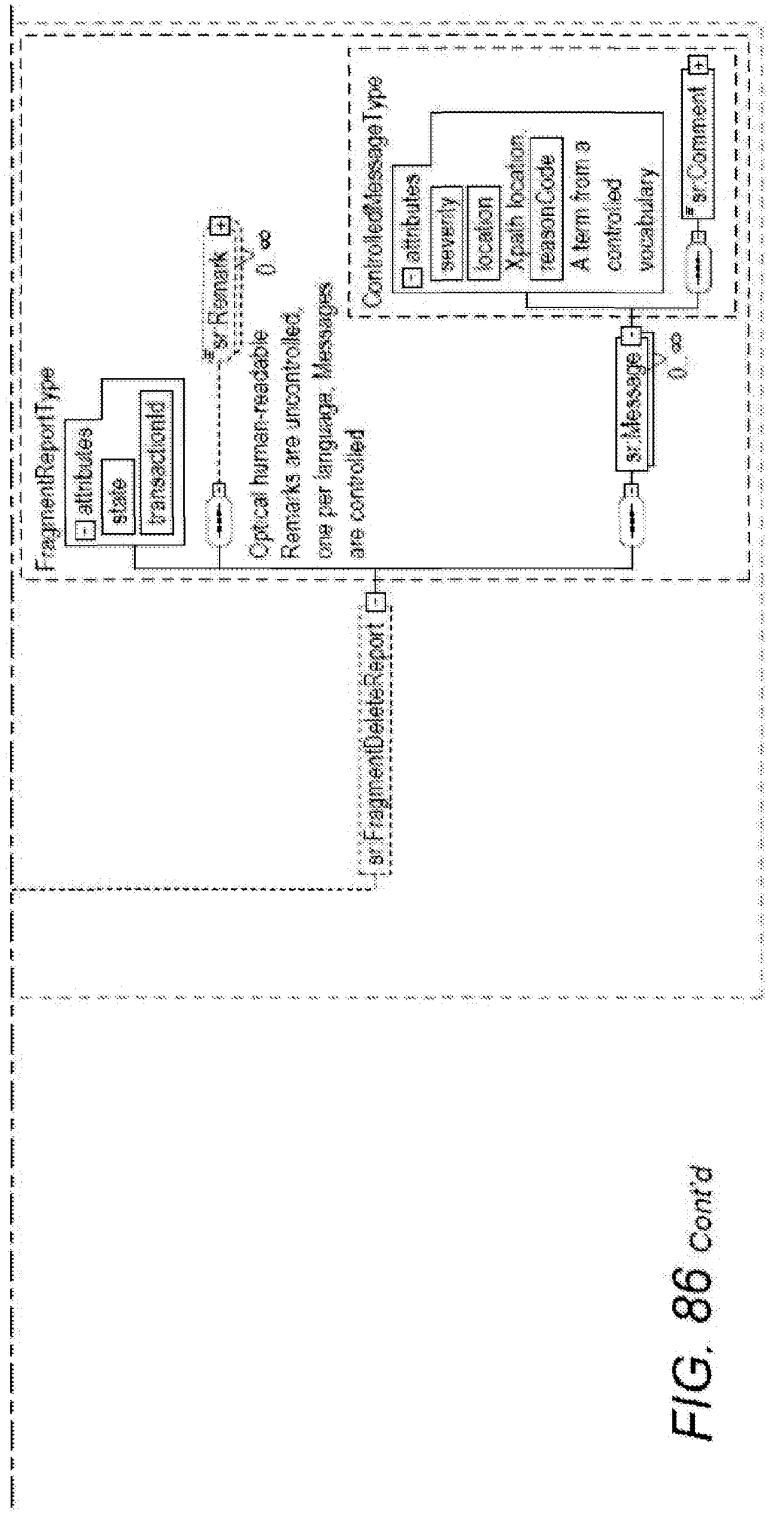

FragmentReportType
attributes
state
transactionId
sr:Remark
Optical human-readable
Remarks are uncontrolled,
one per language. Messages
are controlled
0..∞
ControlledMessageType
attributes
severity
location
Xpath location
reasonCode
A term from a
controlled
vocabulary
sr:Message
0..∞
sr:Comment
sr:FragmentDeleteReport

FIG. 86 Cont'd

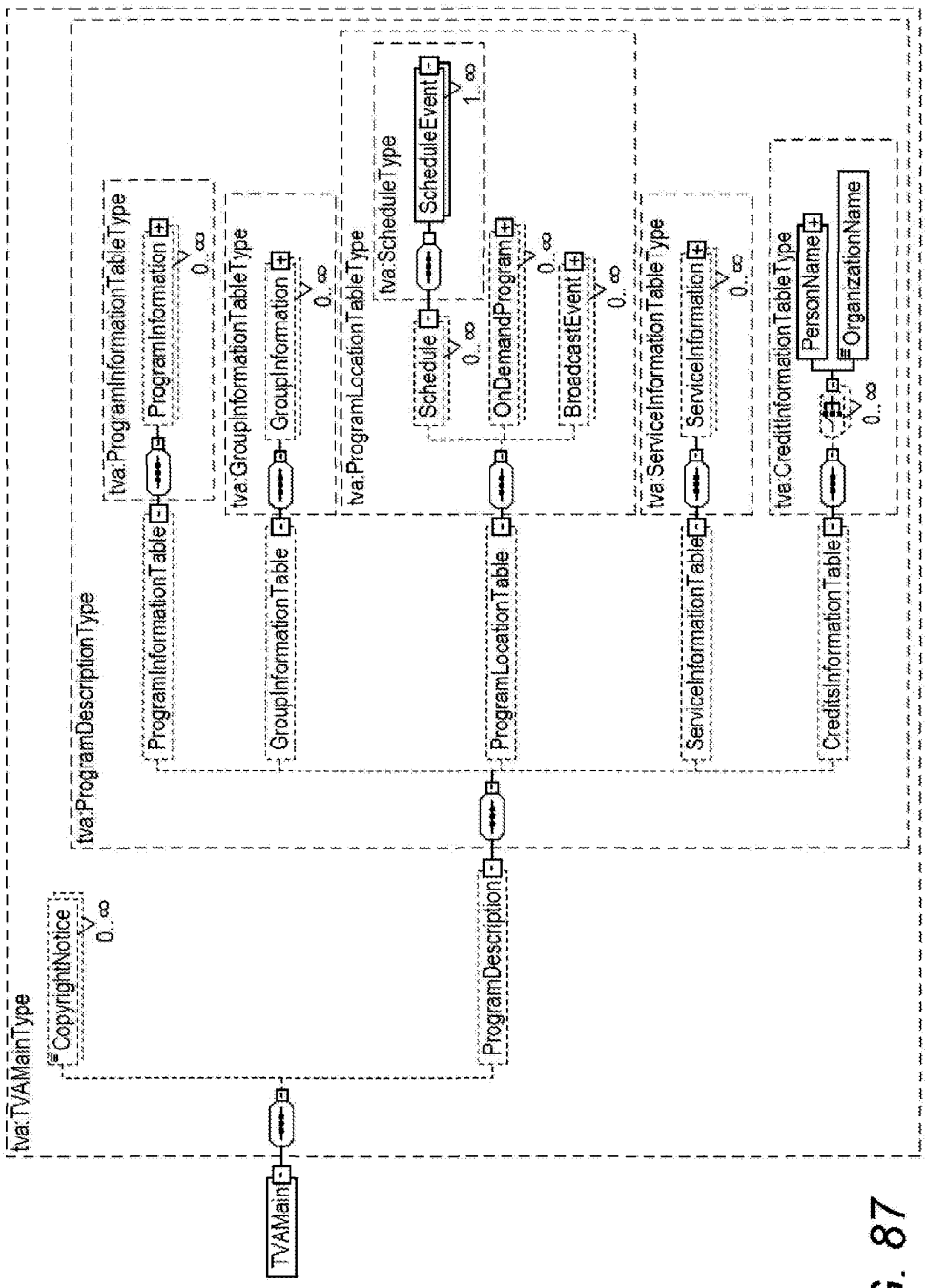

tva:TVAMainType
CopyrightNotice
0..∞
TVAMain
ProgramDescription
tva:ProgramDescriptionType
ProgramInformationTable
tva:ProgramInformationTableType
ProgramInformation
0..∞
GroupInformationTable
tva:GroupInformationTableType
GroupInformation
0..∞
ProgramLocationTable
tva:ProgramLocationTableType
Schedule
0..∞
ScheduleEvent
1..∞
OnDemandProgram
0..∞
BroadcastEvent
0..∞
ServiceInformationTable
tva:ServiceInformationTableType
ServiceInformation
0..∞
CreditsInformationTable
tva:CreditsInformationTableType
PersonName
OrganizationName
0..∞

FIG. 87

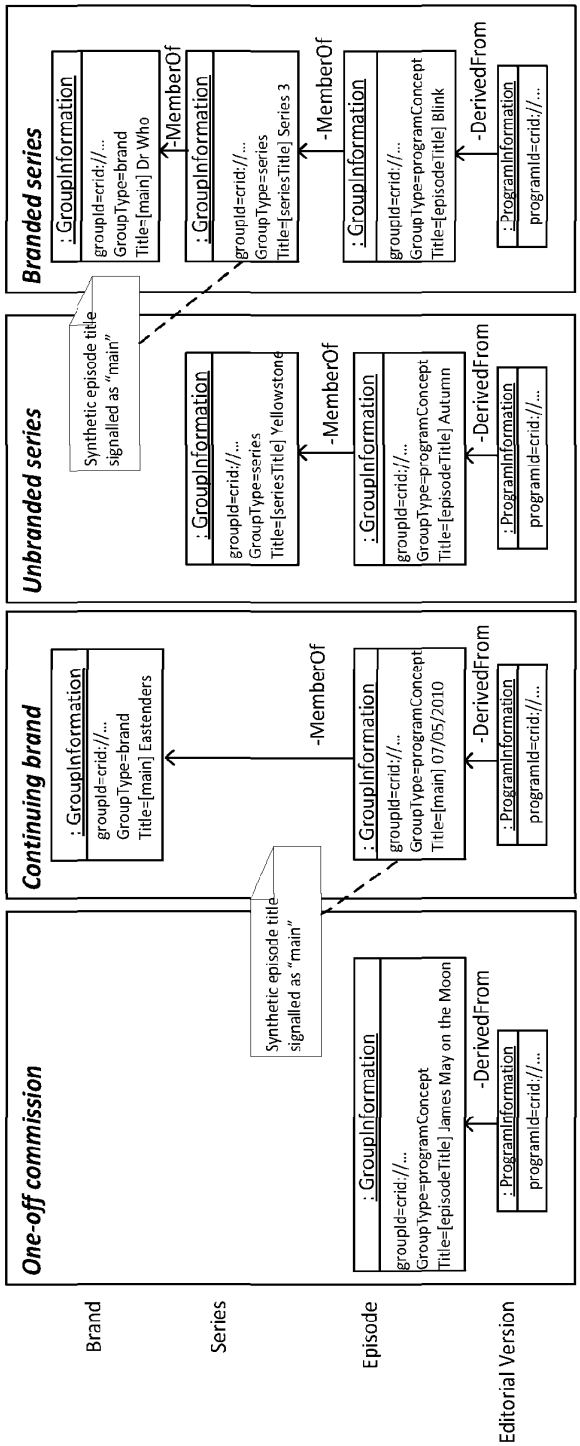

Brand
Series
Episode
Editorial Version
One-off commission
Continuing brand
Unbranded series
Branded series
: GroupInformation
groupId=crid://...
GroupType=brand
Title=[main] Eastenders
-MemberOf
: GroupInformation
groupId=crid://...
GroupType=programConcept
Title=[episodeTitle] James May on the Moon
-DerivedFrom
: ProgramInformation
programId=crid://...
Synthetic episode title signalled as "main"
: GroupInformation
groupId=crid://...
GroupType=brand
Title=[main] 07/05/2010
-MemberOf
: GroupInformation
groupId=crid://...
GroupType=programConcept
Title=[episodeTitle] 07/05/2010
-DerivedFrom
: ProgramInformation
programId=crid://...
Synthetic episode title signalled as "main"
: GroupInformation
groupId=crid://...
GroupType=series
Title=[seriesTitle] Yellowstone
-MemberOf
: GroupInformation
groupId=crid://...
GroupType=programConcept
Title=[episodeTitle] Autumn
-DerivedFrom
: ProgramInformation
programId=crid://...
: GroupInformation
groupId=crid://...
GroupType=brand
Title=[main] Dr Who
-MemberOf
: GroupInformation
groupId=crid://...
GroupType=series
Title=[seriesTitle] Series 3
-MemberOf
: GroupInformation
groupId=crid://...
GroupType=programConcept
Title=[episodeTitle] Blink
-DerivedFrom
: ProgramInformation
programId=crid://...

Figure 88

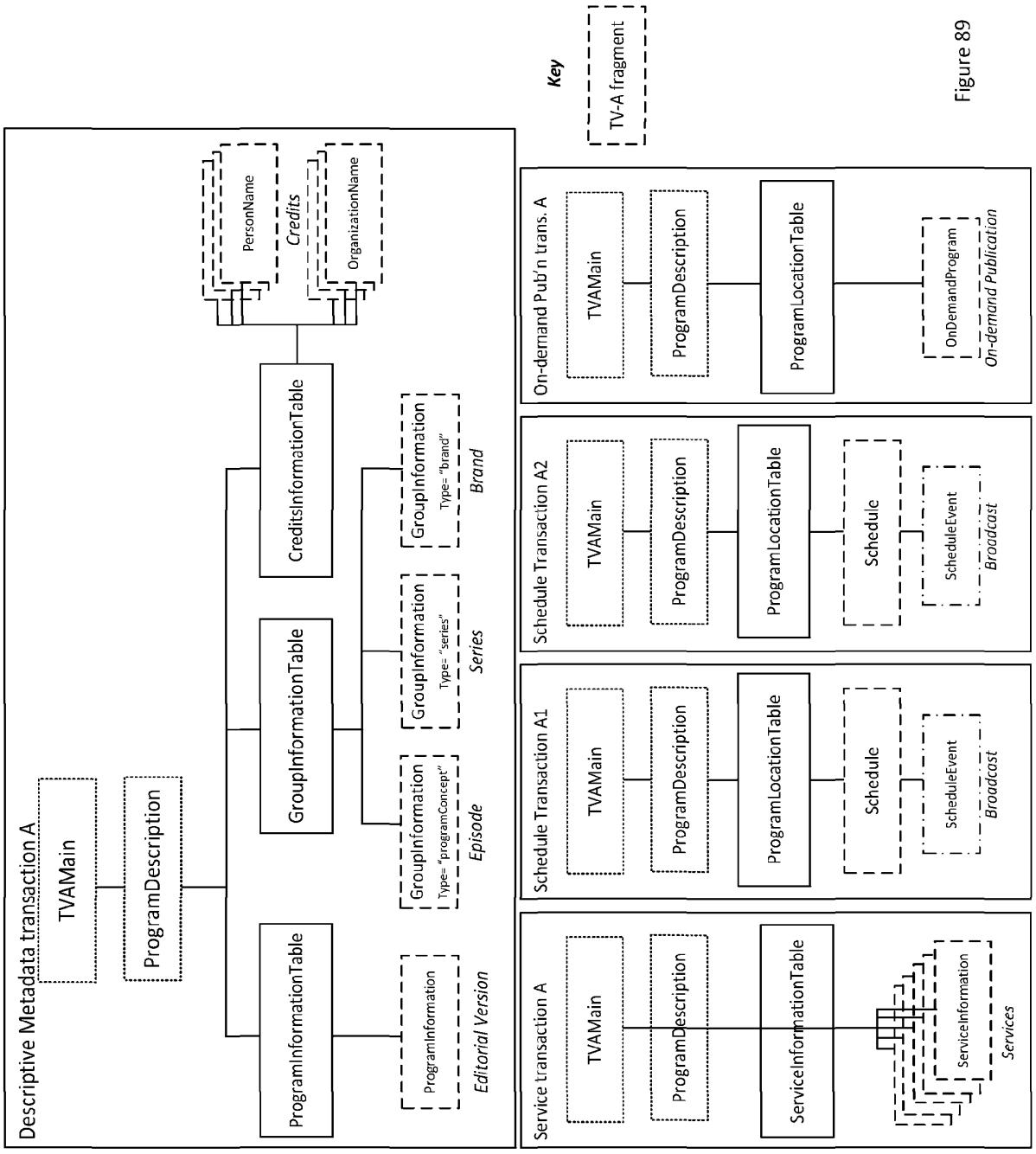

Descriptive Metadata transaction A
TVAMain
ProgramDescription
ProgramInformationTable
ProgramInformation
Editorial Version
GroupInformationTable
GroupInformation
Type= "programConcept"
Episode
GroupInformation
Type= "series"
Series
GroupInformation
Type= "brand"
Brand
CreditsInformationTable
Credits
PersonName
OrganizationName
Service transaction A
TVAMain
ProgramDescription
ServiceInformationTable
ServiceInformation
Services
Schedule Transaction A1
TVAMain
ProgramDescription
ProgramLocationTable
Schedule
ScheduleEvent
Broadcast
Schedule Transaction A2
TVAMain
ProgramDescription
ProgramLocationTable
Schedule
ScheduleEvent
Broadcast
On-demand Pub'n trans. A
TVAMain
ProgramDescription
ProgramLocationTable
OnDemandProgram
On-demand Publication
Key
TV-A fragment

Figure 89

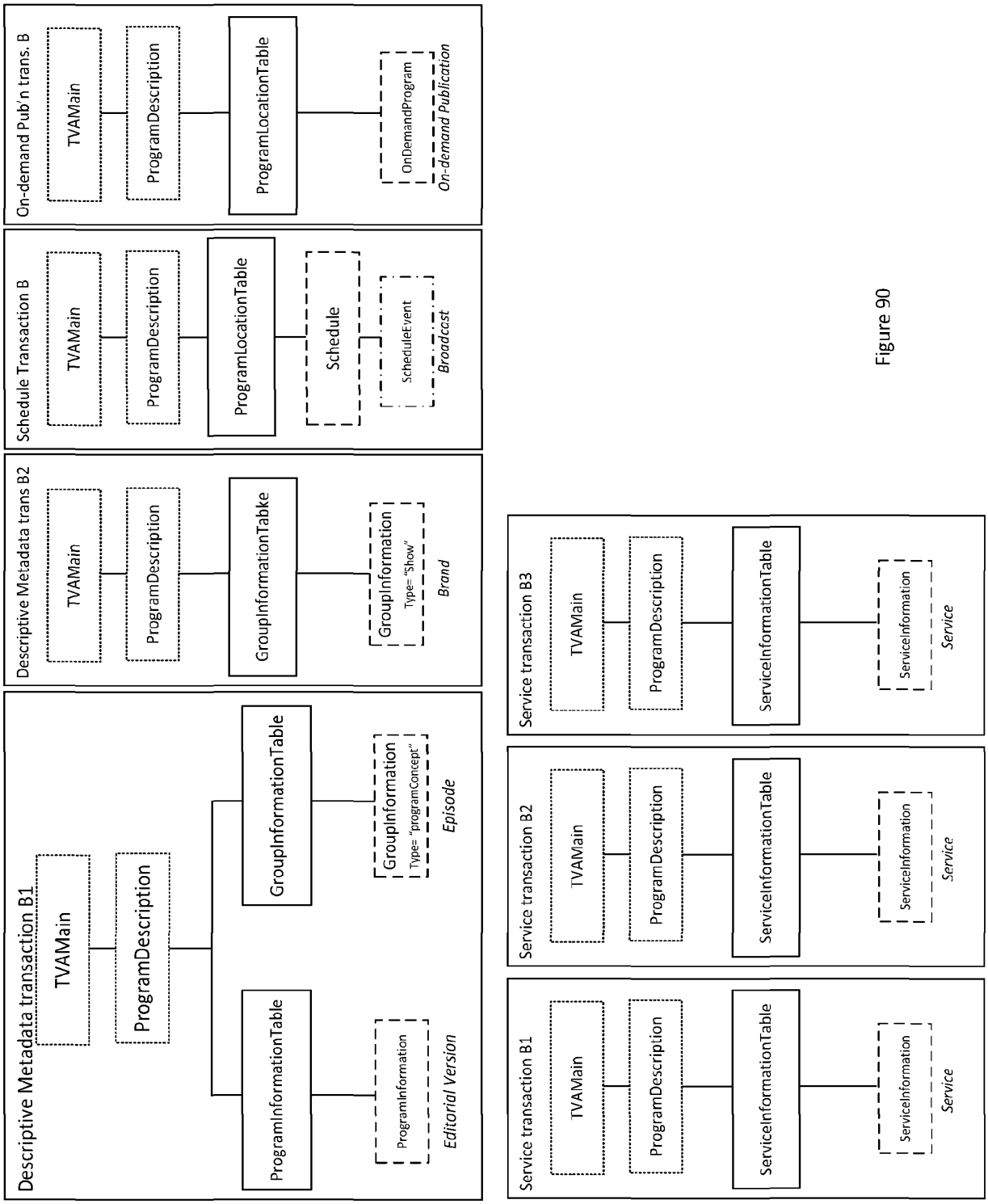

Descriptive Metadata transaction B1
TVAMain
ProgramDescription
ProgramInformationTable
ProgramInformation
GroupInformationTable
GroupInformation
Type= "programConcept"
Editorial Version
Episode
Descriptive Metadata trans B2
TVAMain
ProgramDescription
GroupInformationTabke
GroupInformation
Type= "show"
Brand
Schedule Transaction B
TVAMain
ProgramDescription
ProgramLocationTable
Schedule
ScheduleEvent
Broadcast
On-demand Pub'n trans. B
TVAMain
ProgramDescription
ProgramLocationTable
OnDemandProgram
On-demand Publication
Service transaction B1
TVAMain
ProgramDescription
ServiceInformationTable
ServiceInformation
Service
Service transaction B2
TVAMain
ProgramDescription
ServiceInformationTable
ServiceInformation
Service
Service transaction B3
TVAMain
ProgramDescription
ServiceInformationTable
ServiceInformation
Service

Figure 90

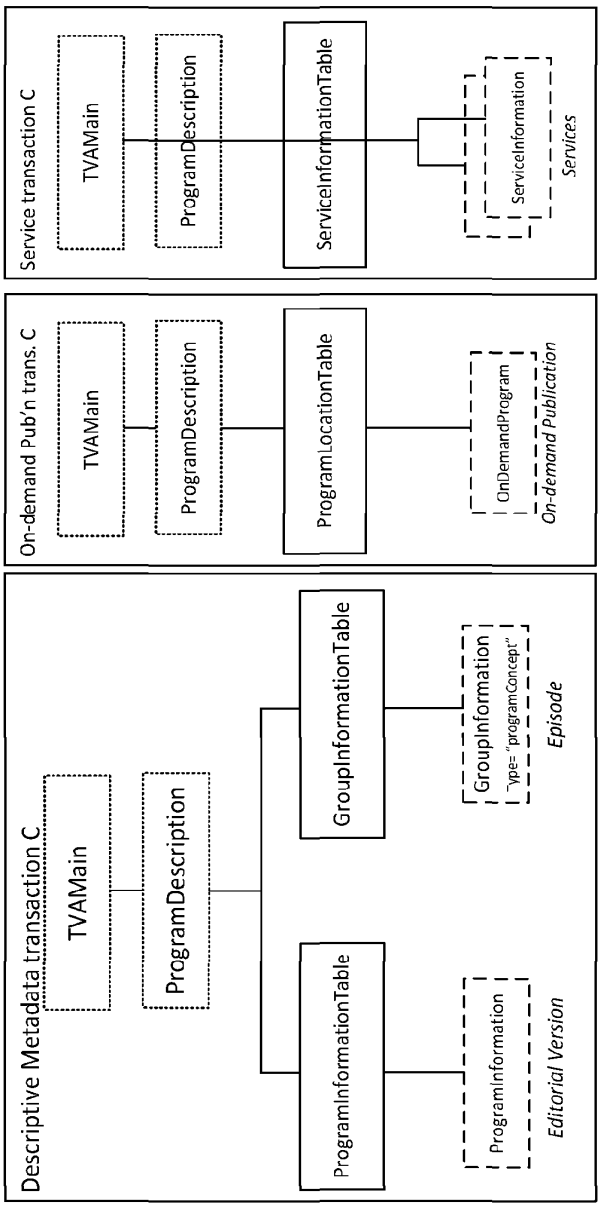

Service transaction C
TVAMain
ProgramDescription
ServiceInformationTable
ServiceInformation
Services
On-demand Pub'n trans. C
TVAMain
ProgramDescription
ProgramLocationTable
OnDemandProgram
On-demand Publication
Descriptive Metadata transaction C
TVAMain
ProgramDescription
ProgramInformationTable
GroupInformationTable
ProgramInformation
GroupInformation
Type= "programConcept"
Editorial Version
Episode

Figure 91

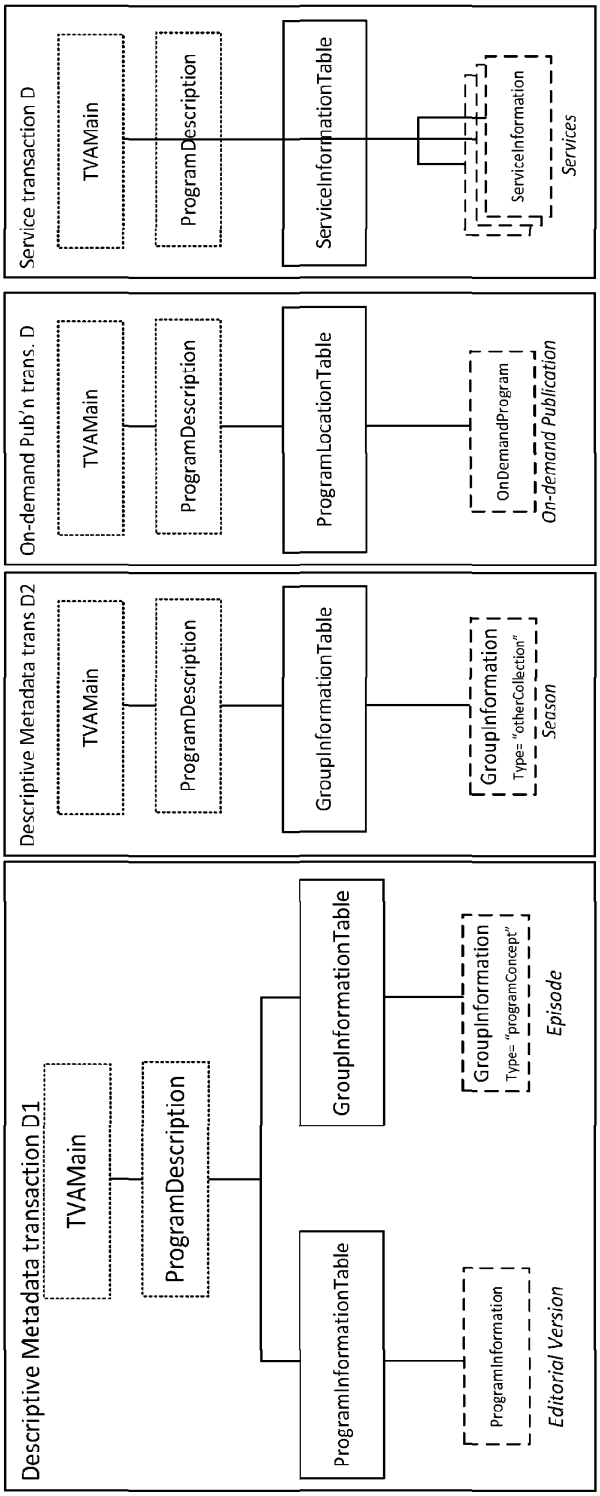

Service transaction D
TVAMain
ProgramDescription
ServiceInformationTable
ServiceInformation
Services
On-demand Pub'n trans. D
TVAMain
ProgramDescription
ProgramLocationTable
OnDemandProgram
On-demand Publication
Descriptive Metadata trans D2
TVAMain
ProgramDescription
GroupInformationTable
GroupInformation
Type= "otherCollection"
Season
Descriptive Metadata transaction D1
TVAMain
ProgramDescription
GroupInformationTable
GroupInformation
Type= "programConcept"
Episode
ProgramInformationTable
ProgramInformation
Editorial Version

Figure 92

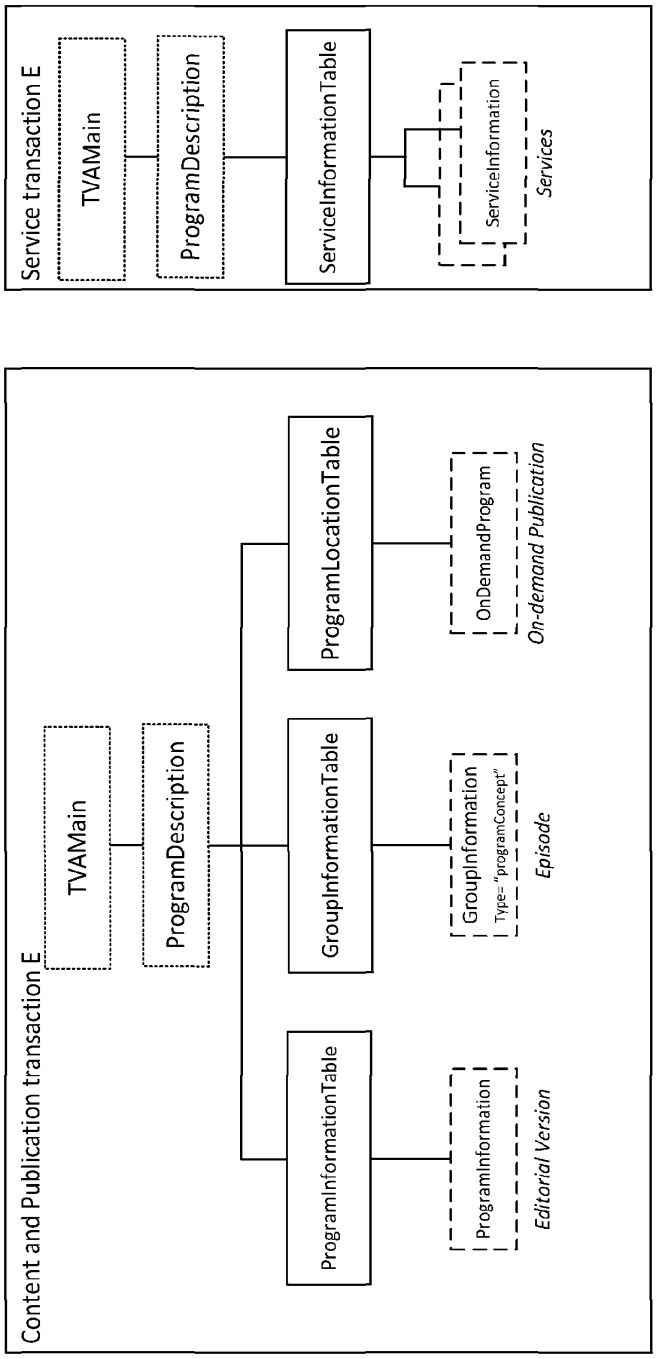

Service transaction E
TVAMain
ProgramDescription
ServiceInformationTable
ServiceInformation
Services
Content and Publication transaction E
TVAMain
ProgramDescription
ProgramLocationTable
OnDemandProgram
On-demand Publication
GroupInformationTable
GroupInformation
Type= "programConcept"
Episode
ProgramInformationTable
ProgramInformation
Editorial Version

Figure 93

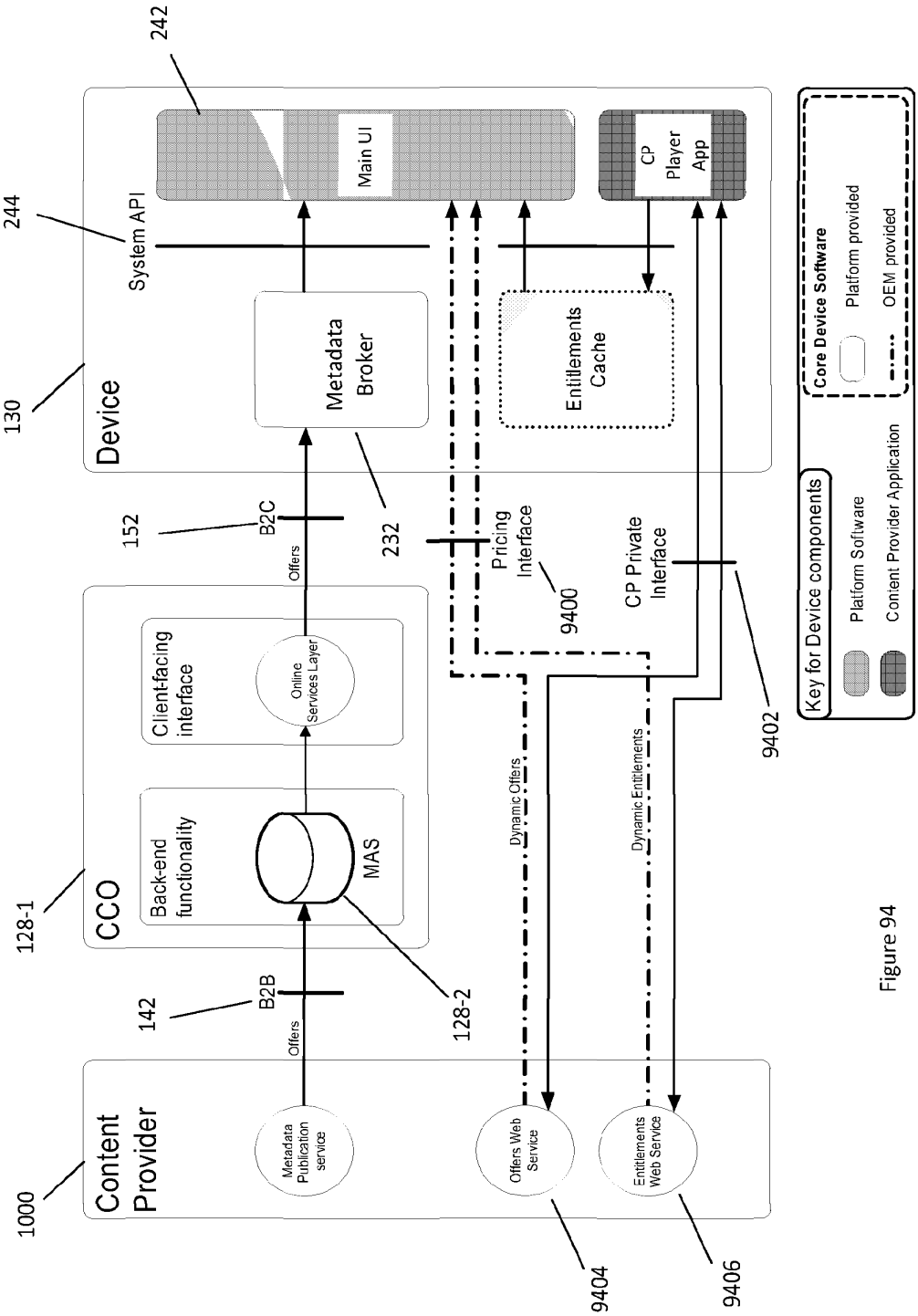

242
Main UI
CP Player App
244
System API
130
Device
Metadata Broker
Entitlements Cache
152
B2C
Offers
232
Pricing Interface
9400
CP Private Interface
9402
Client-facing interface
Online Services Layer
Back-end functionality
MAS
128-1
CCO
Dynamic Offers
Dynamic Entitlements
142
B2B
Offers
128-2
1000
Content Provider
Metadata Publication service
Offers Web Service
Entitlements Web Service
9404
9406
Key for Device components
Platform Software
Content Provider Application
Core Device Software
Platform provided
OEM provided

Figure 94

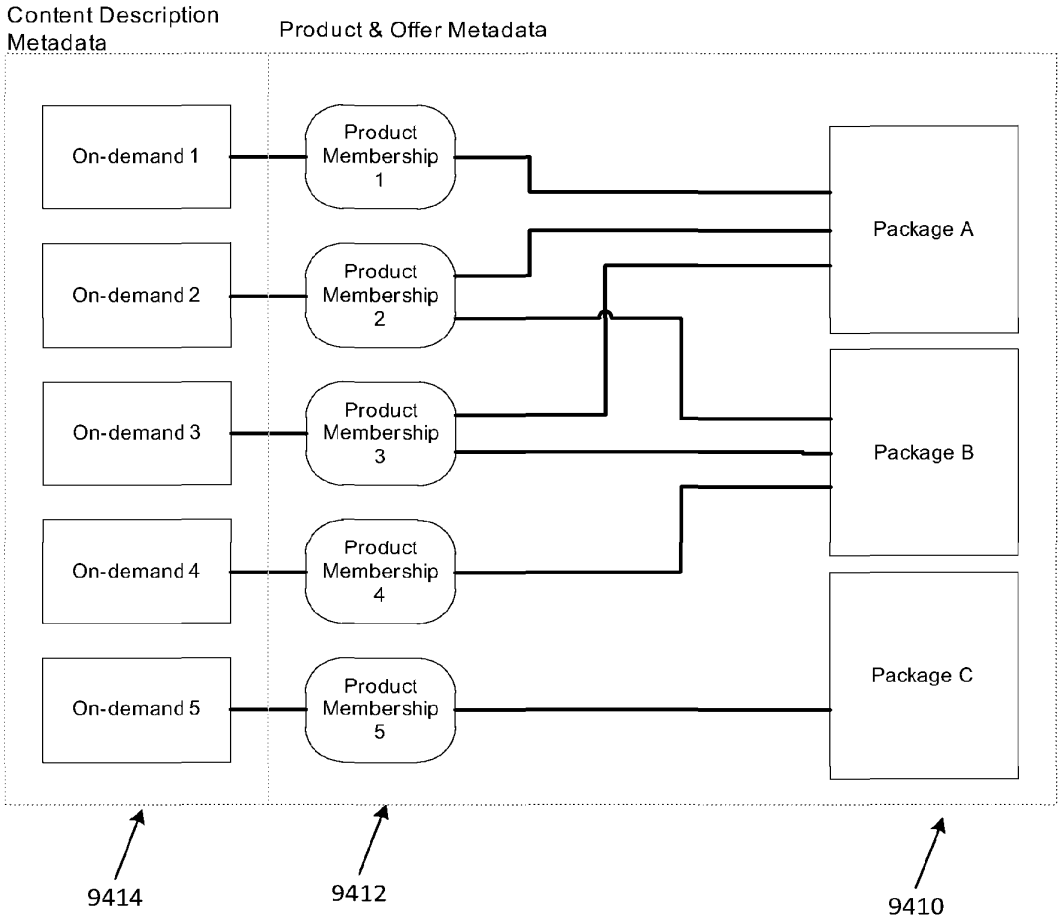

Content Description Metadata
Product & Offer Metadata
On-demand 1
On-demand 2
On-demand 3
On-demand 4
On-demand 5
Product Membership 1
Product Membership 2
Product Membership 3
Product Membership 4
Product Membership 5
Package A
Package B
Package C
9414
9412
9410

Figure 95

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(71) Applicant *(for all designated States except US)*: **ROVI TECHNOLOGIES CORPORATION** [US/US]; 2830 De La Cruz Boulevard, Santa Clara, California 95050 (US).

(72) Inventors; and

(75) Inventors/Applicants *(for US only)*: **DODSON, Chad** [US/US]; 2177 Watercress Place, San Ramon, California 94582 (US). **POZENEL, James** [US/US]; 1950 Coronada Street, Ann Arbor, Michigan 48103 (US). **BROWN, Donald Scott** [US/US]; 12036 Country River Drive, Rives Junction, Michigan 49277 (US). **STROTH, Jennifer** [US/US]; 2370 Cherrystone Drive, San Jose, California 95128 (US). **JORDAN, David** [US/US]; 575 Pierce Street, Apt. 505, San Francisco, California 94117 (US). **BARR, Jeffrey** [US/US]; 297 Tradewinds Drive #101, San Jose, California 95123 (US). **TRENZ, Daniel Wright** [US/US]; 1706 South Boulevard, Ann Arbor, Michigan 48104 (US).

(74) Agents: **GUILIANO, Joseph M.** et al.; Ropes & Gray LLP, 1211 Avenue of the Americas, New York, New York 10036-8704 (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, 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, 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.

[Continued on next page]

(54) Title: SYSTEMS AND METHODS FOR MIXED-MEDIA CONTENT GUIDANCE

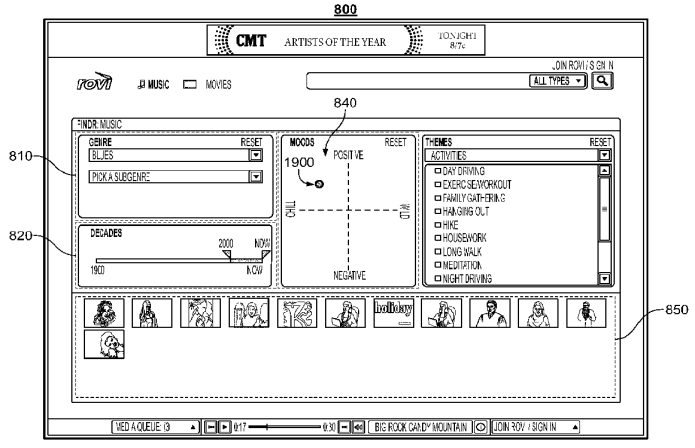


FIG. 19

(57) Abstract: Systems and methods for mixed-media content guidance are provided. One or more interactive tools are provided for searching and/or filtering media content (e.g., music content, movie content, etc.). In some embodiments, these interactive tools may include a two-dimensional selection region, where the two-dimensional selection region is divided into a plurality of sub-regions and defines an intersection between a first criterion and a second criterion. In response to receiving a user selection of a sub-region from the two-dimensional selection region, a subset of a plurality of media identifiers may be determined. At least a portion of the subset of media identifiers may be selected for presentation to the user.

WO 2012/094247 A2

(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, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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:

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SYSTEMS AND METHODS FOR MIXED-MEDIA CONTENT GUIDANCE

Cross-Reference to Related Application

[0001] This application claims the benefit under 35 U.S.C. § 119(e) of U.S. Provisional Patent Application No. 61/429,803, filed January 5, 2011, which is hereby incorporated by reference herein in its entirety.

Background of the Invention

[0002] With society awash in an ever-increasing quantity of media content, and as such media content becomes ever more widely available, advanced media guidance application support is becoming increasingly important. For example, with the overwhelming volume of media content available to the average user, it is often difficult for users to decide what media content to consume. At the same time, a convergence of media types and systems is driving the need for media guidance applications to manage and exploit the relationships between different kinds of media content.

Summary of the Invention

[0003] In view of the foregoing, systems and methods for managing and providing content in a mixed-media environment using an interactive media guidance application are provided. For example, the media guidance application may be provided as an on-line application (e.g., provided on a website) that presents users with information associated with movies, television, music, compositions, actors, artists, other entertainment-related content, or a combination thereof. In particular, the interactive media guidance application may provide a user with guidance for selecting content of various content types, such as movies, television programs, and music.

[0004] In some embodiments, interactive tools may be provided that allow the user to search and/or filter content based on different criteria. Content may be filtered by a category and/or a subcategory (e.g., a genre, a subgenre, or any other suitable category of interest), a rating (e.g., PG-13, PG, R, etc.), a time period (e.g., 1980s, 1990s, etc.), a demographic (e.g., toddlers), a theme (e.g., activity), a mood (e.g., positive, negative, chill, wild, etc.), and/or any other suitable criterion. For example, an interactive tool may be provided that allows users to search and/or filter content based on the user's mood. In response to receiving an indication of mood from the user, the control circuitry may search for a television show, music, or a movie with metadata describing one or more moods (e.g., sober, wild, melancholy, ecstatic, etc.) matching the indicated mood.

[0005] One of the interactive tools may include a two-dimensional selection region, where the two-

dimensional selection region is divided into a plurality of sub-regions and defines an intersection between a first criterion and a second criterion. For example, the two-dimensional selection region may define the intersection between two different moods. In another example, the two-dimensional selection region may define the intersection between a mood (e.g., having the bounds positive and negative) and a genre (e.g., having the bounds drama and comedy).

[0006] It should be noted that, in some embodiments, multiple two-dimensional selection regions may be provided. For example, a first two-dimensional selection region that defines the intersection between two sets of moods (e.g., a vertical axis with a "positive" upper bound and a "negative" lower bound and a horizontal axis with a "wild" upper bound and a "chill" lower bound) and a second two-dimensional selection region that defines the intersection between two sets of genres (e.g., a vertical axis with a "light" upper bound and a "heavy" lower bound and a horizontal axis with a "romance" upper bound and a "comedy" lower28857355_1 bound). In response to selecting a sub-region from each two-dimensional selection region, control circuitry may determine one or more media identifiers and their corresponding content for presentation to the user for selection, retrieval, and/or playback.

[0007] In some embodiments, the media guidance application may allow the user to select one or more criterion for placement in the two-dimensional selection region. For example, the control circuitry may transmit a query to a database or any other suitable source to determine criterion available for

placement in the two-dimensional selection region. In response to receiving the available criterion, the control circuitry may populate a prompt that is provided to the user for selecting one or more criterion. In response to selecting criteria, the control circuitry may provide a two-dimensional selection region that is divided into a plurality of sub-regions and that defines an intersection between the selected criteria.

[0008] In some embodiments, the media guidance application may use metadata associated with media content to assist the user in making a selection. For example, the interactive media guidance application may include techniques for managing and exploiting the relationships between different kinds of media content, such as between movies, television, and music. In a more particular example, metadata associated with the media content may be cross-referenced and linked in order to provide users with relevant information spanning the array of media content types.

Brief Description of the Drawings

[0009] The above and other objects and advantages of the invention will be apparent upon consideration of the following detailed description, taken in conjunction with the accompanying drawings, in which like reference characters refer to like parts throughout, and in which:

[0010] FIGS. 1 and 2 show illustrative display screens that may be used to provide media guidance application listings in accordance with some embodiments of the invention;

[0011] FIG. 3 shows an illustrative user equipment device in accordance with some embodiments of the invention;

[0012] FIG. 4 shows a simplified diagram of an interactive media system in accordance with some embodiments of the invention;

[0013] FIG. 5 is a diagram of an illustrative cross-platform interactive media system in accordance with some embodiments of the invention;

[0014] FIGS. 6 and 7 show illustrative display screens of a media guidance application that may be used to provide guidance for various types of media in accordance with some embodiments of the invention;

[0015] FIGS. 8-13 show illustrative display screens of a media guidance application that may be used to provide criteria for search and/or filtering media content (e.g., music content) in accordance with some embodiments of the invention;

[0016] FIG. 14 shows illustrative portions of display screen that may be used to provide a preview audio clip in response to selecting a particular portion of a media identifier in accordance with some embodiments of the invention;

[0017] FIGS. 15 and 16 show an illustrative display screen of a media guidance application that may be used to access information and other media content associated with a particular album, song, or other audio content in accordance with some embodiments of the invention;

[0018] FIG. 17 shows an illustrative display screen of a media guidance application with an overlay containing information related to a currently queued or

playing song in accordance with some embodiments of the invention;

[0019] FIG. 18 shows an illustrative display screen of a media guidance application that may be used to provide information and other media content associated with a particular song in accordance with some embodiments of the invention;

[0020] FIGS. 19-21 show an illustrative display screen of a media guidance application that may be used to search and/or filter music or other audio content using a two-dimensional selection region (for two sets of moods) in accordance with some embodiments of the invention;

[0021] FIGS. 22-27 show illustrative display screens of a media guidance application that may be used to provide criteria for search and/or filtering media content (e.g., movie content and/or video content) in accordance with some embodiments of the invention;

[0022] FIGS. 28 and 29 show an illustrative display screen of a media guidance application that may be used to access information and other media content associated with a particular movie or other video content in accordance with some embodiments of the invention;

[0023] FIG. 30 shows an illustrative display screen of a media guidance application with an overlay containing a trailer or video clip related to a particular movie or other video content in accordance with some embodiments of the invention;

[0024] FIGS. 31-34 show an illustrative display screen of a media guidance application that may be used to access information and/or a media clips related to media content associated with a particular movie (or

other video content) in accordance with some embodiments of the invention;

[0025] FIG. 35 shows an illustrative display screen of a media guidance application that may be used to access additional information (e.g., synopsis and cast information) associated with a particular movie or other media content in accordance with some embodiments of the invention;

[0026] FIGS. 36-39 show an illustrative display screen of a media guidance application that may be used to access information and/or media content associated with a person (e.g., an actor, an artist, or a performer) including a filmography snapshot portion in accordance with some embodiments of the invention;

[0027] FIGS. 40-43 show illustrative display screens of a media guidance application that includes a persistent media queue and allows a user to access music and/or video clips, or other information, related to media content displayed in a cycling advertorial in accordance with some embodiments of the invention;

[0028] FIGS. 44-47 show illustrative display screens of a media guidance application include a persistent media queue that manages one or more lists of music content and/or video content in accordance with some embodiments of the invention;

[0029] FIG. 48 shows an illustrative display screen of a media guidance application depicting a recommendation feature in accordance with some embodiments of the invention;

[0030] FIG. 49 illustrates a flow diagram for selecting media content in response to receiving user-selected criteria from at least a two-dimensional

selection region in accordance with some embodiments of the invention; and

[0031] FIG. 50 shows an illustrative example of a file in Extensible Markup Language (XML) for retrieving media identifiers used to generate selection displays in accordance with some embodiments of the invention.

Detailed Description of Embodiments

[0032] This invention generally relates to systems and methods for managing and providing content in a mixed-media environment using an interactive media guidance application. In particular, systems and methods are provided for searching and/or filtering content of various content types, such as movies, television programs, and music, with a two-dimensional selection region, where the two-dimensional selection region is divided into a plurality of sub-regions and defines an intersection between a first criterion and a second criterion.

[0033] The amount of content available to users in any given content delivery system can be substantial. Consequently, many users desire a form of media guidance through an interface that allows users to efficiently navigate content selections and easily identify content that they may desire. An application that provides such guidance is referred to herein as an interactive media guidance application or, sometimes, a media guidance application or a guidance application.

[0034] Interactive media guidance applications may take various forms depending on the content for which they provide guidance. One typical type of media guidance application is an interactive television program guide. Interactive television program guides

(sometimes referred to as electronic program guides) are well-known guidance applications that, among other things, allow users to navigate among and locate many types of content. As referred to herein, the term "content" should be understood to mean an electronically consumable user asset, such as television programming, as well as pay-per-view programs, on-demand programs (as in video-on-demand (VOD) systems), Internet content (e.g., streaming content, downloadable content, Webcasts, etc.), video clips, audio, content information, pictures, rotating images, documents, playlists, websites, articles, books, electronic books, blogs, advertisements, chat sessions, social media, applications, games, and/or any other media or multimedia and/or combination of the same. Guidance applications also allow users to navigate among and locate content. As referred to herein, the term "multimedia" should be understood to mean content that utilizes at least two different content forms described above, for example, text, audio, images, video, or interactivity content forms. Content may be recorded, played, displayed or accessed by user equipment devices, but can also be part of a live performance.

[0035] With the advent of the Internet, mobile computing, and high-speed wireless networks, users are accessing media on user equipment devices on which they traditionally did not. As referred to herein, the phrase "user equipment device," "user equipment," "user device," "electronic device," "electronic equipment," "media equipment device," or "media device" should be understood to mean any device for accessing the content described above, such as a television, a Smart TV, a

set-top box, an integrated receiver decoder (IRD) for handling satellite television, a digital storage device, a digital media receiver (DMR), a digital media adapter (DMA), a streaming media device, a DVD player, a DVD recorder, a connected DVD, a local media server, a BLU-RAY player, a BLU-RAY recorder, a personal computer (PC), a laptop computer, a tablet computer, a WebTV box, a personal computer television (PC/TV), a PC media server, a PC media center, a hand-held computer, a stationary telephone, a personal digital assistant (PDA), a mobile telephone, a portable video player, a portable music player, a portable gaming machine, a smart phone, or any other television equipment, computing equipment, or wireless device, and/or combination of the same. In some embodiments, the user equipment device may have a front facing screen and a rear facing screen, multiple front screens, or multiple angled screens. In some embodiments, the user equipment device may have a front facing camera and/or a rear facing camera. On these user equipment devices, users may be able to navigate among and locate the same content available through a television. Consequently, media guidance may be available on these devices, as well. The guidance provided may be for content available only through a television, for content available only through one or more of other types of user equipment devices, or for content available both through a television and one or more of the other types of user equipment devices. The media guidance applications may be provided as on-line applications (i.e., provided on a web-site), or as stand-alone applications or clients on user equipment devices. Various devices and platforms that may implement media

guidance applications are described in more detail below.

[0036] One of the functions of the media guidance application is to provide media guidance data to users. As referred to herein, the phrase, "media guidance data" or "guidance data" should be understood to mean any data related to content, such as media listings, media-related information (e.g., broadcast times, broadcast channels, titles, descriptions, ratings information (e.g., parental control ratings, critic's ratings, etc.), genre or category information, actor information, logo data for broadcasters' or providers' logos, etc.), media format (e.g., standard definition, high definition, 3D, etc.), advertisement information (e.g., text, images, media clips, etc.), on-demand information, blogs, websites, and any other type of guidance data that is helpful for a user to navigate among and locate desired content selections.

[0037] FIGS. 1-2 show illustrative display screens that may be used to provide media guidance data. The display screens shown in FIGS. 1-2 and 6-48 may be implemented on any suitable user equipment device or platform. While the displays of FIGS. 1-2 and 6-48 are illustrated as full screen displays, they may also be fully or partially overlaid over content being displayed. A user may indicate a desire to access content information by selecting a selectable option provided in a display screen (e.g., a menu option, a listings option, an icon, a hyperlink, etc.) or pressing a dedicated button (e.g., a GUIDE button) on a remote control or other user input interface or device. In response to the user's indication, the media guidance application may provide a display screen with

media guidance data organized in one of several ways, such as by time and channel in a grid, by time, by channel, by source, by content type, by category (e.g., movies, sports, news, children, or other categories of programming), or other predefined, user-defined, or other organization criteria. The organization of the media guidance data is determined by guidance application data. As referred to herein, the phrase, "guidance application data" should be understood to mean data used in operating the guidance application, such as program information, guidance application settings, user preferences, or user profile information.

[0038] FIG. 1 shows illustrative grid program listings display 100 arranged by time and channel that also enables access to different types of content in a single display. Display 100 may include grid 102 with: (1) a column of channel/content type identifiers 104, where each channel/content type identifier (which is a cell in the column) identifies a different channel or content type available; and (2) a row of time identifiers 106, where each time identifier (which is a cell in the row) identifies a time block of programming. Grid 102 also includes cells of program listings, such as program listing 108, where each listing provides the title of the program provided on the listing's associated channel and time. With a user input device, a user can select program listings by moving highlight region 110. Information relating to the program listing selected by highlight region 110 may be provided in program information region 112. Region 112 may include, for example, the program title, the program description, the time the program is

provided (if applicable), the channel the program is on (if applicable), the program's rating, and other desired information.

[0039] In addition to providing access to linear programming (e.g., content that is scheduled to be transmitted to a plurality of user equipment devices at a predetermined time and is provided according to a schedule), the media guidance application also provides access to non-linear programming (e.g., content accessible to a user equipment device at any time and is not provided according to a schedule). Non-linear programming may include content from different content sources including on-demand content (e.g., VOD), Internet content (e.g., streaming media, downloadable media, etc.), locally stored content (e.g., content stored on any user equipment device described above or other storage device), or other time-independent content. On-demand content may include movies or any other content provided by a particular content provider (e.g., HBO On Demand providing "The Sopranos" and "Curb Your Enthusiasm"). HBO ON DEMAND is a service mark owned by Time Warner Company L.P. et al. and THE SOPRANOS and CURB YOUR ENTHUSIASM are trademarks owned by the Home Box Office, Inc. Internet content may include web events, such as a chat session or Webcast, or content available on-demand as streaming content or downloadable content through an Internet web site or other Internet access (e.g. FTP).

[0040] Grid 102 may provide media guidance data for non-linear programming including on-demand listing 114, recorded content listing 116, and Internet content listing 118. A display combining media guidance data for content from different types of content sources is

sometimes referred to as a "mixed-media" display. Various permutations of the types of media guidance data that may be displayed that are different than display 100 may be based on user selection or guidance application definition (e.g., a display of only recorded and broadcast listings, only on-demand and broadcast listings, etc.). As illustrated, listings 114, 116, and 118 are shown as spanning the entire time block displayed in grid 102 to indicate that selection of these listings may provide access to a display dedicated to on-demand listings, recorded listings, or Internet listings, respectively. In some embodiments, listings for these content types may be included directly in grid 102. Additional media guidance data may be displayed in response to the user selecting one of the navigational icons 120. (Pressing an arrow key on a user input device may affect the display in a similar manner as selecting navigational icons 120.)

[0041] Display 100 may also include video region 122, advertisement 124, and options region 126. Video region 122 may allow the user to view and/or preview programs that are currently available, will be available, or were available to the user. The content of video region 122 may correspond to, or be independent from, one of the listings displayed in grid 102. Grid displays including a video region are sometimes referred to as picture-in-guide (PIG) displays. PIG displays and their functionalities are described in greater detail in Satterfield et al. U.S. Patent No. 6,564,378, issued May 13, 2003 and Yuen et al. U.S. Patent No. 6,239,794, issued May 29, 2001, which are hereby incorporated by reference herein in their entireties. PIG displays may be included in

other media guidance application display screens of the embodiments described herein.

[0042] Advertisement 124 may provide an advertisement for content that, depending on a viewer's access rights (e.g., for subscription programming), is currently available for viewing, will be available for viewing in the future, or may never become available for viewing, and may correspond to or be unrelated to one or more of the content listings in grid 102. Advertisement 124 may also be for products or services related or unrelated to the content displayed in grid 102. Advertisement 124 may be selectable and provide further information about content, provide information about a product or a service, enable purchasing of content, a product, or a service, provide content relating to the advertisement, etc. Advertisement 124 may be targeted based on a user's profile/preferences, monitored user activity, the type of display provided, or on other suitable targeted advertisement bases.

[0043] While advertisement 124 is shown as rectangular or banner shaped, advertisements may be provided in any suitable size, shape, and location in a guidance application display. For example, advertisement 124 may be provided as a rectangular shape that is horizontally adjacent to grid 102. This is sometimes referred to as a panel advertisement. In addition, advertisements may be overlaid over content or a guidance application display or embedded within a display. Advertisements may also include text, images, rotating images, video clips, or other types of content described above. Advertisements may be stored in a user equipment device having a guidance application, in a database connected to the user equipment, in a remote

location (including streaming media servers), or on other storage means, or a combination of these locations. Providing advertisements in a media guidance application is discussed in greater detail in, for example, Knudson et al., U.S. Patent Application Publication No. 2003/0110499, filed January 17, 2003; Ward, III et al. U.S. Patent No. 6,756,997, issued June 29, 2004; and Schein et al. U.S. Patent No. 6,388,714, issued May 14, 2002, which are hereby incorporated by reference herein in their entireties. It will be appreciated that advertisements may be included in other media guidance application display screens of the embodiments described herein.

[0044] Options region 126 may allow the user to access different types of content, media guidance application displays, and/or media guidance application features. Options region 126 may be part of display 100 (and other display screens described herein), or may be invoked by a user by selecting an on-screen option or pressing a dedicated or assignable button on a user input device. The selectable options within options region 126 may concern features related to program listings in grid 102 or may include options available from a main menu display. Features related to program listings may include searching for other air times or ways of receiving a program, recording a program, enabling series recording of a program, setting program and/or channel as a favorite, purchasing a program, or other features. Options available from a main menu display may include search options, VOD options, parental control options, Internet options, cloud-based options, device synchronization options, second screen device options,

options to access various types of media guidance data displays, options to subscribe to a premium service, options to edit a user's profile, options to access a browse overlay, or other options.

[0045] The media guidance application may be personalized based on a user's preferences. A personalized media guidance application allows a user to customize displays and features to create a personalized "experience" with the media guidance application. This personalized experience may be created by allowing a user to input these customizations and/or by the media guidance application monitoring user activity to determine various user preferences. Users may access their personalized guidance application by logging in or otherwise identifying themselves to the guidance application. Customization of the media guidance application may be made in accordance with a user profile. The customizations may include varying presentation schemes (e.g., color scheme of displays, font size of text, etc.), aspects of content listings displayed (e.g., only HDTV or only 3D programming, user-specified broadcast channels based on favorite channel selections, re-ordering the display of channels, recommended content, etc.), desired recording features (e.g., recording or series recordings for particular users, recording quality, etc.), parental control settings, customized presentation of Internet content (e.g., presentation of social media content, e-mail, electronically delivered articles, etc.) and other desired customizations.

[0046] For example, as described above, the media guidance application may select one or more criteria

for searching and/or filtering media content based on a user profile, user history, previously recorded content, previously ordered content, parental control settings, etc.

[0047] The media guidance application may allow a user to provide user profile information or may automatically compile user profile information. The media guidance application may, for example, monitor the content the user accesses and/or other interactions the user may have with the guidance application. Additionally, the media guidance application may obtain all or part of other user profiles that are related to a particular user (e.g., from other web sites on the Internet the user accesses, such as www.allrovi.com, from other media guidance applications the user accesses, from other interactive applications the user accesses, from another user equipment device of the user, etc.), and/or obtain information about the user from other sources that the media guidance application may access. As a result, a user can be provided with a unified guidance application experience across the user's different user equipment devices. This type of user experience is described in greater detail below in connection with FIG. 5. Additional personalized media guidance application features are described in greater detail in Ellis et al., U.S. Patent Application Publication No. 2005/0251827, filed July 11, 2005, Boyer et al., U.S. Patent No. 7,165,098, issued January 16, 2007, and Ellis et al., U.S. Patent Application Publication No. 2002/0174430, filed February 21, 2002, which are hereby incorporated by reference herein in their entireties.

[0048] Another display arrangement for providing media guidance is shown in FIG. 2. Video mosaic display 200 includes selectable options 202 for content information organized based on content type, genre, and/or other organization criteria. In display 200, television listings option 204 is selected, thus providing listings 206, 208, 210, and 212 as broadcast program listings. In display 200, the listings may provide graphical images including cover art, still images from the content, video clip previews, live video from the content, or other types of content that indicate to a user the content being described by the media guidance data in the listing. Each of the graphical listings may also be accompanied by text to provide further information about the content associated with the listing. For example, listing 208 may include more than one portion, including media portion 214 and text portion 216. Media portion 214 and/or text portion 216 may be selectable to view content in full-screen or to view information related to the content displayed in media portion 214 (e.g., to view listings for the channel that the video is displayed on).

[0049] The listings in display 200 are of different sizes (i.e., listing 206 is larger than listings 208, 210, and 212), but if desired, all the listings may be the same size. Listings may be of different sizes or graphically accentuated to indicate degrees of interest to the user or to emphasize certain content, as desired by the content provider or based on user preferences. Various systems and methods for graphically accentuating content listings are discussed in, for example, Yates, U.S. Patent Application Publication No.

2010/0153885, filed December 29, 2005, which is hereby incorporated by reference herein in its entirety.

[0050] Users may access content and the media guidance application (and its display screens described above and below) from one or more of their user equipment devices. FIG. 3 shows a generalized embodiment of illustrative user equipment device 300. More specific implementations of user equipment devices are discussed below in connection with FIG. 5. User equipment device 300 may receive content and data via input/output (hereinafter "I/O") path 302. I/O path 302 may provide content (e.g., broadcast programming, on-demand programming, Internet content, content available over a local area network (LAN) or wide area network (WAN), and/or other content) and data to control circuitry 304, which includes processing circuitry 306 and storage 308. Control circuitry 304 may be used to send and receive commands, requests, and other suitable data using I/O path 302. I/O path 302 may connect control circuitry 304 (and specifically processing circuitry 306) to one or more communications paths (described below). I/O functions may be provided by one or more of these communications paths, but are shown as a single path in FIG. 3 to avoid overcomplicating the drawing.

[0051] Control circuitry 304 may be based on any suitable processing circuitry such as processing circuitry 306. As referred to herein, processing circuitry should be understood to mean circuitry based on one or more microprocessors, microcontrollers, digital signal processors, programmable logic devices, field-programmable gate arrays (FPGAs), application-specific integrated circuits (ASICs), etc., and may

include a multi-core processor (e.g., dual-core, quad-core, hexa-core, or any suitable number of cores) or supercomputer. In some embodiments, processing circuitry may be distributed across multiple separate processors or processing units, for example, multiple of the same type of processing units (e.g., two Intel Core i7 processors) or multiple different processors (e.g., an Intel Core i5 processor and an Intel Core i7 processor). In some embodiments, control circuitry 304 executes instructions for a media guidance application stored in memory (i.e., storage 308).

[0052] In client-server based embodiments, control circuitry 304 may include communications circuitry suitable for communicating with a guidance application server or other networks or servers. The instructions for carrying out the above mentioned functionality may be stored on the guidance application server. Communications circuitry may include a cable modem, an integrated services digital network (ISDN) modem, a digital subscriber line (DSL) modem, a telephone modem, Ethernet card, or a wireless modem for communications with other equipment, or any other suitable communications circuitry. Such communications may involve the Internet or any other suitable communications networks or paths (which is described in more detail in connection with FIG. 5). In addition, communications circuitry may include circuitry that enables peer-to-peer communication of user equipment devices, or communication of user equipment devices in locations remote from each other (described in more detail below).

[0053] Memory may be an electronic storage device provided as storage 308 that is part of control

circuitry 304. As referred to herein, the phrase "electronic storage device" or "storage device" should be understood to mean any device for storing electronic data, computer software, or firmware, such as random-access memory, read-only memory, hard drives, optical drives, digital video disc (DVD) recorders, compact disc (CD) recorders, BLU-RAY disc (BD) recorders, BLU-RAY 3D disc recorders, digital video recorders (DVR, sometimes called a personal video recorder, or PVR), solid state devices, quantum storage devices, gaming consoles, gaming media, or any other suitable fixed or removable storage devices, and/or any combination of the same. Storage 308 may be used to store various types of content described herein as well as media guidance information, described above, and guidance application data, described above. Nonvolatile memory may also be used (e.g., to launch a boot-up routine and other instructions). Cloud-based storage, described in relation to FIG. 5, may be used to supplement storage 308 or instead of storage 308.

[0054] Control circuitry 304 may include video generating circuitry and tuning circuitry, such as one or more analog tuners, one or more MPEG-2 decoders or other digital decoding circuitry, high-definition tuners, or any other suitable tuning or video circuits or combinations of such circuits. Encoding circuitry (e.g., for converting over-the-air, analog, or digital signals to MPEG signals for storage) may also be provided. Control circuitry 304 may also include scaler circuitry for upconverting and downconverting content into the preferred output format of the user equipment 300. Circuitry 304 may also include digital-to-analog converter circuitry and analog-to-digital

converter circuitry for converting between digital and analog signals. The tuning and encoding circuitry may be used by the user equipment device to receive and to display, to play, or to record content. The tuning and encoding circuitry may also be used to receive guidance data. The circuitry described herein, including for example, the tuning, video generating, encoding, decoding, encrypting, decrypting, scaler, and analog/digital circuitry, may be implemented using software running on one or more general purpose or specialized processors. Multiple tuners may be provided to handle simultaneous tuning functions (e.g., watch and record functions, picture-in-picture (PIP) functions, multiple-tuner recording, etc.). If storage 308 is provided as a separate device from user equipment 300, the tuning and encoding circuitry (including multiple tuners) may be associated with storage 308.

[0055] A user may send instructions to control circuitry 304 using user input interface 310. User input interface 310 may be any suitable user interface, such as a remote control, mouse, trackball, keypad, keyboard, touch screen, touchpad, stylus input, joystick, voice recognition interface, or other user input interfaces. Display 312 may be provided as a stand-alone device or integrated with other elements of user equipment device 300. Display 312 may be one or more of a monitor, a television, a liquid crystal display (LCD) for a mobile device, or any other suitable equipment for displaying visual images. In some embodiments, display 312 may be HDTV-capable. In some embodiments, display 312 may be a 3D display, and the interactive media guidance application and any

suitable content may be displayed in 3D. A video card or graphics card may generate the output to the display 312. The video card may offer various functions such as accelerated rendering of 3D scenes and 2D graphics, MPEG-2/MPEG-4 decoding, TV output, or the ability to connect multiple monitors. The video card may be any processing circuitry described above in relation to control circuitry 304. The video card may be integrated with the control circuitry 304. Speakers 314 may be provided as integrated with other elements of user equipment device 300 or may be stand-alone units. The audio component of videos and other content displayed on display 312 may be played through speakers 314. In some embodiments, the audio may be distributed to a receiver (not shown), which processes and outputs the audio via speakers 314.

[0056] In some embodiments, control circuitry 304 may be configured to receive instructions from user input interface 310. For example, control circuitry 304 may cause media guidance application listings to be presented by selecting a selectable option in a display screen (e.g., a listings option) or pressing a dedicated button (e.g., a GUIDE button) on a remote control or other user input interface 310.

[0057] In some embodiments, control circuitry 304 may be configured to receive one or more user selections of criteria using user input interface 310 to search and/or filter media content. For example, control circuitry 304 may present the user with a two-dimensional selection region that defines an intersection between a first criterion and a second criterion, where the first criterion and the second criterion are associated with a plurality of media

identifiers. The two-dimensional selection region may also be divided into a plurality of sub-regions, where the user selection indicates at least one of the sub-regions. In response to receiving the user selection, control circuitry 304 may determine a subset of media identifiers that correspond to the selected sub-region. For example, control circuitry 304 may transmit a query to a database or any other suitable source for media content having metadata that meets the user-selected criteria derived from the selected sub-region. Control circuitry 304 may then present at least a portion of the subset of media identifiers to the user. For each media identifier, control circuitry 304 may provide the user with various options, such as playing a preview of the media content, retrieving and/or downloading the media content, accessing information relating to the media content, accessing supplemental media content related to the media content, recording the media content, setting a reminder for the media content, etc.

[0058] The guidance application may be implemented using any suitable architecture. For example, it may be a stand-alone application wholly implemented on user equipment device 300. In such an approach, instructions of the application are stored locally, and data for use by the application is downloaded on a periodic basis (e.g., from an out-of-band feed, from an Internet resource, or using another suitable approach). In some embodiments, the media guidance application is a client-server based application. Data for use by a thick or thin client implemented on user equipment device 300 is retrieved on-demand by issuing requests to a server remote to the user equipment device 300. In one example of a client-server based guidance

application, control circuitry 304 runs a web browser that interprets web pages provided by a remote server. For example, in some embodiments in which the media guidance application is implemented as an on-line application, such as a web site or other Internet-based application, the illustrative display screens of FIGS. 6-48 described herein, may be displayed to the user through a web browser implemented using control circuitry 304. As another example, the display screens of FIGS. 6-48 may be displayed on display 312. User indications and interaction with the display screens of FIGS. 6-48 may be received with interface 310 and processed by circuitry 306.

[0059] In some embodiments, the media guidance application is downloaded and interpreted or otherwise run by an interpreter or virtual machine (run by control circuitry 304). In some embodiments, the guidance application may be encoded in the ETV Binary Interchange Format (EBIF), received by control circuitry 304 as part of a suitable feed, and interpreted by a user agent running on control circuitry 304. For example, the guidance application may be an EBIF application. In some embodiments, the guidance application may be defined by a series of JAVA-based files that are received and run by a local virtual machine or other suitable middleware executed by control circuitry 304. In some of such embodiments (e.g., those employing MPEG-2 or other digital media encoding schemes), the guidance application may be, for example, encoded and transmitted in an MPEG-2 object carousel with the MPEG audio and video packets of a program.

[0060] FIG. 4 shows a simplified diagram of an interactive media system in accordance with some embodiments of the invention. User equipment device 400 is a more detailed, yet still simplified, view of user equipment device 300 of FIG. 3. In addition to the features and functionalities described herein in connection with FIGS. 6-48, user equipment device 400 may include any of the components, features, and functionalities described above in connection with FIG. 3. Control circuitry 414 of user equipment device 400 may include processing circuitry 404, schedule information data store 408, advertising data store 410, and media data store 412. Data stores 408, 410, and 412 may each be one or more relational databases or any other suitable storage mechanisms. Although data stores 408, 410, and 412 are shown as separate data stores, one or more of these data stores may instead be combined into a single storage system. Although only data stores 408, 410, and 412 are shown in FIG. 43, it will be understood that there may be any suitable number of data stores.

[0061] Schedule information data store 408 may store media guidance data for a media guidance application. Schedule information data store 408 may store media-related information (e.g., broadcast times, broadcast channels, server/storage location, media titles, media descriptions, ratings information (e.g., parental control ratings, critic's ratings, etc.), genre or category information, actor information, logo data for broadcasters' or providers' logos, etc.), media format, on-demand information, or any other suitable information. The schedule information included in schedule information data store 408 may be used by the

media guidance application to provide media content information (e.g., as shown in the display screens of FIGS. 6-48) on display 406, or to provide any other suitable media guidance display.

[0062] Advertising data store 410 may store advertising content for display in a media guidance application. Advertising data store 410 may store advertising content in various forms, including text, graphics, images, video clips, content of any other suitable type, or references to remotely stored content. Advertising data store 410 may also store links or identifiers to advertising content in other data stores. In some embodiments, advertising data store 410 may store indexes for advertising content in other local data stores (e.g., data store 408 or 412), or may store identifiers to remote storage systems, such as URLs to advertisements provided by web servers. Data store 410 may also store identifying information about each advertisement or advertisement element (e.g., associated advertiser, type of promotional, length of promotion, a television show, product, or service the advertisement is promoting, etc.), or may store indexes to locations in other local or remote storage systems where this information may be found.

[0063] Media database 412 may store media content or information related to media content accessible through a media guidance application. For example, the media content and/or media related information displayed in the display screens and overlays of FIGS. 6-48 may be stored and/or downloaded to media database 412. Upon display to the user, media database 412 may be accessed to retrieve the requested information or media content.

[0064] Processing circuitry 404, which may have any of the features and functionalities of processing circuitry 306 (FIG. 3), may access any of the information included in data stores 408, 410 and 412. Processing circuitry 404 may use this information to select, prepare, and display information on display 406. In particular, processing circuitry 404 may use information obtained from these data stores to provide a media guidance application with advertisements to a user of user equipment 400. For example, processing circuitry 404 may use this information to display the display screens of FIGS. 6-48. Processing circuitry 404 may also use the information included in data stores 408, 410, and 412 to select, prepare, and output audio to speakers 314 of FIG. 3. In addition, processing circuitry 404 may update information in data stores 408, 410 and 412 with data received from, for example, communications link 402. Communications link 402 may have any of the features and functionalities of communications links 508, 510, and 512 of FIG. 5, discussed in greater detail below. In some embodiments, processing circuitry 404 may update schedule information in data store 408 with new or updated information, may add, remove, or change any advertising content in data store 410, and may add, remove, or change media content or information associated with media content in data store 412 or any other suitable data store. Processing circuitry 404 may additionally update any of the associations between these data stores.

[0065] User equipment device 300 of FIG. 3 and user equipment device 400 of FIG. 4 can be implemented in system 500 of FIG. 5 as user television equipment 502,

user computer equipment 504, wireless user communications device 506, or any other type of user equipment suitable for accessing content, such as a non-portable gaming machine. For simplicity, these devices may be referred to herein collectively as user equipment or user equipment devices, and may be substantially similar to user equipment devices described above. User equipment devices, on which a media guidance application may be implemented, may function as a standalone device or may be part of a network of devices. Various network configurations of devices may be implemented and are discussed in more detail below.

[0066] A user equipment device utilizing at least some of the system features described above in connection with FIG. 3 or FIG. 4 may not be classified solely as user television equipment 502, user computer equipment 504, or a wireless user communications device 506. For example, user television equipment 502 may, like some user computer equipment 504, be Internet-enabled allowing for access to Internet content, while user computer equipment 504 may, like some television equipment 502, include a tuner allowing for access to television programming. The media guidance application may have the same layout on various different types of user equipment or may be tailored to the display capabilities of the user equipment. For example, on user computer equipment 504, the guidance application may be provided as a web site accessed by a web browser. In another example, the guidance application may be scaled down for wireless user communications devices 506.

[0067] In system 500, there is typically more than one of each type of user equipment device but only one of each is shown in FIG. 5 to avoid overcomplicating the drawing. In addition, each user may utilize more than one type of user equipment device and also more than one of each type of user equipment device.

[0068] In some embodiments, a user equipment device (e.g., user television equipment 502, user computer equipment 504, wireless user communications device 506) may be referred to as a "second screen device." For example, a second screen device may supplement content presented on a first user equipment device. The content presented on the second screen device may be any suitable content that supplements the content presented on the first device. In some embodiments, the second screen device provides an interface for adjusting settings and display preferences of the first device. In some embodiments, the second screen device is configured for interacting with other second screen devices or for interacting with a social network. The second screen device can be located in the same room as the first device, a different room from the first device but in the same house or building, or in a different building from the first device.

[0069] The user may also set various settings to maintain consistent media guidance application settings across in-home devices and remote devices. Settings include those described herein, as well as channel and program favorites, programming preferences that the guidance application utilizes to make programming recommendations, display preferences, and other desirable guidance settings. For example, if a user sets a channel as a favorite on, for example, the web

site www.allrovi.com on their personal computer at their office, the same channel would appear as a favorite on the user's in-home devices (e.g., user television equipment and user computer equipment) as well as the user's mobile devices, if desired. Therefore, changes made on one user equipment device can change the guidance experience on another user equipment device, regardless of whether they are the same or a different type of user equipment device. In addition, the changes made may be based on settings input by a user, as well as user activity monitored by the guidance application.

[0070] The user equipment devices may be coupled to communications network 514. Namely, user television equipment 502, user computer equipment 504, and wireless user communications device 506 are coupled to communications network 514 via communications paths 508, 510, and 512, respectively. Communications network 514 may be one or more networks including the Internet, a mobile phone network, mobile voice or data network (e.g., a 4G or LTE network), cable network, public switched telephone network, or other types of communications network or combinations of communications networks. Paths 508, 510, and 512 may separately or together include one or more communications paths, such as, a satellite path, a fiber-optic path, a cable path, a path that supports Internet communications (e.g., IPTV), free-space connections (e.g., for broadcast or other wireless signals), or any other suitable wired or wireless communications path or combination of such paths. Path 512 is drawn with dotted lines to indicate that in the exemplary embodiment shown in FIG. 5 it is a

wireless path and paths 508 and 510 are drawn as solid lines to indicate they are wired paths (although these paths may be wireless paths, if desired). Communications with the user equipment devices may be provided by one or more of these communications paths, but are shown as a single path in FIG. 5 to avoid overcomplicating the drawing.

[0071] Although communications paths are not drawn between user equipment devices, these devices may communicate directly with each other via communication paths, such as those described above in connection with paths 508, 510, and 512, as well other short-range point-to-point communication paths, such as USB cables, IEEE 1394 cables, wireless paths (e.g., Bluetooth, infrared, IEEE 802-11x, etc.), or other short-range communication via wired or wireless paths. BLUETOOTH is a certification mark owned by Bluetooth SIG, INC. The user equipment devices may also communicate with each other directly through an indirect path via communications network 514.

[0072] System 500 includes content source 516 and media guidance data source 518 coupled to communications network 514 via communication paths 520 and 522, respectively. Paths 520 and 522 may include any of the communication paths described above in connection with paths 508, 510, and 512. Communications with the content source 516 and media guidance data source 518 may be exchanged over one or more communications paths, but are shown as a single path in FIG. 5 to avoid overcomplicating the drawing. In addition, there may be more than one of each of content source 516 and media guidance data source 518, but only one of each is shown in FIG. 5 to avoid

overcomplicating the drawing. (The different types of each of these sources are discussed below.) If desired, content source 516 and media guidance data source 518 may be integrated as one source device. Although communications between sources 516 and 518 with user equipment devices 502, 504, and 506 are shown as through communications network 514, in some embodiments, sources 516 and 518 may communicate directly with user equipment devices 502, 504, and 506 via communication paths (not shown) such as those described above in connection with paths 508, 510, and 512.

[0073] Content source 516 may include one or more types of content distribution equipment including a television distribution facility, cable system headend, satellite distribution facility, programming sources (e.g., television broadcasters, such as NBC, ABC, HBO, etc.), intermediate distribution facilities and/or servers, Internet providers, on-demand media servers, and other content providers. NBC is a trademark owned by the National Broadcasting Company, Inc., ABC is a trademark owned by the ABC, INC., and HBO is a trademark owned by the Home Box Office, Inc. Content source 416 may be the originator of content (e.g., a television broadcaster, a Webcast provider, etc.) or may not be the originator of content (e.g., an on-demand content provider, an Internet provider of content of broadcast programs for downloading, etc.). Content source 416 may include cable sources, satellite providers, on-demand providers, Internet providers, over-the-top content providers, or other providers of content. Content source 516 may also include a remote media server used to store different types of content

(including video content selected by a user), in a location remote from any of the user equipment devices. Systems and methods for remote storage of content, and providing remotely stored content to user equipment are discussed in greater detail in connection with Ellis et al., U.S. Patent No. 7,761,892, issued July 20, 2010, which is hereby incorporated by reference herein in its entirety.

[0074] Media guidance data source 518 may provide media guidance data, such as the media guidance data described above. Media guidance application data may be provided to the user equipment devices using any suitable approach. In some embodiments, the guidance application may be a stand-alone interactive television program guide that receives program guide data via a data feed (e.g., a continuous feed or trickle feed). Program schedule data and other guidance data may be provided to the user equipment on a television channel sideband, using an in-band digital signal, using an out-of-band digital signal, or by any other suitable data transmission technique. Program schedule data and other media guidance data may be provided to user equipment on multiple analog or digital television channels.

[0075] In some embodiments, guidance data from media guidance data source 518 may be provided to users' equipment using a client-server approach. For example, a user equipment device may pull media guidance data from a server, or a server may push media guidance data to a user equipment device. In some embodiments, a guidance application client residing on the user's equipment may initiate sessions with source 518 to obtain guidance data when needed, e.g., when the

guidance data is out of date or when the user equipment device receives a request from the user to receive data. Media guidance may be provided to the user equipment with any suitable frequency (e.g., continuously, daily, a user-specified period of time, a system-specified period of time, in response to a request from user equipment, etc.). Media guidance data source 518 may provide user equipment devices 502, 504, and 506 the media guidance application itself or software updates for the media guidance application.

[0076] Media guidance applications may be, for example, stand-alone applications implemented on user equipment devices. For example, the media guidance application may be implemented as software or a set of executable instructions which may be stored in storage 308, and executed by control circuitry 304 of a user equipment device 300. In some embodiments, media guidance applications may be client-server applications where only a client application resides on the user equipment device, and server application resides on a remote server. For example, media guidance applications may be implemented partially as a client application on control circuitry 304 of user equipment device 300 and partially on a remote server as a server application (e.g., media guidance data source 518) running on control circuitry of the remote server. When executed by control circuitry of the remote server (such as media guidance data source 518), the media guidance application may instruct the control circuitry to generate the guidance application displays and transmit the generated displays to the user equipment devices. The server application may instruct the control circuitry of the media guidance data source 518

to transmit data for storage on the user equipment. The client application may instruct control circuitry of the receiving user equipment to generate the guidance application displays.

[0077] Content and/or media guidance data delivered to user equipment devices 502, 504, and 506 may be over-the-top (OTT) content. OTT content delivery allows Internet-enabled user devices, including any user equipment device described above, to receive content that is transferred over the Internet, including any content described above, in addition to content received over cable or satellite connections. OTT content is delivered via an Internet connection provided by an Internet service provider (ISP), but a third party distributes the content. The ISP may not be responsible for the viewing abilities, copyrights, or redistribution of the content, and may only transfer IP packets provided by the OTT content provider. Examples of OTT content providers include YOUTUBE, NETFLIX, and HULU, which provide audio and video via IP packets. Youtube is a trademark owned by Google Inc., Netflix is a trademark owned by Netflix Inc., and Hulu is a trademark owned by Hulu, LLC. OTT content providers may additionally or alternatively provide media guidance data described above. In addition to content and/or media guidance data, providers of OTT content can distribute media guidance applications (e.g., web-based applications or cloud-based applications), or the content can be displayed by media guidance applications stored on the user equipment device.

[0078] Media guidance system 500 is intended to illustrate a number of approaches, or network

configurations, by which user equipment devices and sources of content and guidance data may communicate with each other for the purpose of accessing content and providing media guidance. The embodiments described herein may be applied in any one or a subset of these approaches, or in a system employing other approaches for delivering content and providing media guidance. The following four approaches provide specific illustrations of the generalized example of FIG. 5.

[0079] In one approach, user equipment devices may communicate with each other within a home network. User equipment devices can communicate with each other directly via short-range point-to-point communication schemes describe above, via indirect paths through a hub or other similar device provided on a home network, or via communications network 514. Each of the multiple individuals in a single home may operate different user equipment devices on the home network. As a result, it may be desirable for various media guidance information or settings to be communicated between the different user equipment devices. For example, it may be desirable for users to maintain consistent media guidance application settings on different user equipment devices within a home network, as described in greater detail in Ellis et al., U.S. Patent Application No. 11/179,410, filed July 11, 2005. Different types of user equipment devices in a home network may also communicate with each other to transmit content. For example, a user may transmit content from user computer equipment to a portable video player or portable music player.

[0080] In a second approach, users may have multiple types of user equipment by which they access content and obtain media guidance. For example, some users may have home networks that are accessed by in-home and mobile devices. Users may control in-home devices via a media guidance application implemented on a remote device. For example, users may access an online media guidance application on a website via a personal computer at their office, or a mobile device such as a PDA or web-enabled mobile telephone. The user may set various settings (e.g., recordings, reminders, or other settings) on the online guidance application to control the user's in-home equipment. The online guide may control the user's equipment directly, or by communicating with a media guidance application on the user's in-home equipment. Various systems and methods for user equipment devices communicating, where the user equipment devices are in locations remote from each other, is discussed in, for example, Ellis et al., U.S. Patent No. 8,046,801, issued October 25, 2011, which is hereby incorporated by reference herein in its entirety.

[0081] In a third approach, users of user equipment devices inside and outside a home can use their media guidance application to communicate directly with content source 516 to access content. Specifically, within a home, users of user television equipment 502 and user computer equipment 504 may access the media guidance application to navigate among and locate desirable content. Users may also access the media guidance application outside of the home using wireless user communications devices 506 to navigate among and locate desirable content.

[0082] In a fourth approach, user equipment devices may operate in a cloud computing environment to access cloud services. In a cloud computing environment, various types of computing services for content sharing, storage or distribution (e.g., video sharing sites or social networking sites) are provided by a collection of network-accessible computing and storage resources, referred to as "the cloud." For example, the cloud can include a collection of server computing devices, which may be located centrally or at distributed locations, that provide cloud-based services to various types of users and devices connected via a network such as the Internet via communications network 514. These cloud resources may include one or more content sources 516 and one or more media guidance data sources 518. In addition or in the alternative, the remote computing sites may include other user equipment devices, such as user television equipment 502, user computer equipment 504, and wireless user communications device 506. For example, the other user equipment devices may provide access to a stored copy of a video or a streamed video. In such embodiments, user equipment devices may operate in a peer-to-peer manner without communicating with a central server.

[0083] The cloud provides access to services, such as content storage, content sharing, or social networking services, among other examples, as well as access to any content described above, for user equipment devices. Services can be provided in the cloud through cloud computing service providers, or through other providers of online services. For example, the cloud-based services can include a content

storage service, a content sharing site, a social networking site, or other services via which user-sourced content is distributed for viewing by others on connected devices. These cloud-based services may allow a user equipment device to store content to the cloud and to receive content from the cloud rather than storing content locally and accessing locally-stored content.

[0084] A user may use various content capture devices, such as camcorders, digital cameras with video mode, audio recorders, mobile phones, and handheld computing devices, to record content. The user can upload content to a content storage service on the cloud either directly, for example, from user computer equipment 504 or wireless user communications device 506 having content capture feature. Alternatively, the user can first transfer the content to a user equipment device, such as user computer equipment 504. The user equipment device storing the content uploads the content to the cloud using a data transmission service on communications network 514. In some embodiments, the user equipment device itself is a cloud resource, and other user equipment devices can access the content directly from the user equipment device on which the user stored the content.

[0085] Cloud resources may be accessed by a user equipment device using, for example, a web browser, a media guidance application, a desktop application, a mobile application, and/or any combination of access applications or the same. The user equipment device may be a cloud client that relies on cloud computing for application delivery, or the user equipment device may have some functionality without access to cloud

resources. For example, some applications running on the user equipment device may be cloud applications, i.e., applications delivered as a service over the Internet, while other applications may be stored and run on the user equipment device. In some embodiments, a user device may receive content from multiple cloud resources simultaneously. For example, a user device can stream audio from one cloud resource while downloading content from a second cloud resource. Or, a user device can download content from multiple cloud resources for more efficient downloading. In some embodiments, user equipment devices can use cloud resources for processing operations such as the processing operations performed by processing circuitry described in relation to FIG. 3.

[0086] In some embodiments, control circuitry 304 may receive a request from the user for media guidance for selecting content of various content types, such as movies, television programs, and music. In response to receiving the request, control circuitry 304 may provide the user with a media guidance application (e.g., by accessing a website, initiating an application, etc.). The media guidance application may be provided as an on-line application (e.g., provided on a website) that presents users with information associated with movies, television, music, compositions, actors, artists, other entertainment-related content, or a combination thereof.

[0087] FIGS. 6-48 show illustrative display screens that may be used to provide media guidance in accordance with some embodiments of the invention. The display screens shown in FIGS. 6-48 may be implemented on any suitable device or platform. As referred to

herein, platform refers to any system that may support the operation of an interactive media guidance application.

[0088] It should be noted that, while some of the displays depicted in FIGS. 6-48 are illustrated as full screen displays, they may also be fully or partially overlaid over media content being displayed. For example, while the display screens of FIGS. 6-48 may be implemented as one or more pages of a website, it should also be understood that they may be implemented within an application running on a television, a Smart TV, a set-top box, an integrated receiver decoder (IRD) for handling satellite television, a digital storage device, a digital media receiver, a digital media adapter, a streaming media device, a DVD player, a DVD recorder, a connected DVD, a local media server, a BLU-RAY player, a BLU-RAY recorder, a personal computer, a laptop computer, a tablet computer, a WebTV box, a personal computer television, a PC media server, a PC media center, a hand-held computer, a stationary telephone, a personal digital assistant, a mobile telephone, a portable video player, a portable music player, a portable gaming machine, a smart phone, or any other television equipment, computing equipment, or wireless device, and/or combination of the same.

[0089] Turning to FIGS. 6 and 7, FIGS. 6 and 7 show illustrative display screens of a media guidance application that may be used to provide a user with guidance for various types of media content in accordance with some embodiments of the invention. As shown in FIG. 6, control circuitry 304 may cause a guidance display 600 to be divided into a plurality of regions, where each region provides a different

mechanism for accessing media content. In particular, guidance display 600 includes a first region 610 that provides a general searching tool 612, a second region 620 that provides an advertorial, and a third region 630 that provides access to specific media content and access to a content selection tool 640.

[0090] It should be noted that, although guidance display 600 of FIG. 6, guidance display 700 of FIG. 7, and other display screens described herein are generally described as containing three regions, this is merely illustrative. For example, control circuitry 304 may provide a guidance display that includes any suitable number of regions (e.g., a region for each media type). Moreover, each region of the guidance display may or may not provide a different mechanism for accessing media content. For example, control circuitry 304 may provide two regions, where one region provides access to content selection tool 640 for filtering movie assets and another region provides access to content selection tool 640 for filtering music assets.

[0091] Although not shown, it should be noted that guidance display 600 of FIG. 6, guidance display 700 of FIG. 7, and other display screens described herein may contain one or more advertisements (e.g., for media content, products, or services related or unrelated to other content displayed on the display screen).

[0092] In some embodiments, first region 610 may include general searching tool 612. Control circuitry 304 may provide general searching tool 612 to, for example, allow a user to search for people (e.g., actors, actresses, artists, etc.), albums, movies, songs, compositions, television shows, and/or any other

media content or entertainment information. As shown, control circuitry 304 may provide general searching tool 612 using a single text box or input element. This input element is thus capable of handling input related to various kinds of media or media-related information. As described further below, the search results may be context-sensitive, providing the user with the most relevant information and/or dividing different results by media type. For example, in response to receiving search terms in the input element of general searching tool 612, control circuitry 304 may search through metadata or other media guidance data for media content or information with metadata matching one or more of the search terms.

[0093] It should be noted that the input element of general searching tool 612 combines media content search capability with entertainment information search capability. As such, a single input element is provided that can return media content or information about media content as well as entertainment information related to, for example, an entertainer. In some embodiments, the search capability of general searching tool 612 contains context-sensitive functionality to recognize the type of information or content requested by the user.

[0094] It should also be noted that, in some embodiments, the input element of general searching tool 612 may be combined with other searching and/or filtering tools described herein. For example, in response to receiving one or more search terms in general searching tool 612, control circuitry 304 may provide the user with additional searching and/or filtering tools while limiting the search results to

the one or more received search terms. In a more particular example, in response to the user entering the phrase "The Simpsons" in the input element of general searching tool 612, control circuitry 304 may limit the media content presented in a search results region by media content relating to "The Simpsons" and assist the user to select "The Simpsons"-related media content for consumption (e.g., music tracks played on "The Simpsons, downloadable episodes of "The Simpsons," past or upcoming movies for "The Simpsons," or information on actors or actresses that make guest appearances on "The Simpsons").

[0095] Alternatively, as also shown in general searching tool 612 within first region 610, general searching tool 612 may allow the user to limit the search results to media content or information of a particular type. For example, by selecting the drop down box labeled "all types" in general searching tool, the user may specify the type of search desired. In response, control circuitry 304 may search for the desired type of content, such as movie content, music content, video content, all content, etc. In a more particular example, the user may specify that the search is for one or more of people, albums, movies, songs, compositions, television shows, or any other suitable media content or entertainment information.

[0096] In some embodiments, general searching tool 612 may include a browse option that allows the user to browse different categories of media content or related information. It should be noted that, although the general searching tool 612 in FIGS. 6 and 7 provide browse options for music content and movie content, any

suitable number of browse options may be displayed for any number of categories.

[0097] In some embodiments, second region 620 may include an advertorial. As referred to herein, an advertorial is a combination of an advertisement and related editorial information. For example, an advertorial may present information pertaining to a person, a movie, a television show, an album, a song, a composition, or any other media content or related information. In some embodiments, the advertorial may be interactive. For example, the advertorial may provide the user with access to a video clip or preview (e.g., a movie trailer), an audio clip (e.g., a clip of a music track), and/or information related to the media content, person, or information being promoted (e.g., reviews, synopsis, cast information, etc.), or the media content itself. In another example, the advertorial may present and provide access to media content related to the media content being promoted. It should be noted that the advertorial may be the featured content on the display screen as opposed to an advertisement that is often displayed alongside, but secondary to, featured content. In providing one or more advertorials, the user may not be able to discern whether the media content featured in the advertorial is being promoted by an advertiser.

[0098] In some embodiments, the advertorial may cycle through a plurality of advertorials such that a different advertorial is displayed after a predetermined amount of time (e.g., every five seconds). After control circuitry 304 has displayed a sequence of advertorials, the rotation sequence may return to the first advertorial in the sequence. As

shown in FIG. 6, the advertorial is promoting the actor "Jeff Bridges" and provides access to a trailer for the movie "Tron Legacy." The advertorial also provides access to media content and information related to or featuring Jeff Bridges. As shown, a trailer or a video clip for the movie "True Grit," a review for the album "Be Here Soon," and information corresponding to a filmography of the actor are provided within the advertorial. Turning to FIG. 7, the first advertorial promoting the actor "Jeff Bridges" in second region 620 from FIG. 6 may cycle to a second advertorial promoting the music artist "Usher" in second region 720. Similar to the advertorial of FIG. 6, the advertorial within second region 720 provides an audio clip from a music album that may be played directly from the advertorial as well as access to media content and information related to or featuring the music artist "Usher" (e.g., a related music video, a review of an album, and discography information).

[0099] In some embodiments, control circuitry 304 may allow the user to control which advertorial in a sequence of advertorials is displayed. For example, control circuitry 304 may provide selectable advertorial sequence indicators within second region 620 or 720 (e.g., located below the advertorial) that allow the user to select which advertorial is displayed.

[0100] In some embodiments, third region 630 of FIG. 6 or third region 730 of FIG. 7 may provide the user with access to trending media content. Trending media content may include, for example, movies, music, or other media content currently of interest to other users (e.g., other website users, most downloaded by

users in a given period of time, etc.). Trending media content may be a selection of media content receiving the most selections compared to other media content that is available. For example, media content may be designated as trending media content based on traffic and visitor behavior and, in some embodiments, may be updated in real-time. As shown in FIGS. 6 and 7, the music album "Best Night of My Life" by Jaime Foxx is an example of a trending music album in third region 630 and the movie "Please Give" is an example of a trending movie in third region 730.

[0101] It should be noted that any suitable approach for determining the popularity or trending of media content may be used to select media content for display in the trending region. For example, the media content displayed in the trending region of region 630 or 730 may be media content of particular interest to a user, e.g., based on the user's profile or usage history.

[0102] As with the advertorial, control circuitry 304 may cycle or alternate with time the content displayed in the trending region of region 630 or 730. For example, control circuitry 304 may cause trending movies to be displayed, followed by trending albums, followed by additional trending movies, followed by additional trending albums, etc. In some embodiments, control circuitry 304 may allow the user to customize the content displayed in the trending region. Moreover, in some embodiments, the trending region may contain active media identifiers (e.g., highlighted thumbnails) and inactive media identifiers (e.g., thumbnails that are greyed out or not highlighted). As the content cycles through region 630 or 730 for given periods of time, the row of inactive media identifiers

may replace the row of active media identifiers in the top row (as shown) and other inactive media identifiers may replace the previous row of inactive media identifiers.

[0103] In some embodiments, third region 630 of FIG. 6 or third region 730 of FIG. 7 may provide the user with access to content selection tool 640. Content selection tools 640 may provide the user with access to tools for finding music or movies (or other media content) based on user-defined criteria. For example, as shown in third region 630 of FIG. 6 and third region 730 of FIG. 7, content selection tool 640, which is indicated by "findR," assists the user in selecting content for consumption from the guidance display. In a more particular example, control circuitry 304 may configure content selection tool 640 to include a music selection option 642 that provides the user with guidance for selecting music content, a movie selection option 644 that provides the user with guidance for selecting movie content, and a content selection option 646 that provides the user with guidance for selecting any suitable content (e.g., both music content and movie content). Content selection tool 640 is sometimes referred to herein as the "findR" tool. The findR tool is described in further detail below.

[0104] In response to receiving an indication that the user has selected a content selection tool, such as music selection option 642, control circuitry 304 may generate a display screen of a music selection tool for providing the user with guidance for selecting music content. FIGS. 8-13 show an illustrative display screen of a media guidance application that may be used

to search and/or filter music or other audio content in accordance with some embodiments of the invention.

[0105] Turning to FIG. 8, initial display screen 800 may provide the user with various criteria. For example, as shown in FIG. 8, display screen 800 may include a category and/or subcategory filters 810, a decades filter 820, a themes filter 830, and a two-dimensional selection region 840. In particular, the user may instruct control circuitry 304 to filter the content that appears in a content results region 850 by genre (e.g., blues, classical, holiday, rock, rap, etc.), and, in some embodiments, a subgenre (e.g., acoustic blues, country blues, folk blues, modern blues, blues gospel, etc.) using category and/or subcategory filters 810. The user may also instruct control circuitry 304 to filter the content that appears in content results region 850 by selecting a time period (e.g., restricting the content to decade during which the content was released) using decades filter 820, a theme (e.g., an activity, such as exercising) using themes filter 830, and/or a mood (e.g., positive, negative, wild, chill, etc.) using two-dimensional selection region 840. In response to receiving one or more user-selected criteria, control circuitry 304 may filter content to provide search results associated with metadata that match the user-selected criteria. Content selection tool 640 or the findR tool provides a flexible and sensitive selection feature that allows users to find content, such as music content or movie content, that suits a particular and, in some cases, momentary taste.

[0106] In some embodiments, category and/or subcategory filters 810 may allow the user to instruct

control circuitry 304 to filter content by genre, subgenre, or any other suitable category of interest. FIG. 9 shows an example of the various genres that may be selected by the user with category filter 810. In particular, category filter 810 in FIG. 9 includes music genres, such as blues, classical, country, easy listening, jazz, etc. In response to receiving a user-selected genre (e.g., blues) to search and/or filter music content, control circuitry 304 performs a search through content for metadata matching the user-selected genre and, as shown in FIG. 10, a plurality of media identifiers are displayed in search results region 850. Each of the media identifiers, which are displayed as thumbnails containing cover art in search results region 850, corresponds to media content (e.g., a music album, an audio track, a movie, a television program, video clips, games, etc.).

[0107] Turning to FIG. 11, control circuitry 304 may allow the user to continue to enter criteria for searching and/or filtering content in search results region 850. In FIG. 11, control circuitry 304 has activated a subcategory or subgenre filter in response to receiving a user selection for the category or genre filter shown in FIG. 9. In particular, in response to receiving a user selection for the category filter in region 810, control circuitry 304 may transmit a query to a database for subcategory information associated with the selected category. Upon receiving the subcategory information, control circuitry 304 may populate a drop-down list in region 810 for selection by the user. For example, as shown in FIG. 11, in response to the user selecting "Blues" in the category filter of FIG. 9, control circuitry 304 may provide the

user with a drop-down list in region 810 of corresponding subcategories. The subcategories or subgenres associated with the blues music category may include, for example, blues gospel, contemporary blues, country blues, and harmonica blues.

[0108] In response to receiving a subcategory or subgenre from the user in region 810, control circuitry 304 may refine the content provided in search results region 850. For example, control circuitry 304 may search through the metadata associated with the media content in search results region 850 to find media content that matches the updated criteria. In a more particular example, the media content provided in search results region 850 of FIG. 12 has metadata that matches the selected genre "blues" and the selected subgenre "country blues."

[0109] Additionally, FIGS. 12 and 13 shows that other filters may be used to further refine the content provided in search results region 850. As shown in FIG. 12, the time period of the music content may be defined by the user (e.g., 1950-1990) in decades filter 820. As the decades time period is modified by the user, control circuitry 304 may dynamically update the media content provided in search results region 850 to show only those albums matching the desired criteria, which includes the desired time period. As also shown in FIG. 12, the user may select a theme to filter the media content provided in search results region 850. A theme may be any contextual or environmental variable, such as an activity the user is doing, an emotion the user is feeling, or the weather at the user's location. In a more particular example, FIG. 12 shows that themes may be organized into categories, such as activities,

empowerment, feelings, life events, party, places, time of day, and weather/seasons. For example, in response to receiving a user selection for theme filter 830, control circuitry 304 may transmit a query to a database for subcategory information associated with the selected theme. Upon receiving the subcategory information, control circuitry 304 may populate a drop-down list in region 830 for selection by the user. For example, as shown in FIG. 13, in response to the user selecting the theme "feelings" in theme filter 830 of FIG. 12, control circuitry 304 may provide the user with a drop-down list in region 830 of corresponding subcategories. The subcategories or subgenres associated with the "feelings" theme may include, for example, "feeling blue," "heartache," and "in love."

[0110] In response to receiving one or more subcategories from the user in region 830, control circuitry 304 may refine the content provided in search results region 850. For example, in response to determining that the user has selected subcategory "exercise" under the theme "activity," control circuitry 304 may update the content provided in search results region 850 such that albums, songs, and other music content matches the user-selected criteria, such as relating to exercise.

[0111] It should be noted that, in some embodiments, metadata associated with the albums, songs, and other content may include information on which themes (e.g., activities) the content is suitable for categorization.

[0112] It should be noted that control circuitry 304 may provide additional criteria for searching and/or limiting search results. For example, control

circuitry 304 may include a rating filter (e.g., one star), a popularity or ranking filter, a demographics filter (e.g., toddler, high schooler, young adult, etc.), a film rating filter (e.g., PG-13, PG, R, etc.), etc.

[0113] In some embodiments, control circuitry 304 may allow the user to select one or more filters to provide in guidance display 800. For example, the user may request that theme filter 830 be replaced with a rating filter. In response, control circuitry 304 may retrieve from a database identifiers associated with the rating filter for population into display 800. In another example, control circuitry 304 may retrieve from a database a list of available filters for selection by the user. In response to receiving a selection of a filter from the user, control circuitry 304 may retrieve identifiers associated with the selected filter and present the retrieved filter and its associated identifiers in display 800.

[0114] Accordingly, the various search and filtering tools of content selection tool 640 may be used in combination to identify particular albums and/or songs the user desires (when searching for music content) or particular movies and movie-related content (when searching for movie content). For example, a genre and subgenre may be specified, a time period may be defined, and a number of emotions may be selected. The search results are thereby refined such that metadata associated with the content provided in the search results match the user-selected criteria.

[0115] In some embodiments, control circuitry 304 may connect the searching and filtering tools of content selection tool 640 with other portions of the

media guidance application. For example, in response to the user inputting the name of an artist, such as "Wolfgang Amadeus Mozart" into general searching tool 612 in first region 610 of FIG. 6, control circuitry 304 may provide the searching and filtering tools of content selection tool 640 to identify particular albums and/or songs relating to the artist "Wolfgang Amadeus Mozart." In this example, control circuitry 304 may allow the user input criteria (e.g., a sub-region from two-dimensional selection region, an activity, a particular mood, etc.) and use the user-selected criteria to filter music content relating to "Wolfgang Amadeus Mozart." In another example, in mixed-media cases where the user is searching for any media content (whether audio content or video content), control circuitry 304 may also provide the user with movie content (e.g., the movie "Amadeus"), video-related content (e.g., video content where music by "Wolfgang Amadeus Mozart" is played), etc.

[0116] In response to entering and/or selecting from various criteria, control circuitry 304 may perform a search through content for metadata matching the user-selected criteria and, as shown in FIG. 13, a plurality of selectable media identifiers are displayed in search results region 850. For example, in response to navigating to a particular media identifier (e.g., a selectable media identifier 860) from the plurality of selectable media identifiers in search results region 850, control circuitry 304 may provide the user with text information associated with the media asset, such as the album title and artist name (e.g., "Alone" by John Lee Hooker).

[0117] In some embodiments, control circuitry 304 may monitor the navigation by the user. For example, when control circuitry 304 determines that the cursor is placed over selectable media identifier 860, control circuitry 304 may highlight or activate selectable media identifier 860 (e.g., increase the brightness of the thumbnail image) and provide the user with text information associated with the media asset (e.g., the album title and artist name).

[0118] In some embodiments, control circuitry 304 may monitor the location with respect to a selectable media identifier. For example, control circuitry 304 may detect whether the location coordinates of a cursor are approaching the center of a selectable media identifier. As shown in FIG. 14, in response to determining that the cursor has been placed near the center of selectable media identifier 860, control circuitry 304 may activate a playback option 1400. Playback option 1400 may, for example, instruct control circuitry 304 to retrieve and/or play an audio clip, a full track from the music album, a sequence of audio clips starting at the first track of the music album, or any other suitable audio content via speakers 314.

[0119] In some embodiments, in response to selecting selectable media identifier 860, control circuitry 304 may provide the user with access to additional information about the media content associated with the media identifier. For example, as shown in an illustrative media information display 1500 of FIGS. 15-18, in response to the user receiving a plurality of media identifiers after using content selection tool 640 and selecting a selectable media identifier corresponding to the music album "O Brother, Where Art

Thou?", control circuitry 304 may provide the user with access to information and other media content associated with a particular album, song, or other audio content.

[0120] It should be noted that control circuitry 304 may cause media information display 1500 or any other suitable information display to be presented in response to, for example, selecting an album from trending media content section of third region 630 in FIG. 6, or inputting the album name or other identifying information into general searching tool 612 in first region 610 in FIG. 6.

[0121] Referring back to FIGS. 15-18, media information display 600 may include reviews of the album, rating information, credit information, award information, and other pertinent information. For example, as shown in FIG. 16, different releases of the album may be displayed together with relevant information, such as the year of release. In some embodiments, control circuitry 304 may retrieve metadata associated with the selected media content and present portions of the metadata in media information display 600. For example, as shown in FIG. 15, media information display 600 includes the styles (e.g., neo-traditional folk, traditional bluegrass, etc.), themes (e.g., empowering, reminiscing, etc.), and moods (e.g., bittersweet, reflective, rustic, etc.) associated with the media content.

[0122] It should be noted that control circuitry 304 may retrieve metadata associated with the selected media content for presentation in display 600. In some embodiments, control circuitry 304 may aggregate and/or assemble the metadata associated with each song on a

particular album for presentation in display 600. Additionally or alternatively, control circuitry 304 may transmit a query to other sources (e.g., media guidance data source 418, a social networking website, a music review website, etc.) to assemble the metadata for presentation in display 600.

[0123] As also shown in FIGS. 15-17, media information display 600 may also provide information on the album tracks (or songs). The tracks may be sampled by the user and/or added to a media queue. In some embodiments, control circuitry 304 may allow the user to select an individual track to access additional information related to the selected track. Additionally or alternatively, control circuitry 304 may allow the user to purchase and/or download the album or a particular track.

[0124] Turning to FIG. 17, control circuitry 304 may allow the user to add one or more pieces of media content (e.g., audio tracks) to a media queue 1700 for playback. Media queue 1700 may provide the user with media control tools for allowing a selected album or song to be played or queued for layer playing. As shown, media queue 1700 may play back a selected piece of media content while simultaneously displaying information related to a currently queued or playing song in overlay 1710. In particular, overlay 1710 may include information, such as the album title, song title, artist, genres, and styles. In some embodiments, overlay 1710 may be revealed or hidden as the user desires (e.g., user selection, user preferences, etc.). Alternatively, overlay 1710 may be minimized or hidden after being displayed for a predetermined period of time.

[0125] In response to selecting information from overlay 1710, control circuitry 304 may provide the user with information and other media content associated with a particular song (e.g., selected from the overlay of FIG. 17). For example, FIG. 18 shows that an illustrative media information display 1800 screen may list all albums on which the song appears, and may allow the user to play, queue, or sample the song on each album. This allows the user to quickly listen to different versions of the same song on different albums. Again, control circuitry 304 may provide a persistent media queue. Once a song, video, or other content is queued or playing, the media guidance application may allow the user to navigate to other display screens without interrupting the playing and/or without erasing the queue. Accordingly, the media queue and its control tools may persist throughout the media guidance application, allowing the user to play or add media content to the media queue as the user browses through the display screens of the media guidance application.

[0126] It should be noted that, in some embodiments, control circuitry 304 may cause any suitable action to be performed in response to selecting a media identifier (e.g., media identifier 860 of FIG. 13). For example, additionally or alternatively to accessing information relating to the content corresponding to the selected media identifier, control circuitry 304 may provide the user with the opportunity to preview the content, record the content, set a reminder to listen to or watch the content, etc.

[0127] Referring back to FIG. 8, content selection 640 may also include two-dimensional selection region

840 for searching and/or filtering media content provided in search results region 850. In response to selecting a portion within two-dimensional selection region 840, control circuitry 304 may search through media content with metadata matching or corresponding to the selected portion within two-dimensional selection region 840.

[0128] FIG. 19 shows an illustrative display screen 800 that may be used to search and/or filter music or other audio content based on criteria, such as moods, in accordance with some embodiments of the invention. In particular, along with the other filters and filtering tools described above, content selection tool 640 may limit the search results to those associated with one or more moods indicated by the user in two-dimensional selection region 840.

[0129] In some embodiments, two-dimensional selection region 840 may allow the user to graphically indicate which, and how much, of each mood to take into account when selecting media content. For example, two-dimensional selection region 840 may a vertical axis and a horizontal axis. The vertical axis and the horizontal axis may each have a lower bound or extreme and an upper bound or extreme. For example, as shown in FIG. 19, the vertical axis of two-dimensional selection region 840 allows the user to indicate a desire for "positive" music content (the upper bound) or "negative" music content and the horizontal axis of two-dimensional selection region 840 allows the user to indicate a desire for "wild" music content (the upper bound) or "chill" music content (the lower bound). The user may provide an indication of degree between two bounds for each of the moods. For example, as shown in

FIG. 19, the user has selected point 1900 in two-dimensional selection region, which may be used to select media content that is more towards a "positive" mood than a "negative" mood and more towards a "chill" mood than a "wild" mood.

[0130] In some embodiments, control circuitry 304 may cause the two-dimensional selection region to be divided into a plurality of sub-region. For example, as shown in a two-dimensional selection region 2010 of FIG. 20, control circuitry 304 divides two-dimensional selection region 2010 iinto a grid of evenly spaced, square cells. Alternatively, although the two-dimensional selection regions shown in FIG. 20 are shown as a grid that is divided into a plurality of square sub-regions, this is merely illustrative. For example, in some embodiments, control circuitry 304 may divide the two-dimensional selection region into a plurality of non-uniform regions (e.g., circular regions of varying diameter).

[0131] In some embodiments, the two-dimensional selection region may define an intersection between a first criterion and a second criterion. For example, as shown in FIG. 20, two-dimensional selection region 2010 defines an intersection between a first mood between "positive" and "negative" and a second mood between "wild" and "chill." It should be noted that the positive-negative and chill-wild sets of moods are exemplary only and that control circuitry 304 may provide any suitable criterion on the axes of two-dimensional selection region 2010. For example, a two-dimensional selection region may define the intersection between a mood, which has a "positive" mood upper bound and a "negative" mood lower bound, and

a parental guideline, which has a "mature audiences only" upper bound and a "kid friendly" lower bound.

[0132] In some embodiments, control circuitry 304 may allow the user to select and/or define criterion for placement on the two-dimensional selection region. For example, in some embodiments, control circuitry 304 may provide the user with a list populated with criterion information from database. The user may indicate criterion for placement on the two-dimensional selection region using the criteria list. In another example, in some embodiments, control circuitry 304 may provide the user with an opportunity to define or create criteria for customized two-dimensional selection regions. In response, control circuitry 304 may search through metadata for content that best matches the user-defined criteria.

[0133] Referring back to FIG. 20, as shown in two-dimensional selection region 2020, control circuitry 304 may receive a user selection 2030 of one of the cells in the grid. In this example, in response to receiving a user selection 2030 of a square sub-region from the grid in two-dimensional selection region 2020, control circuitry 304 may transmit a query to a database for media content with metadata matching user selection 2030. In a more particular example, control circuitry 304 may transmit a query to a database for media content using portions of information derived from user selection 2030 - e.g., find media content with corresponding metadata that is at least 82% wild and 18% chill on the chill-wild mood scale (where chill is 0% and wild is 100%) and that is at least 54% negative and 46% positive on the negative-positive mood scale.

[0134] Another illustrative example of receiving a user selection in a two-dimensional selection region is shown in FIG. 21. The extent of a mood may be indicated by selecting an area on or near an axis of the desired mood. For example, a user may set how wild or chill the music should be by selecting a location on the chill-wild axis. The closer to "chill" the user selects, the more chill the music, while the closer to "wild" the user selects, the more wild the music. Similarly, the user may indicate how positive or negative the music should be by selecting a point on the positive-negative axis. A combination of moods may be indicated by selecting a point within the two-dimensional space created by the intersecting axes. For example, a point 2110 selected by the user indicates that the music content should be both very positive and very chill. The center of the intersecting axes indicates that the music content should be neither very chill nor very wild, nor should it be very positive or very negative. On the other hand, a point 2120 selected by the user indicates that the music content should be both very positive and very wild.

[0135] In some embodiments, control circuitry 304 may provide the user with multiple two-dimensional selection regions in a guidance display. For example, control circuitry 304 may provide the user with a selectable list of available two-dimensional selection regions. In a more particular example, the user may be provided with a first two-dimensional selection region that defines an intersection between a first mood and a second mood, a second two-dimensional selection region that defines an intersection between a third mood and a

fourth mood, and a third two-dimensional selection region that defines an intersection between a rating and a theme. Control circuitry 304 may sequentially filter media content for presentation to the user in response to a user providing a user selection of a sub-region from each two-dimensional selection region. Alternatively, control circuitry 304 may collect and/or combine the user selections from the multiple two-dimensional selection regions and create a single query to the database – e.g., retrieve media content with corresponding metadata that is at least 82% wild and 18% chill for the chill-wild set of moods, at least 54% negative and 46% positive for the negative-positive set of moods, at least 80% bright and 20% dark for the bright-dark set of moods, at least 80% comedy and 20% romantic on the set of romantic-comedy themes, etc.

[0136] In some embodiments, control circuitry 304 may modify and/or update the two-dimensional selection region. For example, the criteria placed on the axes of the two-dimensional selection region may change based on other criteria selected by the user, user history information, user profile information, etc. In a more particular example, control circuitry 304 may determine that the user prefers "positive" music and, in response, may remove the positive-negative set of moods from the two-dimensional selection region and provide a different set of moods.

[0137] In response to retrieving music content matching the user-selected criteria (e.g., using the two-dimensional selection region), control circuitry 304 may present the user with a plurality of media identifiers associated with the retrieved media content in search results region. For example, control

circuitry 304 may provide an indicator that follows the cursor directed by the user as the user moves the cursor around the two-dimensional selection region defined by the mood axes (or other criteria axes). In response to receiving a mouse click on a particular point in the two-dimensional selection region, control circuitry 304 may display a point indicator of the user selection (e.g., points 2110 and 2120) and update the search results based on the user selection. In response to determining that the user has made another selection on another area, control circuitry 304 moves the point indicator to the new position and updates the search results accordingly.

[0138] In some embodiments, control circuitry 304 may dynamically update the media content and their media identifiers presented in search results region as the user moves through the two-dimensional selection region. For example, as shown in FIG. 19, in response to detecting that the cursor has navigated within two-dimensional selection 840 ("mood space"), control circuitry 304 may dynamically update the media content and their media identifiers presented in search results region 850.

[0139] In some embodiments, control circuitry 304 may provide a two-dimensional selection region that indicates where media content is available with shading, coloring, or other indicators. For example, an area within the lower right quadrant of the mood space in FIG. 21 may be shaded to indicate that wild and negative music is available. In another example, coloring and/or shading may indicate the amount of music available in any given area of the mood space. In a more particular example, the mood space may be

lightly shaded in certain areas to indicate the availability of relatively few songs, and may be heavily shaded in other areas to indicate the availability of a relatively large number of songs. Thus, control circuitry 304 provides a two-dimensional selection region that allows the user to quickly determine whether music content is available and how much music content is available for a desired mood or combination of moods.

[0140] It should be noted that, in some embodiments, control circuitry 304 may allow the user to provide multiple user selections within the two-dimensional selection region. For example, as shown in FIG. 21, in response to selection points 2110 and 2120, control circuitry 304 may retrieve search results that match the criteria associated with point 2110 and search results that match the criteria associated with point 2120.

[0141] Accordingly, the two-dimensional selection region provides an interactive and easy-to-use tool that allows the user to quickly and efficiently indicate one or more moods or any other suitable criteria, and the extent of such moods. User selections from the one or more two-dimensional selection regions is then used to search through metadata and other content information for music content to determine or filter through search results of music content matching the user-selected criteria.

[0142] Although FIGS. 8-21 generally describe embodiments directed towards searching and/or filtering music content, there are merely illustrative. The media guidance application may provide the user with guidance for searching and/or filtering any suitable

media content. For example, FIGS. 22-27 show illustrative media guidance display screens that may be used to search and/or filter movie content and/or other video content in accordance with some embodiments of the invention. In particular, FIGS. 22-27 illustrate the content selection tool or findR tool to search for movies, television shows, or other video content. As shown, the findR tool for searching or filtering video content may be similar to the findR tool for searching or filtering music content described above in connection with FIGS. 8-21.

[0143] Turning to FIG. 22, in addition to a category and/or subcategory filter 2210, a decades or time filter 2230, a two-dimensional region 2240 with an intersection between a bright-dark set of moods and a carefree-sober set of moods, control circuitry 304 may cause the content selection tool shown in display 2200 to include a rating filter 2220 and a demographics filter 2250. Rating filter 2220 may instruct control circuitry 304 to search and/or filter video content by rating (e.g., G, PG, PG-13, R, NC-17, NR, etc.). Demographics filter 2250 may instruct control circuitry 304 to search and/or filter video content by an age group (e.g., toddlers, preschoolers, elementary school kids, etc.).

[0144] In particular, FIG. 22 shows an illustrative initial screen of the content selection tool for searching and/or filtering video content. As shown, the user may search for video content by selecting from one or more of: a genre in category and/or subcategory filter 2210, a rating in rating filter 2220, a time period of the video in decades filter 2230 (e.g., the decade during which the video was released), a point or

intersections of moods in two-dimensional selection region 2240 (e.g., "bright" and/or "sober"), and/or a demographic category in demographic filter 2250 (e.g., "toddlers"). Additional criteria (not shown) may also be used to limit search results of video content. Using these search and/or filter tools in content selection tool, control circuitry 304 may retrieve movies, television shows, or other video content associated with metadata that match the user-selected criteria for presentation to the user.

[0145] It should be noted that two-dimensional selection region 2240 may be substantially similar to the two-dimensional selection region described above. As shown, the mood axes may be bright-dark and sober-carefree, but may also be any other suitable criteria. It should also be noted that, although two-dimensional selection region 2240 and the two-dimensional selection regions described above include two sets of mood axes, the criteria and its corresponding axes may change depending on the other criteria selected by the user (e.g., selected genre criteria), user history data (e.g., recorded programs), user profile data, etc. For example, control circuitry 304 may determine that the user indicated in a user profile or indicated by usage history that the user prefers light, happy music and/or films. Accordingly, control circuitry 304 may configure the two-dimensional selection region may be configured to provide "light" and "happy" axes. Thus, control circuitry 304 may allow the user to control the level of similarity of the media content being searched for to the media the user generally prefers.

[0146] FIG. 23 shows an illustrative example of the various genres that may be selected by the user with

category filter 2210. In particular, category filter 2210 in FIG. 23 includes movie genres, such as action, adventure comedy, comedy, crime, drama, etc. In response to receiving a user-selected genre (e.g., action) to search and/or filter video content, control circuitry 304 performs a search through video content for metadata matching the user-selected genre and a plurality of media identifiers are displayed in search results region 2260. Each of the media identifiers, which are displayed as thumbnails containing movie art in search results region 2260, corresponds to media content (e.g., a movie, a television program, video clips, games, etc.).

[0147] Turning to FIG. 24, control circuitry 304 has activated a subcategory or subgenre filter in response to receiving a user selection for the category or genre filter shown in FIG. 23. In particular, in response to receiving a user selection for the category filter in region 2210, control circuitry 304 may transmit a query to a database for subcategory information associated with the selected category. Upon receiving the subcategory information, control circuitry 304 may populate a drop-down list in region 2210 for selection by the user. For example, as shown in FIG. 24, in response to the user selecting "action" in the category filter of FIG. 23, control circuitry 304 may provide the user with a drop-down list in region 2210 of corresponding subcategories. The subcategories or subgenres associated with the action music category may include, for example, action comedy, action thriller, bounty hunters, car racing, etc.

[0148] In response to receiving a subcategory or subgenre from the user in region 2210, control

circuitry 304 may refine the content provided in search results region 2260. For example, control circuitry 304 may search through the metadata associated with the media content in search results region 260 to find media content that matches the updated criteria.

[0149] As shown in FIG. 25, the user may select a demographic group that instructs control circuitry 304 to filter the media content provided in search results region 2260. A demographic group may be any suitable age group, pop culture group, or special interest group. In response to receiving a user selection for demographic filter 2250, control circuitry 304 may transmit a query to a database for subcategory information associated with the selected demographic group. Upon receiving the subcategory information, control circuitry 304 may populate a drop-down list in region 2250 for selection by the user. For example, as shown in FIG. 25, in response to the user selecting the demographic group "age groups" in demographic filter 2250 of FIG. 25, control circuitry 304 may provide the user with a drop-down list in region 830 of corresponding subcategories as shown in FIG. 26. The subcategories or subgenres associated with the "age group" demographic group may include, for example, toddlers, preschoolers, elementary school kids, middle-schoolers, high-schoolers, college students, etc. As shown in FIG. 27, the user has selected the subcategories "college students," "twentysomethings," "thirtysomethings," "fortysomethings," and "fiftysomethings."

[0150] As also shown in FIG. 27, the user has selected the genre "action" and the subgenre "action thriller" in the category and/or subcategory filter,

the ratings "PG-13" and "R" in the rating filter, the time period between 2000 and now in the decades filter, a point in the two-dimensional selection region that is more sober than carefree and slightly brighter than darker in mood, and subcategories "college students," "twentysomethings," "thirtysomethings," "fortysomethings," and "fiftysomethings" in the demographics filter. Control circuitry 304 may use the user-selected criteria in combination to filter the video content provided in a search results region. As described above, video content may be associated with criteria through metadata (e.g., metadata descriptors).

[0151] In response to entering and/or selecting from various criteria, control circuitry 304 may performs a search through content for metadata matching the user-selected criteria and a plurality of selectable media identifiers are displayed in search results region 2260. For example, in response to navigating to a particular media identifier (e.g., a selectable media identifier of "The Pianist") from the plurality of selectable media identifiers in search results region 2260, control circuitry 304 may provide the user with text information associated with the media asset, such as the movie title (e.g., "The Pianist").

[0152] In some embodiments, control circuitry 304 may monitor the navigation by the user. For example, when control circuitry 304 determines that the cursor is placed over the selectable media identifier, control circuitry 304 may highlight or activate selectable media identifier (e.g., increase the brightness of the thumbnail image) and provide the user with text

information associated with the media asset (e.g., the movie title).

[0153] In some embodiments, control circuitry 304 may monitor the location with respect to a selectable media identifier. For example, control circuitry 304 may detect whether the location coordinates of a cursor are approaching the center of a selectable media identifier. In a more particular example, in response to determining that the cursor has been placed near the center of a selectable media identifier, control circuitry 304 may activate a playback option. Playback option may, for example, instruct control circuitry 304 to retrieve and/or play a video clip, a movie trailer, the actual video content associated with the media identifier, or any other suitable video content. In some embodiments, selecting a media identifier (e.g., video cover art) instructs control circuitry 304 to load a trailer or other relevant video clip, or the video content itself into a video queue, which may be accessed at any time to play the added video content.

[0154] In some embodiments, control circuitry 304 may provide supplemental media content. For example, selecting a selectable media identifier may instruct control circuitry 304 to load a video list with all available clips associated with the video content. In another example, if the video content is associated with a music album or one or more songs, selecting the video thumbnail may instruct control circuitry 304 to load sample audio clips into a media queue (e.g., media queue 1700 of FIG. 17). In this example, a user may also select a thumbnail to retrieve the album (or songs) or to access additional information relating to the album (or songs).

[0155] In some embodiments, in response to selecting a selectable media identifier for video content, control circuitry 304 may provide the user with access to additional information and other media content associated with a particular movie or other video content. For example, as shown in an illustrative media information display 2800 of FIGS. 28-39, in response to the user receiving a plurality of media identifiers after using content selection tool 640 and selecting a selectable media identifier corresponding to the movie "The Pianist," control circuitry 304 may provide the user with access to information and other media content associated with the movie content.

[0156] Media information display 2800 may include reviews of the movie, rating information, award information, and other pertinent information. In some embodiments, control circuitry 304 may retrieve metadata associated with the selected video content and present portions of the metadata in media information display 2800. For example, as shown in FIGS. 28 and 29, media information display 2800 includes the keywords (e.g., escape, Holocaust, occupation [military], and pianist), themes (e.g., crimes against humanity), and tones (e.g., poignant, austere, somber, cathartic, gloomy, and reflective) associated with the video content.

[0157] It should be noted that control circuitry 304 may retrieve metadata associated with the selected media content for presentation in display 2800. In some embodiments, control circuitry 304 may transmit a query to other sources (e.g., media guidance data source 418, a social networking website, a movie review

website, etc.) to assemble the metadata for presentation in display 2800.

[0158] FIG. 30 shows an illustrative display screen of a media guidance application with an overlay 3000 containing a trailer or other video clip related to a particular movie or other video content (e.g., selected from the display screen of FIGS. 28 and 29) in accordance with some embodiments of the invention. In particular, overlay 3000 may display a trailer or other video clip when the video cover art or other media identifier is selected. In some embodiments, the video clip played in overlay 3000 may be placed in a media queue 3005. Media queue 3005 may include media control options for controlling the playback of the video clip in overlay 3000. The video clip may be hidden and/or revealed as desired by the user. Overlay 3000 and media queue 3005 may also persist as the user browses through other display screens in the media guidance application, thereby providing the user with access to other display screens while the video clip continues to play.

[0159] FIGS. 31-34 show an illustrative display screen of a media guidance application that may be used to access information and/or a media clips related to media content associated with a particular movie (or other video content) in accordance with some embodiments of the invention. As shown in FIG. 31, video content (e.g., a trailer for the movie "Schindler's List") related to the media content of the display screen (e.g., the movie "The Pianist") may be accessed directly for playing or adding to the media queue. As shown in FIG. 32, control circuitry 304 may display the related video content within an overlay

3200, and may allow the user to control the playback of the related video content with the media control options provided by the media queue. As shown in FIG. 33, control circuitry 304 may retrieve information relating to the video clip being played and display the information in the overlay in second overlay 3300, which is placed over the video clip. Both overlays 3200 and 3300 may be hidden or revealed as desired, and the video clip may continue to play while the second overlay with information is displayed. For example, as shown in FIG. 34, the video clip in overlay 3200 may be hidden while the information overlay 3300 remains displayed.

[0160] FIG. 35 shows an illustrative display screen of a media guidance application that may be used to access additional information associated with a particular movie or other media content in accordance with some embodiments of the invention. As shown, display screen 2800 may include a synopsis of the movie content and cast information. As also shown, control circuitry 304 may allow the user to select a cast member or other supplemental content from display screen 2800 to retrieve information related to that cast member.

[0161] FIGS. 36-39 show an illustrative display screen 3600 of a media guidance application that may be used to access information and/or media content associated with a person (e.g., an actor, artist, or performer) in accordance with some embodiments of the invention. For example, as shown in FIG. 36, control circuitry 304 may cause a filmography snapshot portion 3610 to be displayed in display screen 3600. Filmography snapshot portion 3610 may indicate the

number of movies, television shows, and/or other appearances made by an actor each year. In the case of a musical artist, a corresponding discography snapshot may be displayed indicating the number of albums released per year. In cases where a single artist both acts and musically performs, a combined display may indicate the number of releases featuring the artist - whether a movie, television show, or album - in each year. As shown, each release (e.g., movie and/or album) may be indicated by a block. However, it should be noted that any other suitable indicator of any size, shape, and color may also be used.

[0162] Turning to FIG. 37, when the user scrolls over, or otherwise selects, a column of boxes (e.g., corresponding to the releases in a particular year) in filmography snapshot portion 3610, control circuitry 304 may cause an overlay 3700 to be displayed with a list of the releases. Thus, the media guidance application may allow a user to quickly browse through the years to view an artist's work and access a particular work by selecting it from the list displayed in the overlay.

[0163] In some embodiments, control circuitry 304 may allow the user to add the contents of a list to the video and/or music queue for later review.

[0164] Any other suitable information relating to the selected artist may be provided in media guidance display 3600. For example, FIG. 38 shows that media guidance display 3600 may include credit information relating to the selected artist. In another example, FIG. 39 shows that media guidance display 3600 may include award information relating to the selected artist. As discussed above, data displayed may be

cross-referenced and linked such that any reference to media content allows quick and easy access to that media content or a related media clip. For example, the user may select a movie for which an actor received an award to access a trailer of that movie.

[0165] As described above, the media information display described herein may also be displayed in response to, for example, selecting an album from trending media content section of third region 630 in FIG. 6, or inputting the album name or other identifying information into general searching tool 612 in first region 610 in FIG. 6.

[0166] FIGS. 40-42 show illustrative display screens of a media guidance application depicting a variety of techniques for accessing music and/or video clips, or other information related to media content displayed in a cycling advertorial in accordance with some embodiments of the invention. When a user selects to view a trailer from an advertorial in guidance display 4000, for example, control circuitry 304 may display the trailer in an overlay 4010 without leaving the display screen. FIG. 40, for example, shows overlay 4000 containing a trailer for the movie "True Grit" that relates to the actor "Jeff Bridge" promoted in an advertorial. Control circuitry 304 may allow the user to play the trailer or close overlay 4010 as the advertorial continues to cycle to the next advertorial.

[0167] As described above, overlays and/or media queue may be persistent throughout the guidance displays presented by the media guidance application. For example, FIG. 41 shows an illustrative display screen with an advertorial featuring the music artist "Shakira." The advertorial may feature the music

artist and their related works. For example, guidance display 4100 may provide the user with access to music content, video content, access to associated information, or any other suitable media content related to the music artist. In a more particular example, the user has selected to watch a music video for the song "Whenever, Wherever" by Shakira. As shown in FIG. 42, control circuitry 304 may display the video clip in an overlay 4200. In addition, control circuitry 304 may place the video content in a media queue, which provides media control options for controlling the playback of the video content. The user may then select to view a review of the album "She Wolf." As shown in FIG. 43, control circuitry 304 causes the video clip in overlay 4200 to continue to play even as the user browses to another display screen using the media guidance application. The user may navigate back or to other information through various other display screens in the media guidance application, yet the overlay persists until the user closes it or the video content finishes playing.

[0168] FIGS. 44-47 show illustrative display screens of a media guidance application depicting a media queue for managing one or more lists of music, video clips, or any other suitable content in accordance with some embodiments of the invention. When a video clip is selected by the user, control circuitry 304 may add the video clip to the media queue 4410 as shown in FIG. 44. Media queue 4410 may be displayed by selecting the "Media Queue" display element at the bottom of display screen 4400. In some embodiments, the media queue may be an overlay displayed over the content of display screen 4400. In addition, media queue 4410 may be

divided into at least two panels 4415 and 4420 - e.g., one for video clips (panel 4415) and one for music clips (panel 4420). Alternatively, media queue 4410 may include an aggregate list of any media content selected by the user. From within media queue 4410, a user may select a clip to play in an overlay, such as an overlay 4510 shown in FIG. 45. Media queue 4410 may also allow that user to delete an item from within the queue.

[0169] As shown in FIG. 46, media queue 4410 may also include music clips in panel 4420. The list may be populated by selecting clips from one or more display screens. In particular, control circuitry 304 may store user selections that are placed in media queue 4410 in memory. Music clips, like video clips, may be played and deleted. In some embodiments, media queue 4410 or any other portion of the media guidance application may provide the user with the opportunity to purchase one or more media clips, e.g., directly through media queue 4410.

[0170] In some embodiments, the media guidance application may provide the user with a user-configurable media queue. FIG. 47 provides an enlarged view of the media queue in accordance with some embodiments of the invention. As shown, clips may be played in any order and the user may rearrange the order of the items listed. In some embodiments, the media queue automatically plays through the listed content, moving from one item to the next in the queue until all clips have been played.

[0171] In some embodiments, referring back to FIG. 6, control circuitry 304 may provide the user with access to information directly from general searching

tool 612. For example, when a person's name is entered into the general searching tool 612, a biography of that person may appear in an overlay over the current display screen. As another example, a user may enter a song name into general searching tool 612 or any other suitable mechanism and may be able to play the song without navigating away from the current display screen. Thus, the user elements described herein may function to enable a user to find and access media information, but also, simultaneously, as media control elements allowing the user to play media clips as the user browses for entertainment information. Accordingly, a mixed-media, immersive experience is provided.

[0172] Furthermore, it should be noted that the media guidance application may provide the user with information in a mixed-media context. For example, as described above, an advertorial may highlight an artist's work in film, television, and/or music. Similarly, biographies and other information on individuals may highlight that individual's contribution to film, television, and/or music. Clips from each of these media types may be integrated and made available to the user. In addition, these clips may be accessed through the media queue, which is itself a mixed-media tool capable of handling both music and video assets.

[0173] FIG. 48 shows an illustrative display screen of a media guidance application depicting a recommendation feature in accordance with some embodiments of the invention. In particular, the user may set up a profile in which indications of the user's preferred media content is stored. As the user

indicates likes and dislikes, and, as the site learns more about the user, e.g., by tracking user actions and viewing history, control circuitry 304 may provide recommendations of media determined to be of interest to the user. Additionally or alternatively, control circuitry 304 may retrieve user profile information and user history information from user television equipment 502, user computer equipment 504, and/or wireless communications devices 506 for providing recommendations of media content.

[0174] In a more particular example, the media guidance application may provide the user with the opportunity to indicate whether the user likes a particular artist. In another example, the media guidance application may provide the user with the opportunity to rate media content. As the user continues to indicate preferences and/or uses the media guidance application, the user profile may continue to be updated and used as a basis for providing recommendations.

[0175] As shown in FIG. 48, control circuitry 304 may cause recommended media content to be presented to the user based on, for example, the user profile. In addition, new releases of media content may be recommended to the user based on the user profile. For example, a new album by an artist the user has indicated a strong liking for may be displayed prominently. In addition, as shown in FIG. 48, the display screen may display, pictorially, the media content or artists a user has indicated as favorites. Thus, a visual mash-up may be created with thumbnails or pictures of various media content and artists the user likes. Thus, the user is provided with a visual

representation of the user profile, and may edit it accordingly. It should be noted that, in some embodiments, active user selections or indications of likes and dislikes may be weighted more heavily than tracked user history when providing recommendations.

[0176] FIG. 49 illustrates a flow diagram 4900 for presenting an interactive media guidance application, where user-selected criteria is received and guidance for selecting media content is provided in accordance with some embodiments of the invention.

[0177] At step 4910, a plurality of media identifiers are stored. For example, control circuitry 304 may store media identifiers associated with media content. A media identifier may be, for example, a thumbnail of cover art shown in FIG. 13, a thumbnail of movie art, still images from the content, video clip previews, live video from the content, or any other suitable content that identifies the media content.

[0178] At step 4920, control circuitry 304 may determine whether an indication from the user has been received to access guidance display that allows the user to input criteria for searching and/or filtering media content. For example, control circuitry 304 may determine whether the user has navigated to a guidance display, such as the ones shown in FIGS. 8-14 and 19-27. In a more particular example, control circuitry 304 may receive an indication that the user has selected the findR button or a content selection tool option on a guidance display, such as the ones shown in FIGS. 6 and 7.

[0179] In response, control circuitry 304 may cause a two-dimensional selection region to be displayed at step 4930. As shown in FIGS. 8-14 and 19-27, the two-

dimensional selection region is divided into a plurality of sub-regions for selection by the user. The two-dimensional selection region also defines an intersection between a first criterion and a second criterion. For example, as shown in FIG. 20, control circuitry 304 causes a two-dimensional selection region in a grid form to be presented to the user. The two-dimensional selection region shown in FIG. 20 defines the intersection between the positive-negative set of moods and the wild-chill set of moods. In particular, a sub-region indicates a particular selection between a "positive" mood and a "negative" mood (e.g., the music should be significantly more positive than negative), a particular selection between a "wild" mood and a "chill" mood (e.g., the music should be more chill than wild), and/or any combination or interaction between both (e.g., the music should be positive, but chill).

[0180] It should be noted that, although the embodiments described herein generally refer to a first mood and a second mood in the two-dimensional selection region, this is merely illustrative. Any suitable criterion may be placed in the two-dimensional selection region. In some embodiments, control circuitry 304 may allow the user to select and/or define criterion for placement on the two-dimensional selection region. For example, in some embodiments, control circuitry 304 may provide the user with a list populated with criterion information from database. The user may indicate criterion for placement on the two-dimensional selection region using the criteria list.

[0181] In some embodiments, control circuitry 304 may provide multiple two-dimensional selection regions

for receiving user selections. For example, control circuitry 304 may provide a first two-dimensional selection region defining the intersection between a first set of moods and a second set of moods and a second two-dimensional selection region defining the intersection between a set of tones and a set of genres.

[0182] At step 4940, control circuitry 304 may receive a user selection of a sub-region from the plurality of sub-regions in the two-dimensional selection region. For example, using a user input device, the user may select one of the sub-region cells within the two-dimensional selection region. It should be noted that the two-dimensional selection region allows the user to indicate the extent of a mood or other criterion by selecting an area on or near an axis of the desired mood. For example, a user may set how wild or chill the music should be by selecting a location on the chill-wild axis.

[0183] In response to receiving a user selection of a sub-region from the two-dimensional selection region at step 4940, control circuitry 304 may derive information from the selected sub-region at step 4950. For example, control circuitry 304 may transmit a query to a database for media content using portions of information derived from user selection 2030 - e.g., find media content with corresponding metadata that is at least 82% on the chill-wild mood scale (where chill is 0%, wild is 100%, and 50% is neither chill nor wild) and that is at least 46% on the negative-positive mood scale (where negative is 0%, positive is 100%, and 50% is neither negative nor positive).

[0184] It should be noted that, upon receiving a user selection (e.g., a user selection of a sub-region or any other user-selected criteria), control circuitry 304 may query the database to search and/or filter search results. Alternatively, at step 4950, control circuitry 304 may combine or aggregate the user selection from the sub-region and/or other user-selected criteria for submission to the database or other data source.

[0185] Any suitable mechanism for retrieving media content and/or their associated media identifiers to be presented in the guidance display may be used. For example, in some embodiments, control circuitry 304 may transmit a query to storage for media content and media identifiers with metadata matching user-selected criteria. In response to receiving media content and media identifiers from storage (e.g., in an XML structure as illustrated in FIG. 13), control circuitry 304 may determine which media content and media identifiers to present.

[0186] In response, control circuitry 304 may determine a subset of the plurality of media identifiers corresponding to the user-selected criteria at step 4960. For example, control circuitry 304 may determine which pieces of media content have metadata matching the user-selected criteria.

[0187] At step 4970, control circuitry 304 may cause at least a portion of the subset of media identifiers to be presented. For example, as shown in FIG. 19, in response to receiving user-selected criteria, control circuitry 304 may retrieve and present a subset of media identifiers in a search results portion 850 of a guidance display 800.

[0188] Control circuitry 304 may monitor to detect whether the user has provided additional criteria or modified criteria for searching and/or filtering media content at step 4980. In response to receiving additional criteria or modified criteria, control circuitry 304 may dynamically update the media content and their media identifiers presented in a search results region. For example, as the user moves through the two-dimensional selection region, control circuitry 304 may dynamically update the media identifiers presented in the search results region.

[0189] Any suitable mechanism for updating media identifiers may be used. For example, in some embodiments, control circuitry 304 may transmit a query to local storage to filter the currently displayed media identifiers with additional criteria. In response to receiving updated media identifiers from storage (e.g., in an XML structure as illustrated in FIG. 50), control circuitry 304 may present the updated media identifiers to the user.

[0190] At step 4990, control circuitry 304 may determine whether the user has indicated to access the media asset or media content corresponding to the selected media identifier. For example, the user may use a user input device to select the presented media identifier. In response, control circuitry 304 may perform a corresponding action at step 5000. For example, control circuitry 304 may access the corresponding media content. In another example, control circuitry 304 may provide the user with a preview of the media content (e.g., an audio sample, a trailer, a video clip, etc.). Additionally or alternatively to presenting the content corresponding

to the selected media identifier, control circuitry 304 may provide the user with access to information, access to related media content, and/or provide the opportunity to set various settings, such as record the content, set a reminder to watch or listen to the content, etc. In some embodiments, control circuitry 304 may select the media identifier and instruct a second screen device (e.g., wireless user communications device 406) to playback the content, record the content, set a reminder to watch the content, etc.

[0191] Otherwise, if the user does not select one of the subset of media identifiers, control circuitry 304 may return back to step 4980 and continue to monitor to detect whether the user has provided additional criteria or modified criteria for searching and/or filtering media content.

[0192] It should be understood that the above steps of the flow diagram of FIG. 49 may be executed or performed in any order or sequence not limited to the order and sequence shown and described in the figure. Also, some of the above steps of the flow diagram of FIG. 49 may be executed or performed substantially simultaneously where appropriate or in parallel to reduce latency and processing times.

[0193] The above described embodiments of the present disclosure are presented for purposes of illustration and not of limitation, and the present disclosure is limited only by the claims which follow.

What is claimed is:

1. A method for providing guidance for selecting content, the method comprising:

storing a plurality of media identifiers;

causing a two-dimensional selection region to be presented to a user, wherein:

the two-dimensional selection region defines an intersection between a first criterion and a second criterion, the first criterion and the second criterion are associated with the plurality of media identifiers; and

the two-dimensional selection region is divided into a plurality of sub-regions;

receiving a user selection of a sub-region from the plurality of sub-regions within the two-dimensional selection region;

determining a subset of the plurality of media identifiers corresponding to the sub-region in response to receiving the user selection; and

causing at least a portion of the subset of the plurality of media identifiers to be presented to the user.

2. The method of claim 1, wherein each of the plurality of sub-regions defines a degree of the intersection between the first criterion and the second criterion, the method further comprising determining the subset of the plurality of media identifiers by determining the plurality of media identifiers that match the degree of the intersection between the first criterion and the second criterion.

3. The method of claim 1, further comprising:

receiving a plurality of criteria relating to the plurality of media identifiers from the user; and

filtering the plurality of media identifiers in response to receiving the plurality of criteria.

4. The method of claim 3, wherein the plurality of criteria includes one or more of: a mood, a genre, a subgenre, a rating, a time period, a demographic, and a theme.

5. The method of claim 3, further comprising selecting at least one of the first criterion and the second criterion based at least in part on the plurality of criteria received from the user.

6. The method of claim 1, further comprising selecting at least one of the first criterion and the second criterion based on profile information associated with the user.

7. The method of claim 1, further comprising selecting at least one of the first criterion and the second criterion based on usage history information associated with the user.

8. The method of claim 1, wherein each media identifier includes a media playback option, wherein selection of the media identifier causes

information relating to a corresponding media asset to be presented to the user and wherein selection of the media playback option causes a media clip associated with the corresponding media asset to be presented to the user.

9. The method of claim 1, wherein at least one of the plurality of sub-regions within the two-dimensional selection region is shaded to indicate availability of the plurality of media identifiers.

10. The method of claim 1, further comprising:

retrieving relational information associated with each of the plurality of media identifiers that describes a relationship between media assets of a first media type and media assets of a second media type, wherein a media identifier selected by the user corresponds to a media asset of the first media type; and

causing a second media asset of the second media type to be presented to the user in response to receiving the relational information.

11. A system for providing guidance for selecting content, the system comprising:

a storage device;

processing circuitry configured to:

store a plurality of media identifiers in the storage device;

cause a two-dimensional selection region to be presented to a user, wherein:

the two-dimensional selection region defines an intersection between a first

criterion and a second criterion, the first criterion and the second criterion are associated with the plurality of media identifiers; and

the two-dimensional selection region is divided into a plurality of sub-regions;

receive a user selection of a sub-region from the plurality of sub-regions within the two-dimensional selection region;

determine a subset of the plurality of media identifiers corresponding to the sub-region in response to receiving the user selection; and

cause at least a portion of the subset of the plurality of media identifiers to be presented to the user.

12. The system of claim 11, wherein each of the plurality of sub-regions defines a degree of the intersection between the first criterion and the second criterion and wherein the processing circuitry is further configured to determine the subset of the plurality of media identifiers by determining the plurality of media identifiers that match the degree of the intersection between the first criterion and the second criterion.

13. The system of claim 11, wherein the processing circuitry is further configured to:

receive a plurality of criteria relating to the plurality of media identifiers from the user; and

filter the plurality of media identifiers in response to receiving the plurality of criteria.

14. The system of claim 13, wherein the plurality of criteria includes one or more of: a mood, a genre, a subgenre, a rating, a time period, a demographic, and a theme.

15. The system of claim 13, wherein the processing circuitry is further configured to select at least one of the first criterion and the second criterion based at least in part on the plurality of criteria received from the user.

16. The system of claim 11, wherein the processing circuitry is further configured to select at least one of the first criterion and the second criterion based on profile information associated with the user.

17. The system of claim 11, wherein the processing circuitry is further configured to select at least one of the first criterion and the second criterion based on usage history information associated with the user.

18. The system of claim 11, wherein each media identifier includes a media playback option, wherein selection of the media identifier causes information relating to a corresponding media asset to be presented to the user and wherein selection of the media playback option causes a media clip associated with the corresponding media asset to be presented to the user.

19. The system of claim 11, wherein at least one of the plurality of sub-regions within the two-dimensional selection region is shaded to indicate availability of the plurality of media identifiers.

20. The system of claim 11, wherein the processing circuitry is further configured to:

retrieve, from the storage device, relational information associated with each of the plurality of media identifiers that describes a relationship between media assets of a first media type and media assets of a second media type, wherein a media identifier selected by the user corresponds to a media asset of the first media type; and

cause a second media asset of the second media type to be presented to the user in response to receiving the relational information.

21. An apparatus for providing guidance for selecting content, the apparatus comprising:

means for storing a plurality of media identifiers;

means for causing a two-dimensional selection region to be presented to a user, wherein:

the two-dimensional selection region defines an intersection between a first criterion and a second criterion, the first criterion and the second criterion are associated with the plurality of media identifiers; and

the two-dimensional selection region is divided into a plurality of sub-regions;

means for receiving a user selection of

a sub-region from the plurality of sub-regions within the two-dimensional selection region;

means for determining a subset of the plurality of media identifiers corresponding to the sub-region in response to receiving the user selection; and

means for causing at least a portion of the subset of the plurality of media identifiers to be presented to the user.

22. The apparatus of claim 21, wherein each of the plurality of sub-regions defines a degree of the intersection between the first criterion and the second criterion, the apparatus further comprising means for determining the subset of the plurality of media identifiers by determining the plurality of media identifiers that match the degree of the intersection between the first criterion and the second criterion.

23. The apparatus of claim 21, further comprising:

means for receiving a plurality of criteria relating to the plurality of media identifiers from the user; and

means for filtering the plurality of media identifiers in response to receiving the plurality of criteria.

24. The apparatus of claim 23, wherein the plurality of criteria includes one or more of: a mood, a genre, a subgenre, a rating, a time period, a demographic, and a theme.

25. The apparatus of claim 23, further comprising means for selecting at least one of the

first criterion and the second criterion based at least in part on the plurality of criteria received from the user.

26. The apparatus of claim 21, further comprising means for selecting at least one of the first criterion and the second criterion based on profile information associated with the user.

27. The apparatus of claim 21, further comprising means for selecting at least one of the first criterion and the second criterion based on usage history information associated with the user.

28. The apparatus of claim 21, wherein each media identifier includes a media playback option, wherein selection of the media identifier causes information relating to a corresponding media asset to be presented to the user and wherein selection of the media playback option causes a media clip associated with the corresponding media asset to be presented to the user.

29. The apparatus of claim 21, wherein at least one of the plurality of sub-regions within the two-dimensional selection region is shaded to indicate availability of the plurality of media identifiers.

30. The apparatus of claim 21, further comprising:

means for retrieving relational information associated with each of the plurality of media identifiers that describes a relationship between media assets of a first media type and media assets of a second media type, wherein a media identifier

selected by the user corresponds to a media asset of the first media type; and

means for causing a second media asset of the second media type to be presented to the user in response to receiving the relational information.

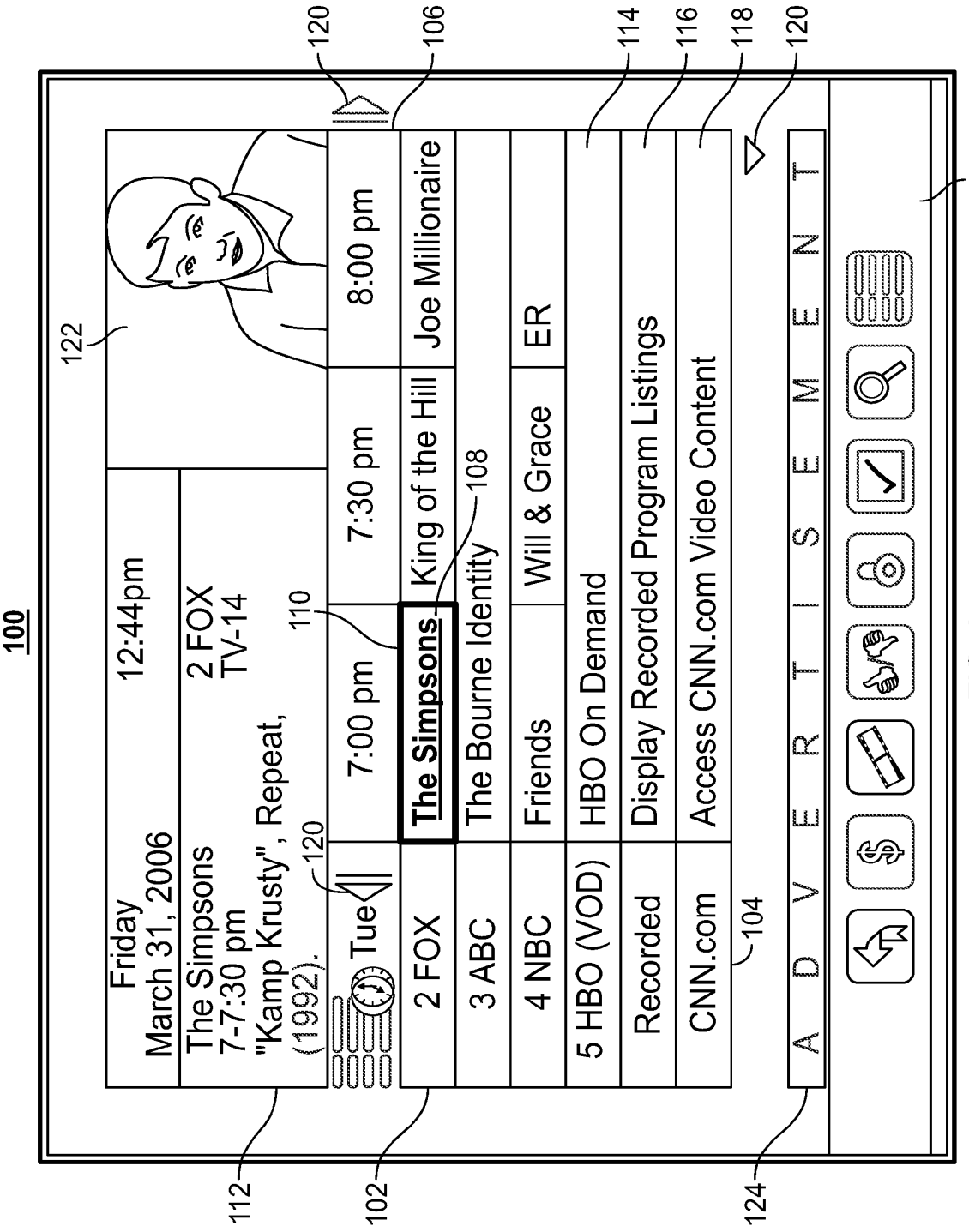

100
Friday
March 31, 2006
12:44pm
The Simpsons
7-7:30 pm
"Kamp Krusty", Repeat,
(1992).
2 FOX
TV-14
Tue
7:00 pm
7:30 pm
8:00 pm
2 FOX
The Simpsons
King of the Hill
Joe Millionaire
3 ABC
The Bourne Identity
4 NBC
Friends
Will & Grace
ER
5 HBO (VOD)
HBO On Demand
Recorded
Display Recorded Program Listings
CNN.com
Access CNN.com Video Content
ADVERTISEMENT
102
104
106
108
110
112
114
116
118
120
122
124
126

FIG. 1

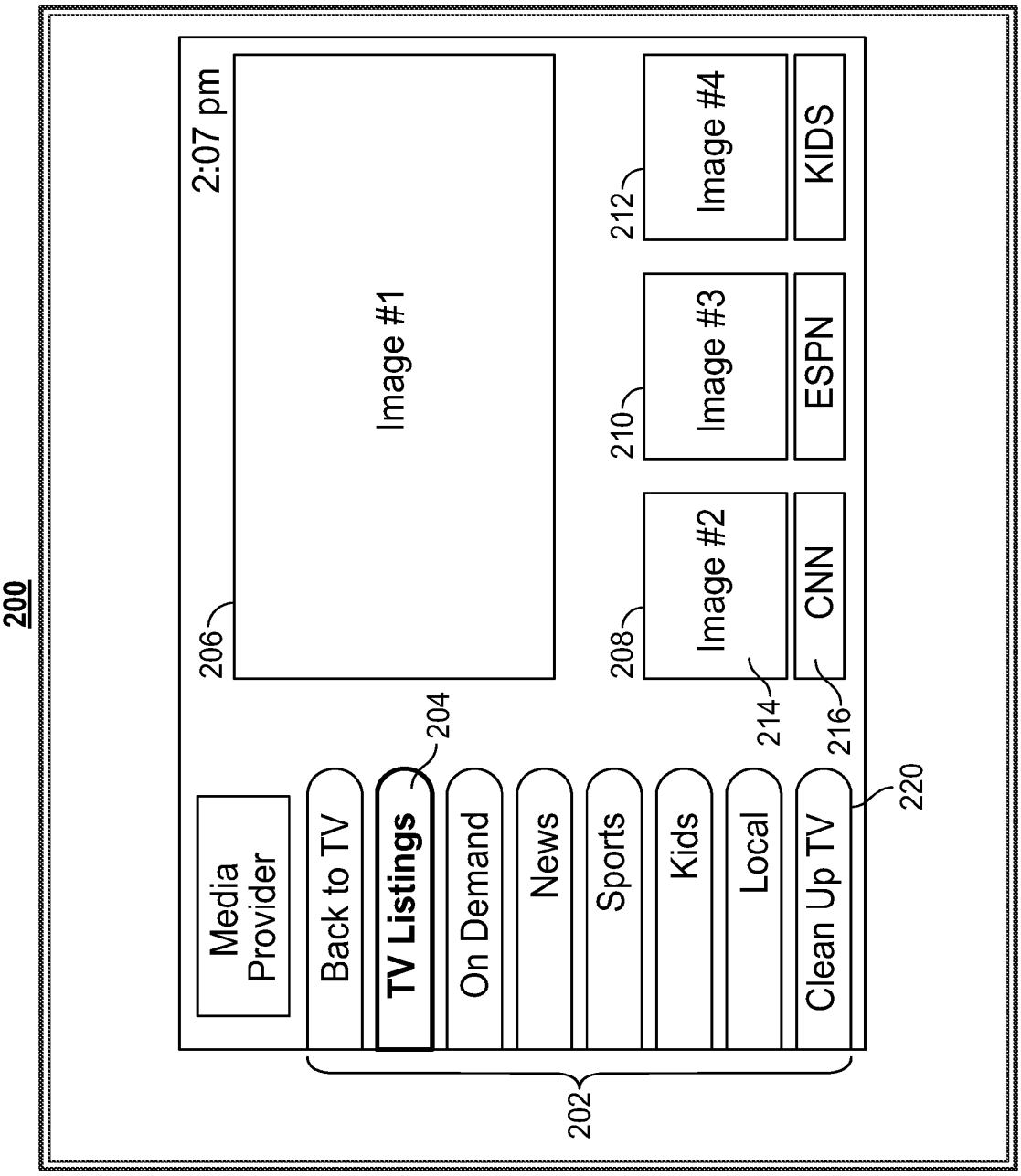

200
2:07 pm
Image #1
206
Image #2
208
Image #3
210
Image #4
212
CNN
ESPN
KIDS
214
216
Media Provider
Back to TV
TV Listings
204
On Demand
News
Sports
Kids
Local
Clean Up TV
220
202

FIG. 2

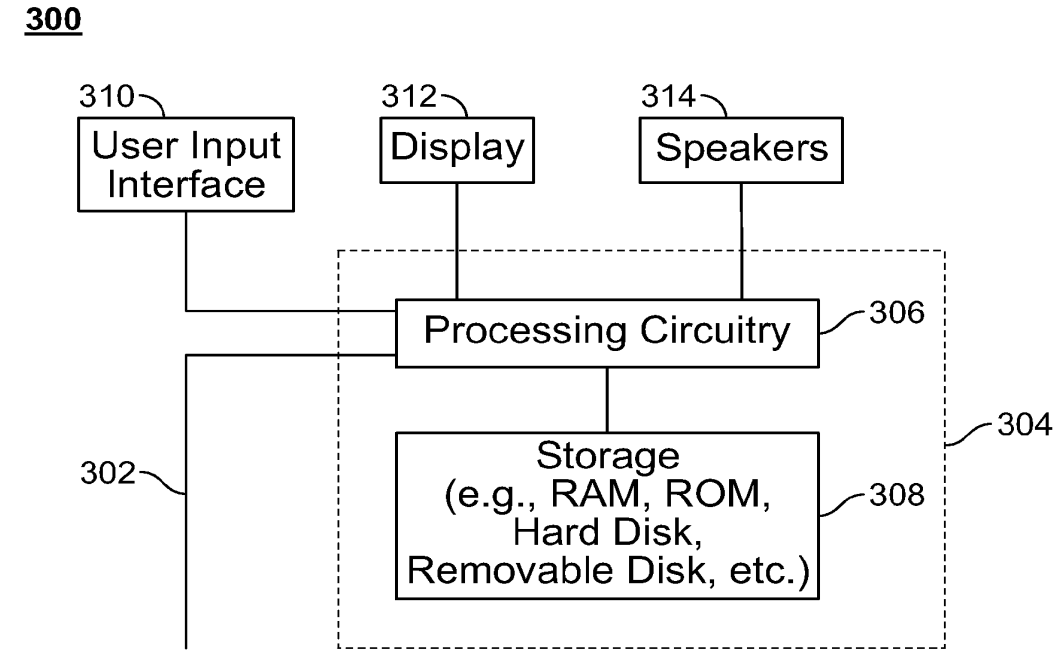

300
310
User Input Interface
312
Display
314
Speakers
Processing Circuitry
306
304
302
Storage (e.g., RAM, ROM, Hard Disk, Removable Disk, etc.)
308

FIG. 3

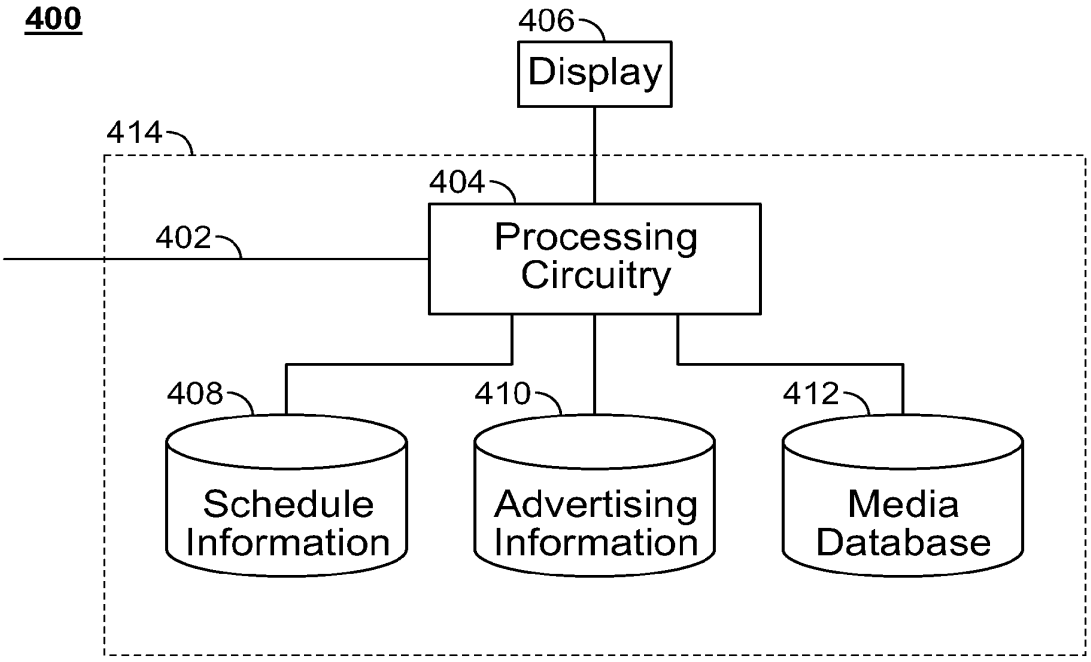

400
406
Display
414
404
402
Processing Circuitry
408
410
412
Schedule Information
Advertising Information
Media Database

FIG. 4

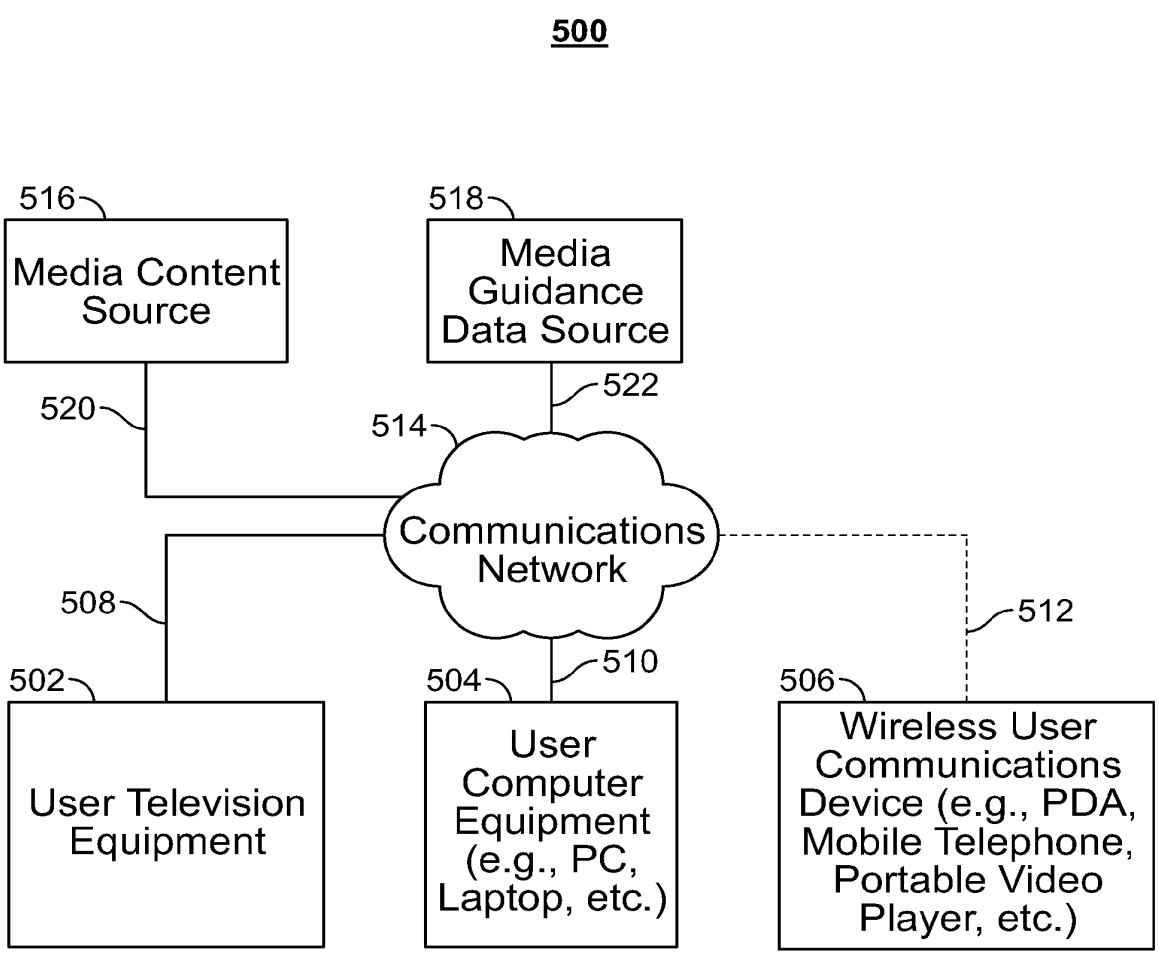

500
516
Media Content Source
518
Media Guidance Data Source
520
522
514
Communications Network
508
512
510
502
504
506
User Television Equipment
User Computer Equipment (e.g., PC, Laptop, etc.)
Wireless User Communications Device (e.g., PDA, Mobile Telephone, Portable Video Player, etc.)

FIG. 5

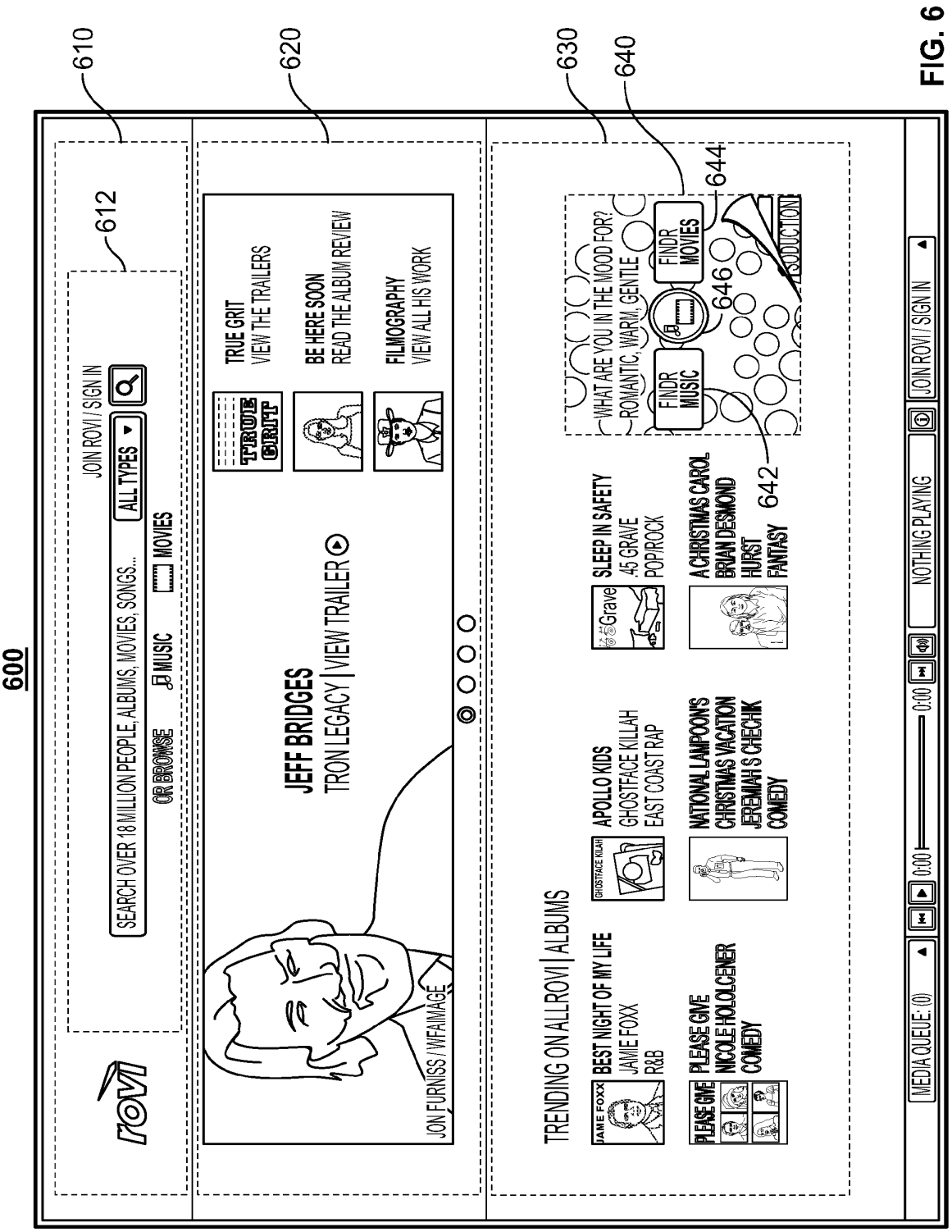

600
610
620
630
640
612
644
642
646
rovi
JOIN ROVI / SIGN IN
SEARCH OVER 18 MILLION PEOPLE, ALBUMS, MOVIES, SONGS...
ALL TYPES
OR BROWSE
MUSIC
MOVIES
JEFF BRIDGES
TRON LEGACY | VIEW TRAILER
JON FURNISS / WFAIMAGE
TRUE GRIT
VIEW THE TRAILERS
BE HERE SOON
READ THE ALBUM REVIEW
FILMOGRAPHY
VIEW ALL HIS WORK
TRENDING ON ALLROVI | ALBUMS
BEST NIGHT OF MY LIFE
JAMIE FOXX
R&B
APOLLO KIDS
GHOSTFACE KILLAH
EAST COAST RAP
SLEEP IN SAFETY
.45 GRAVE
POP/ROCK
PLEASE GIVE
NICOLE HOLLOGENER
COMEDY
NATIONAL LAMPOON'S
CHRISTMAS VACATION
JEREMIAH'S CHECHIK
COMEDY
A CHRISTMAS CAROL
BRIAN DESMOND
HURST
FANTASY
WHAT ARE YOU IN THE MOOD FOR?
ROMANTIC, WARM, GENTLE
FINDR
MUSIC
FINDR
MOVIES
MEDIA QUEUE: (0)
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 6

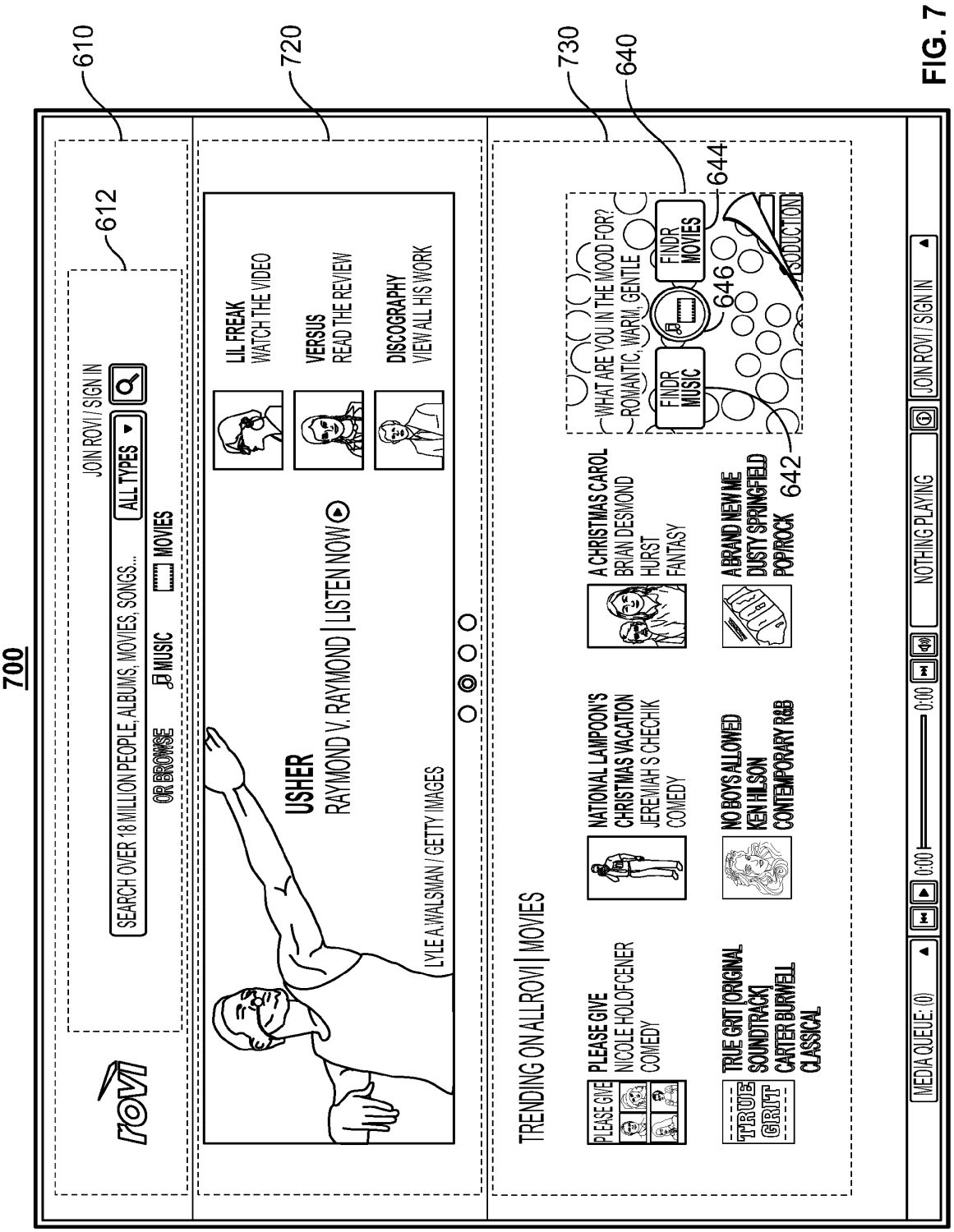

700
610
612
720
730
640
644
646
642
JOIN ROVI / SIGN IN
SEARCH OVER 18 MILLION PEOPLE, ALBUMS, MOVIES, SONGS...
ALL TYPES
OR BROWSE
MUSIC
MOVIES
USHER
RAYMOND V. RAYMOND | LISTEN NOW
LYLE A.WALSMAN / GETTY IMAGES
LIL FREAK
WATCH THE VIDEO
VERSUS
READ THE REVIEW
DISCOGRAPHY
VIEW ALL HIS WORK
TRENDING ON ALLROVI | MOVIES
PLEASE GIVE
NICOLE HOLOFCENER
COMEDY
NATIONAL LAMPOON'S
CHRISTMAS VACATION
JEREMIAH S CHECHIK
COMEDY
A CHRISTMAS CAROL
BRIAN DESMOND
HURST
FANTASY
TRUE GRIT (ORIGINAL
SOUNDTRACK)
CARTER BURWELL
CLASSICAL
NO BOYS ALLOWED
KEN HILSON
CONTEMPORARY R&B
A BRAND NEW ME
DUSTY SPRINGFIELD
POP/ROCK
WHAT ARE YOU IN THE MOOD FOR?
ROMANTIC, WARM, GENTLE
FINDR
MUSIC
FINDR
MOVIES
MEDIA QUEUE: (0)
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 7

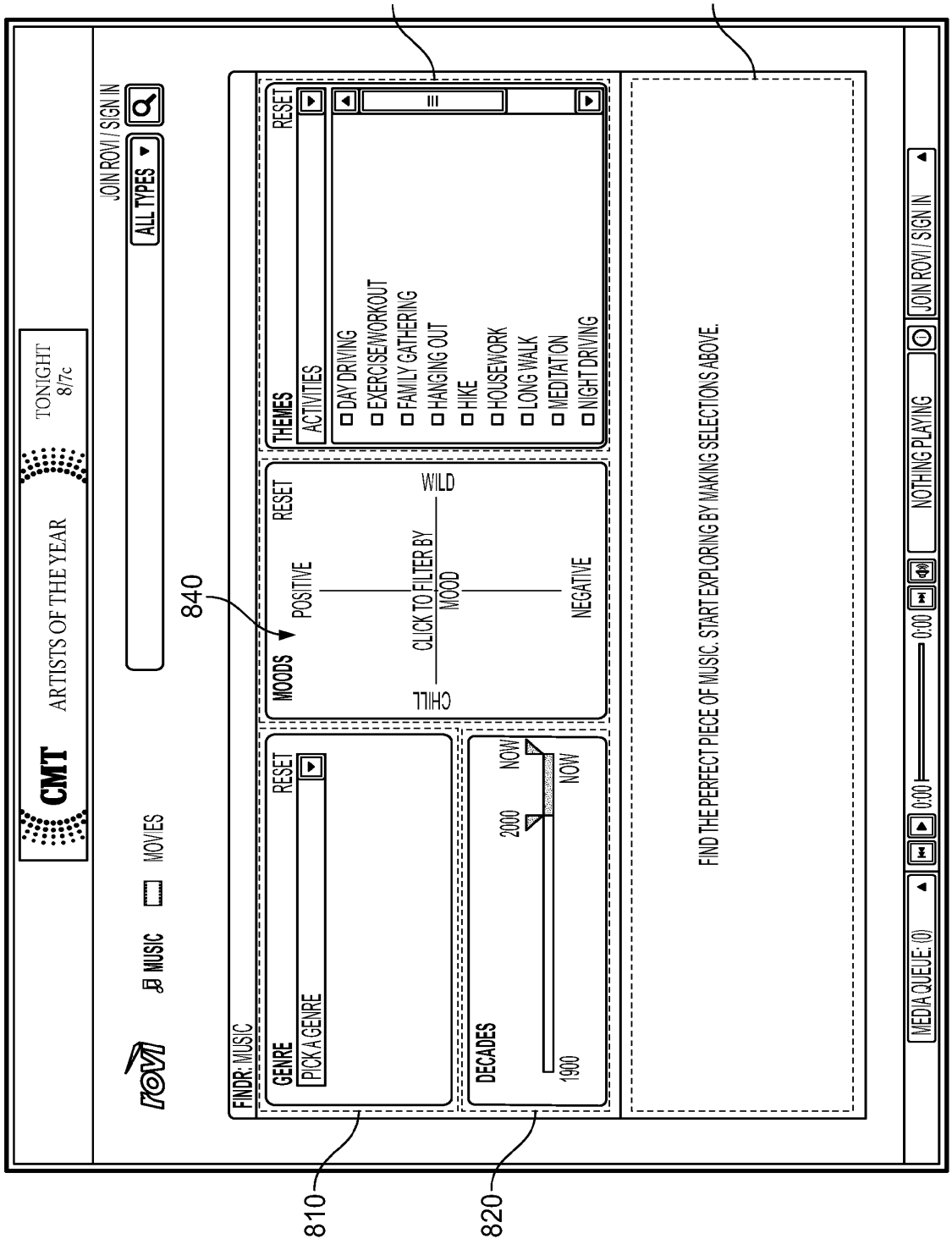

800
CMT
ARTISTS OF THE YEAR
TONIGHT 8/7c
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
840
830
850
FINDR: MUSIC
GENRE
RESET
PICK A GENRE
MOODS
RESET
POSITIVE
CLICK TO FILTER BY MOOD
WILD
CHILL
NEGATIVE
THEMES
RESET
ACTIVITIES
DAY DRIVING
EXERCISE/WORKOUT
FAMILY GATHERING
HANGING OUT
HIKE
HOUSEWORK
LONG WALK
MEDITATION
NIGHT DRIVING
DECADES
2000
NOW
1900
NOW
FIND THE PERFECT PIECE OF MUSIC. START EXPLORING BY MAKING SELECTIONS ABOVE.
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN
810
820

FIG. 8

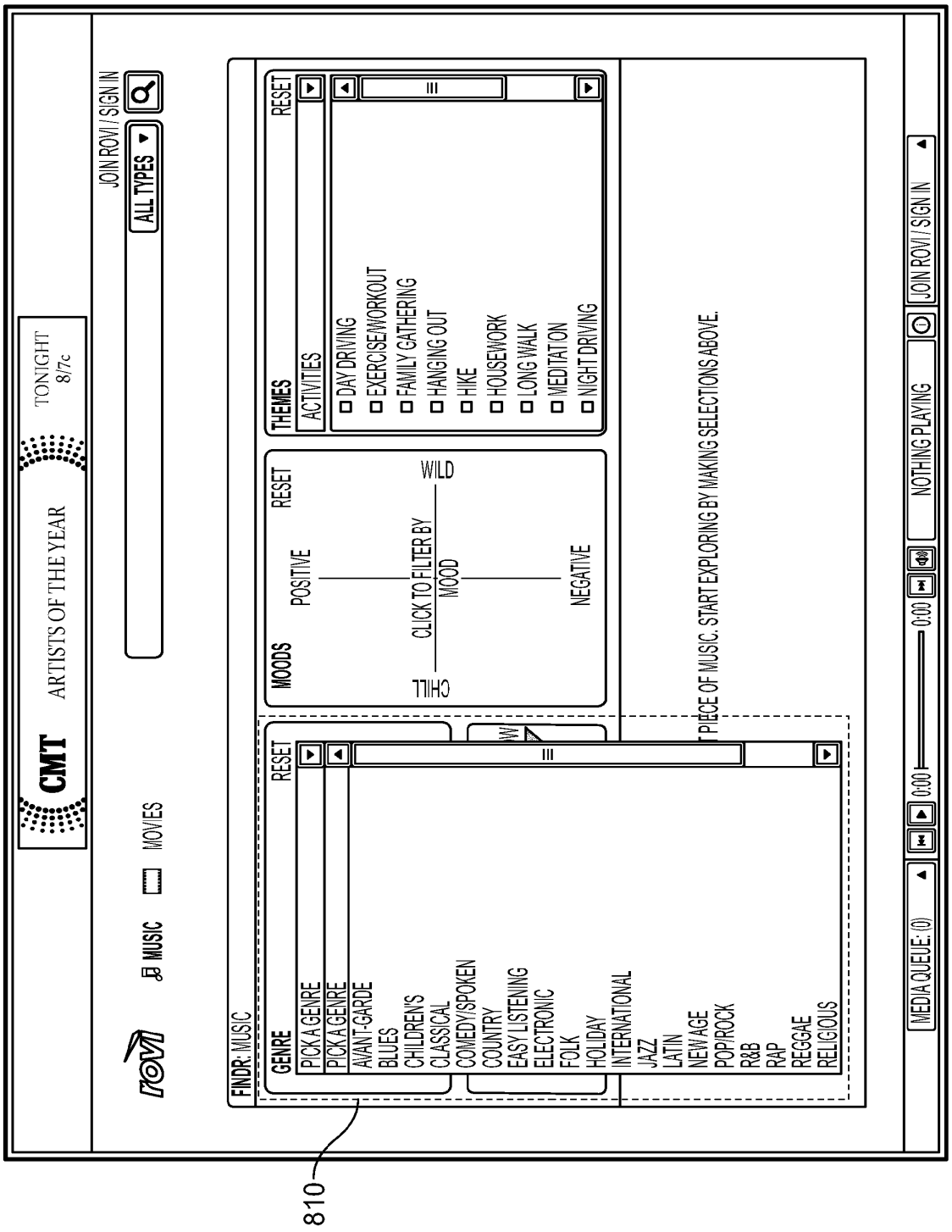

CMT
ARTISTS OF THE YEAR
TONIGHT 8/7c
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
FINDR: MUSIC
GENRE
RESET
PICK A GENRE
PICK A GENRE
AVANT-GARDE
BLUES
CHILDRENS
CLASSICAL
COMEDY/SPOKEN
COUNTRY
EASY LISTENING
ELECTRONIC
FOLK
HOLIDAY
INTERNATIONAL
JAZZ
LATIN
NEW AGE
POP/ROCK
R&B
RAP
REGGAE
RELIGIOUS
MOODS
RESET
POSITIVE
NEGATIVE
CHILL
WILD
CLICK TO FILTER BY MOOD
THEMES
ACTIVITIES
RESET
DAY DRIVING
EXERCISE/WORKOUT
FAMILY GATHERING
HANGING OUT
HIKE
HOUSEWORK
LONG WALK
MEDITATION
NIGHT DRIVING
PIECE OF MUSIC. START EXPLORING BY MAKING SELECTIONS ABOVE.
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN
810

FIG. 9

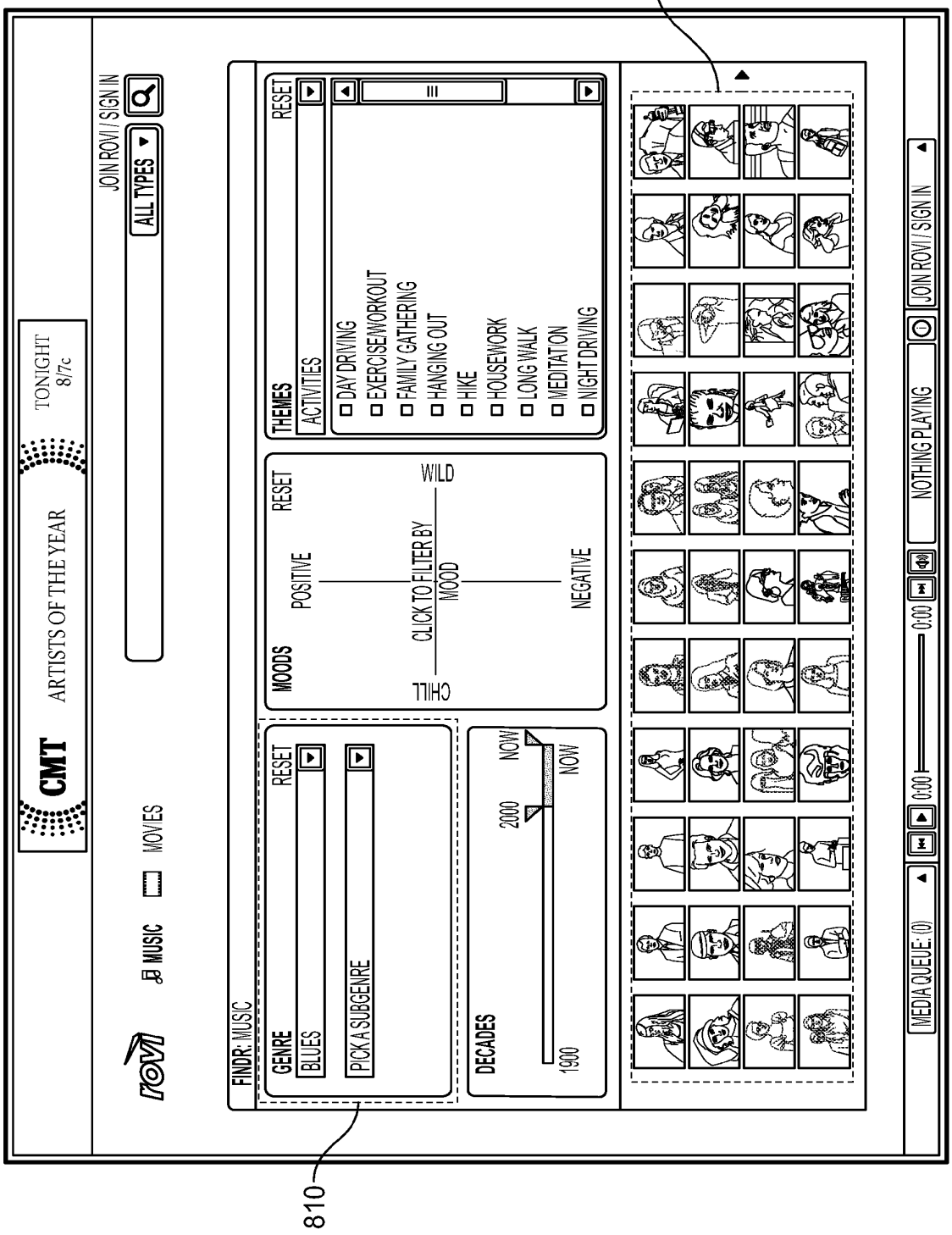

850
810
JOIN ROVI / SIGN IN
ALL TYPES
CMT
ARTISTS OF THE YEAR
TONIGHT 8/7c
MUSIC
MOVIES
FINDR: MUSIC
GENRE
RESET
BLUES
PICK A SUBGENRE
MOODS
RESET
POSITIVE
NEGATIVE
CHILL
WILD
CLICK TO FILTER BY MOOD
DECADES
2000
NOW
1900
THEMES
RESET
ACTIVITIES
DAY DRIVING
EXERCISE/WORKOUT
FAMILY GATHERING
HANGING OUT
HIKE
HOUSEWORK
LONG WALK
MEDITATION
NIGHT DRIVING
MEDIA QUEUE (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 10

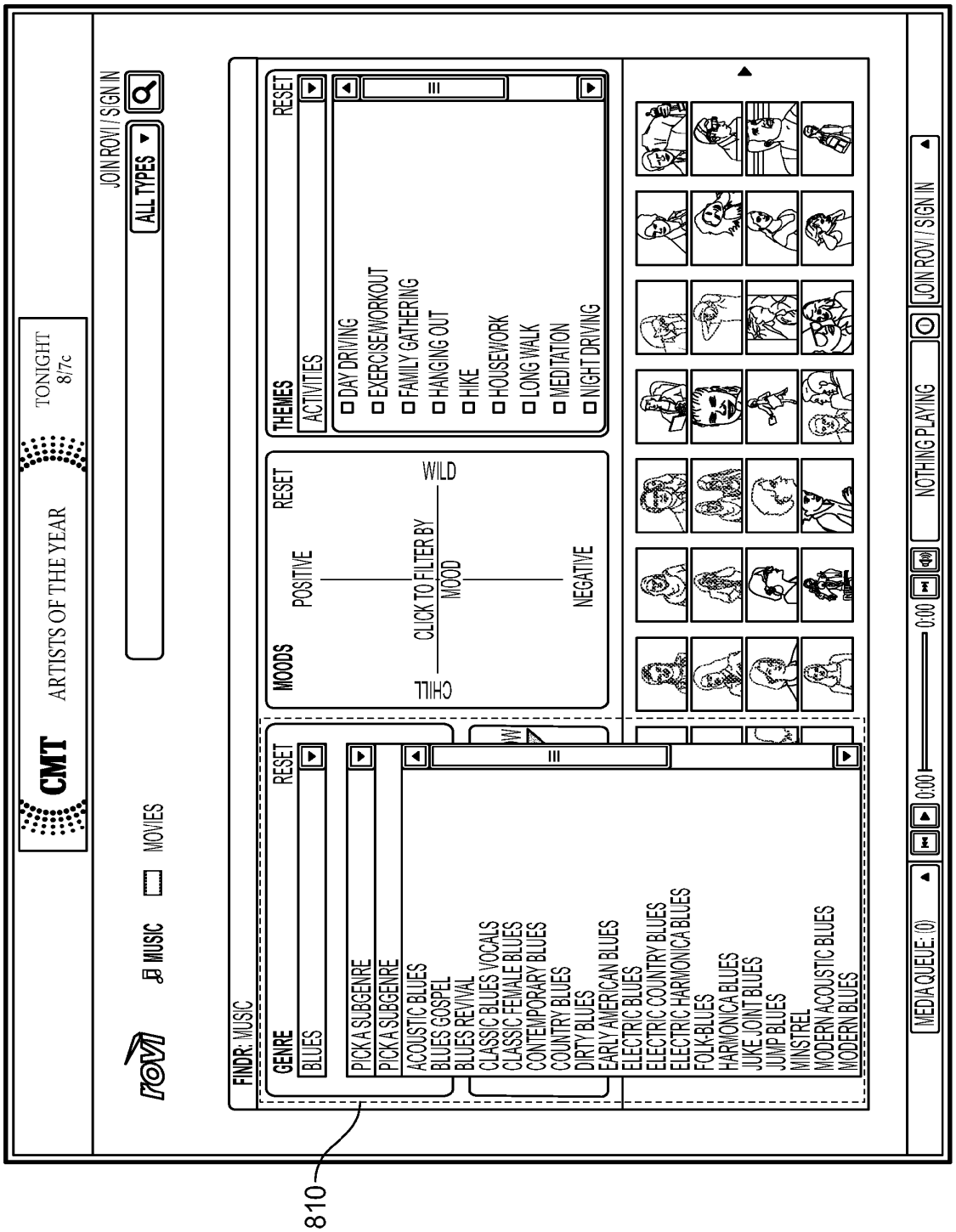

CMT
ARTISTS OF THE YEAR
TONIGHT
8/7c
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
FINDR: MUSIC
GENRE
RESET
BLUES
PICK A SUBGENRE
PICK A SUBGENRE
ACOUSTIC BLUES
BLUES GOSPEL
BLUES REVIVAL
CLASSIC BLUES VOCALS
CLASSIC FEMALE BLUES
CONTEMPORARY BLUES
COUNTRY BLUES
DIRTY BLUES
EARLY AMERICAN BLUES
ELECTRIC BLUES
ELECTRIC COUNTRY BLUES
ELECTRIC HARMONICA BLUES
FOLK-BLUES
HARMONICA BLUES
JUKE JOINT BLUES
JUMP BLUES
MINSTREL
MODERN ACOUSTIC BLUES
MODERN BLUES
MOODS
RESET
POSITIVE
CLICK TO FILTER BY MOOD
WILD
CHILL
NEGATIVE
THEMES
RESET
ACTIVITIES
DAY DRIVING
EXERCISE/WORKOUT
FAMILY GATHERING
HANGING OUT
HIKE
HOUSEWORK
LONG WALK
MEDITATION
NIGHT DRIVING
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN
810

FIG. 11

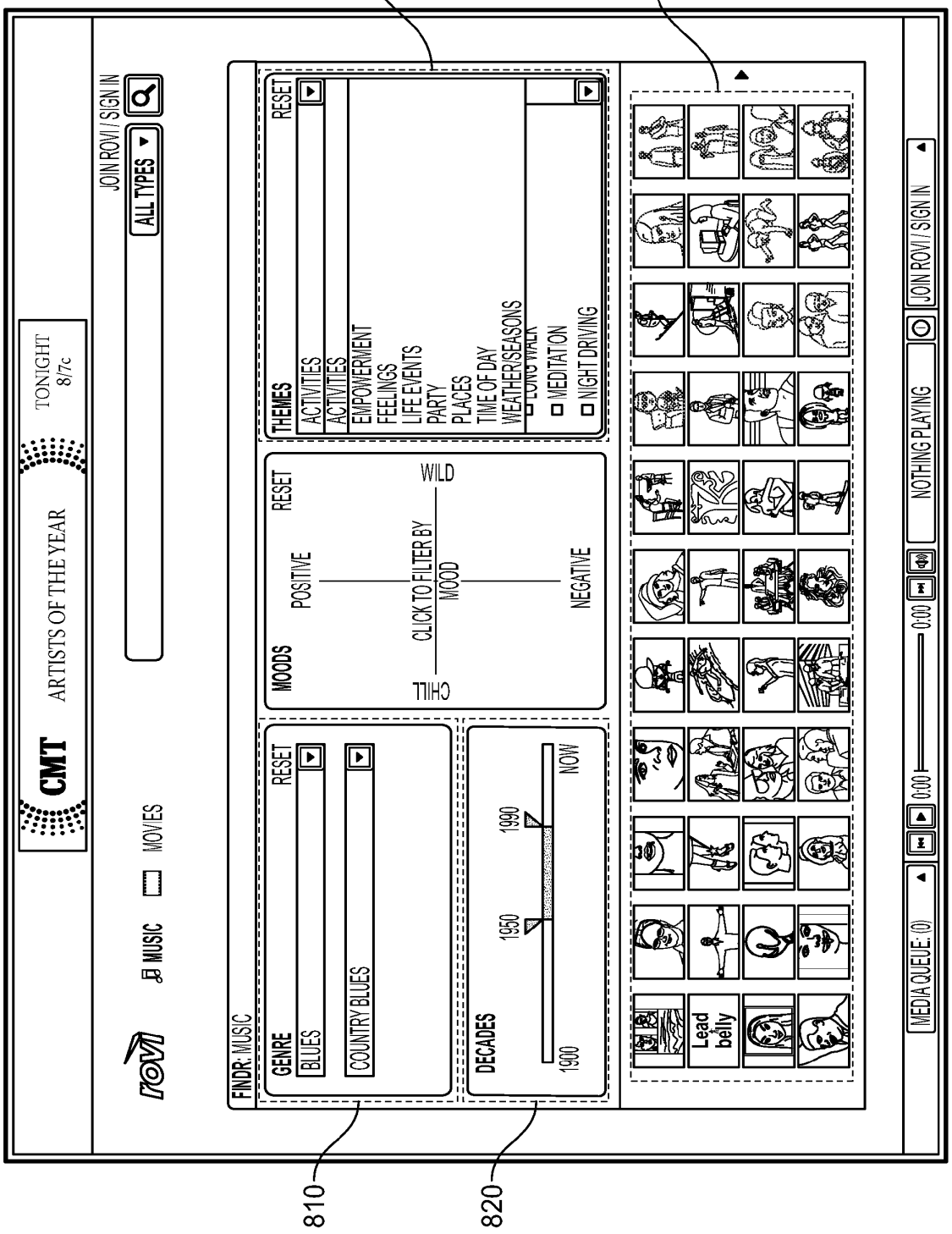

830
850
CMT
ARTISTS OF THE YEAR
TONIGHT
8/7c
JOIN ROVI / SIGN IN
ALL TYPES
rovi
MUSIC
MOVIES
FINDR: MUSIC
GENRE
RESET
BLUES
COUNTRY BLUES
MOODS
RESET
POSITIVE
NEGATIVE
CHILL
WILD
CLICK TO FILTER BY MOOD
DECADES
1950
1990
1900
NOW
THEMES
RESET
ACTIVITIES
ACTIVITIES
EMPOWERMENT
FEELINGS
LIFE EVENTS
PARTY
PLACES
TIME OF DAY
WEATHER/SEASONS
MEDITATION
NIGHT DRIVING
Lead belly
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN
810
820

FIG. 12

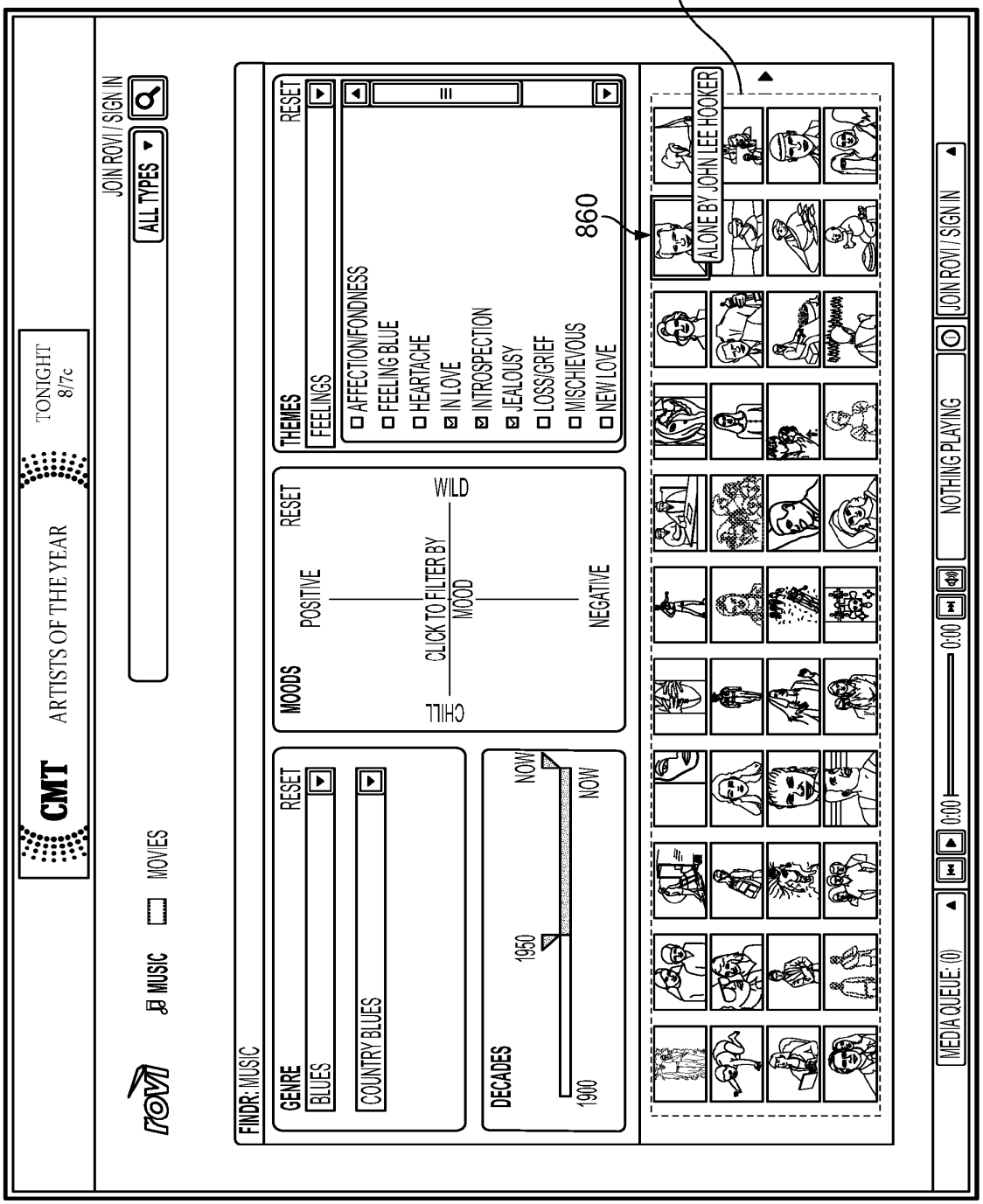

CMT
ARTISTS OF THE YEAR
TONIGHT
8/7c
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
FINDR: MUSIC
GENRE
RESET
BLUES
COUNTRY BLUES
MOODS
RESET
POSITIVE
NEGATIVE
CHILL
WILD
CLICK TO FILTER BY MOOD
DECADES
1900
1950
NOW
NOW
THEMES
RESET
FEELINGS
AFFECTION/FONDNESS
FEELING BLUE
HEARTACHE
IN LOVE
INTROSPECTION
JEALOUSY
LOSS/GRIEF
MISCHIEVOUS
NEW LOVE
860
850
ALONE BY JOHN LEE HOOKER
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 13

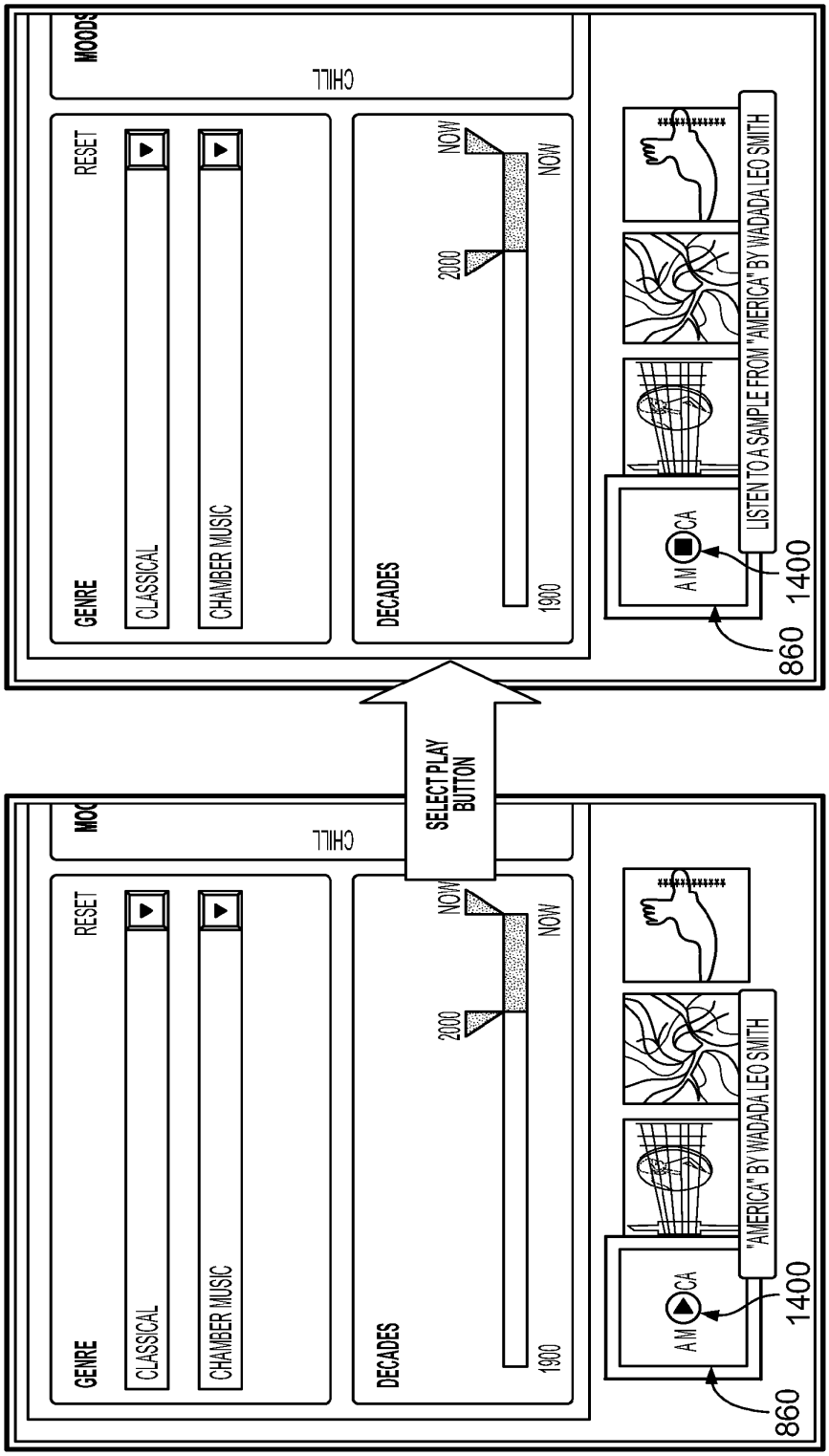

MOODS
CHILL
RESET
GENRE
CLASSICAL
CHAMBER MUSIC
DECADES
NOW
2000
1900
LISTEN TO A SAMPLE FROM "AMERICA" BY WADADA LEO SMITH
860
1400
SELECT PLAY BUTTON

FIG. 14

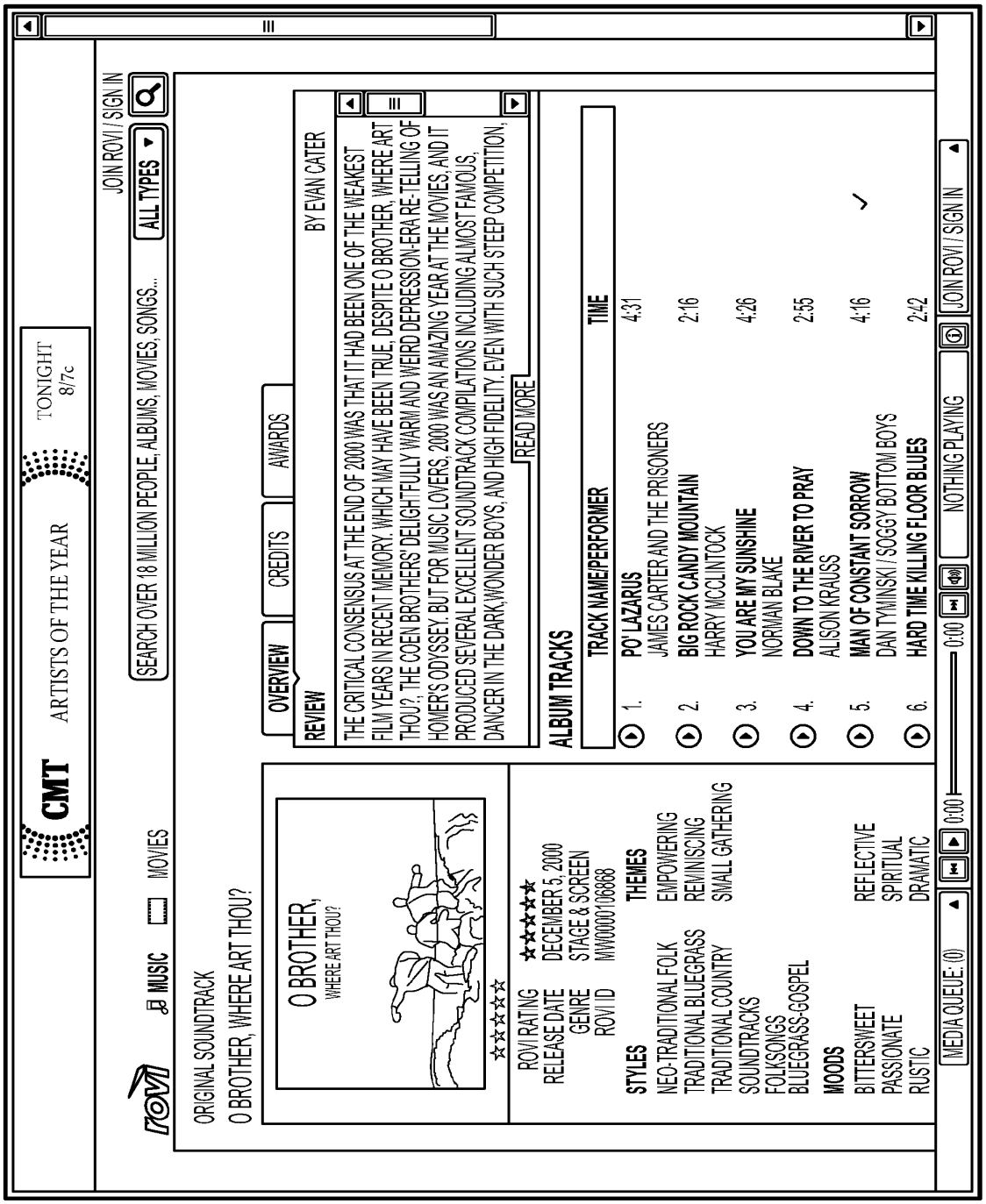

1500
CMT
ARTISTS OF THE YEAR
TONIGHT
8/7c
JOIN ROVI / SIGN IN
MUSIC
MOVIES
SEARCH OVER 18 MILLION PEOPLE, ALBUMS, MOVIES, SONGS...
ALL TYPES
ORIGINAL SOUNDTRACK
O BROTHER, WHERE ART THOU?
O BROTHER,
WHERE ART THOU?
ROVI RATING
RELEASE DATE
GENRE
ROVI ID
DECEMBER 5, 2000
STAGE & SCREEN
MW0000106868
STYLES
NEO-TRADITIONAL FOLK
TRADITIONAL BLUEGRASS
TRADITIONAL COUNTRY
SOUNDTRACKS
FOLKSONGS
BLUEGRASS-GOSPEL
THEMES
EMPOWERING
REMINISCING
SMALL GATHERING
MOODS
BITTERSWEET
PASSIONATE
RUSTIC
REFLECTIVE
SPIRITUAL
DRAMATIC
OVERVIEW
CREDITS
AWARDS
REVIEW
BY EVAN CATER
THE CRITICAL CONSENSUS AT THE END OF 2000 WAS THAT IT HAD BEEN ONE OF THE WEAKEST FILM YEARS IN RECENT MEMORY. WHICH MAY HAVE BEEN TRUE. DESPITE O BROTHER, WHERE ART THOU?, THE COEN BROTHERS' DELIGHTFULLY WARM AND WEIRD DEPRESSION-ERA RE-TELLING OF HOMER'S ODYSSEY. BUT FOR MUSIC LOVERS, 2000 WAS AN AMAZING YEAR AT THE MOVIES, AND IT PRODUCED SEVERAL EXCELLENT SOUNDTRACK COMPILATIONS INCLUDING ALMOST FAMOUS, DANCER IN THE DARK, WONDER BOYS, AND HIGH FIDELITY. EVEN WITH SUCH STEEP COMPETITION,
READ MORE
ALBUM TRACKS
TRACK NAME/PERFORMER
TIME
1. PO' LAZARUS
JAMES CARTER AND THE PRISONERS
4:31
2. BIG ROCK CANDY MOUNTAIN
HARRY MCCLINTOCK
2:16
3. YOU ARE MY SUNSHINE
NORMAN BLAKE
4:26
4. DOWN TO THE RIVER TO PRAY
ALISON KRAUSS
2:55
5. MAN OF CONSTANT SORROW
DAN TYMINSKI / SOGGY BOTTOM BOYS
4:16
6. HARD TIME KILLING FLOOR BLUES
2:42
MEDIA QUEUE: (0)
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 15

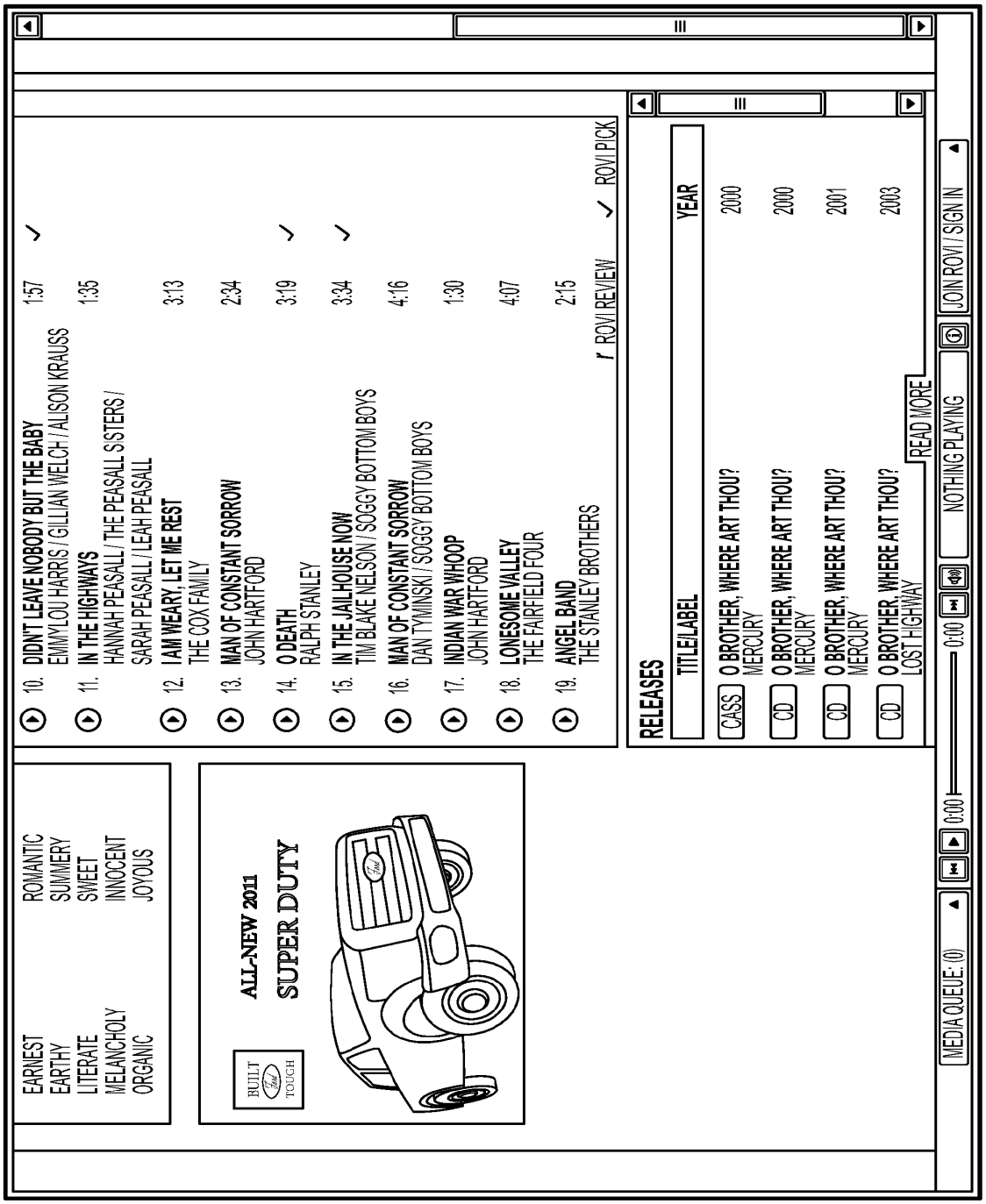

1500
EARNEST
EARTHY
LITERATE
MELANCHOLY
ORGANIC
ROMANTIC
SUMMERY
SWEET
INNOCENT
JOYOUS
BUILT Ford TOUGH
ALL-NEW 2011
SUPER DUTY
10. DIDN'T LEAVE NOBODY BUT THE BABY 1:57 ✓
EMMYLOU HARRIS / GILLIAN WELCH / ALISON KRAUSS
11. IN THE HIGHWAYS 1:35
HANNAH PEASALL / THE PEASALL SISTERS /
SARAH PEASALL / LEAH PEASALL
12. I AM WEARY, LET ME REST 3:13
THE COX FAMILY
13. MAN OF CONSTANT SORROW 2:34
JOHN HARTFORD
14. O DEATH 3:19 ✓
RALPH STANLEY
15. IN THE JAILHOUSE NOW 3:34 ✓
TIM BLAKE NELSON / SOGGY BOTTOM BOYS
16. MAN OF CONSTANT SORROW 4:16
DAN TYMINSKI / SOGGY BOTTOM BOYS
17. INDIAN WAR WHOOP 1:30
JOHN HARTFORD
18. LONESOME VALLEY 4:07
THE FAIRFIELD FOUR
19. ANGEL BAND 2:15
THE STANLEY BROTHERS
ROVI REVIEW ✓ ROVI PICK
RELEASES
TITLE/LABEL YEAR
CASS O BROTHER, WHERE ART THOU? 2000
MERCURY
CD O BROTHER, WHERE ART THOU? 2000
MERCURY
CD O BROTHER, WHERE ART THOU? 2001
MERCURY
CD O BROTHER, WHERE ART THOU? 2003
LOST HIGHWAY
READ MORE
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 16

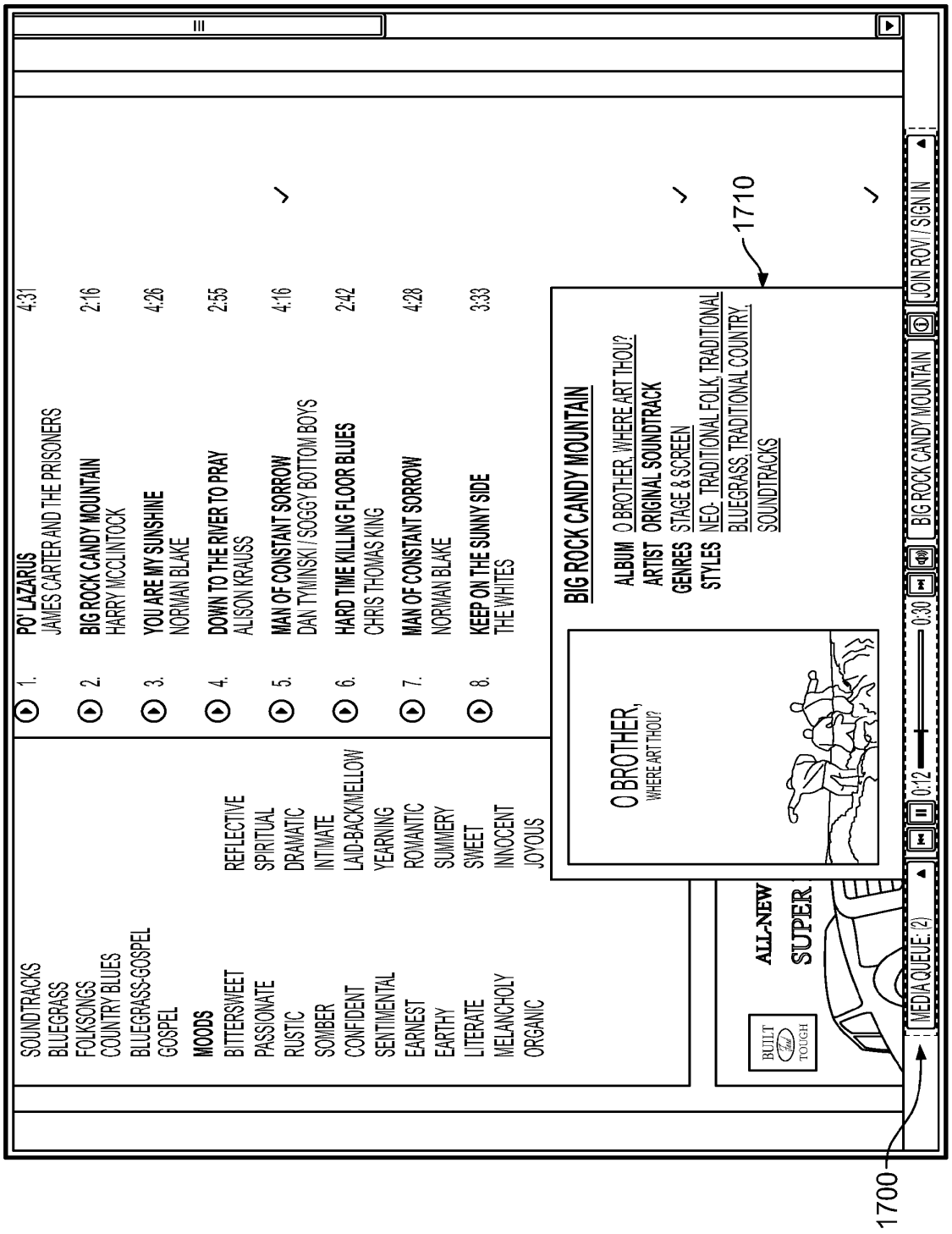

SOUNDTRACKS
BLUEGRASS
FOLKSONGS
COUNTRY BLUES
BLUEGRASS-GOSPEL
GOSPEL
MOODS
BITTERSWEET
PASSIONATE
RUSTIC
SOMBER
CONFIDENT
SENTIMENTAL
EARNEST
EARTHY
LITERATE
MELANCHOLY
ORGANIC
REFLECTIVE
SPIRITUAL
DRAMATIC
INTIMATE
LAID-BACK/MELLOW
YEARNING
ROMANTIC
SUMMERY
SWEET
INNOCENT
JOYOUS
1. PO' LAZARUS 4:31
JAMES CARTER AND THE PRISONERS
2. BIG ROCK CANDY MOUNTAIN 2:16
HARRY MCCLINTOCK
3. YOU ARE MY SUNSHINE 4:26
NORMAN BLAKE
4. DOWN TO THE RIVER TO PRAY 2:55
ALISON KRAUSS
5. MAN OF CONSTANT SORROW 4:16
DAN TYMINSKI / SOGGY BOTTOM BOYS
6. HARD TIME KILLING FLOOR BLUES 2:42
CHRIS THOMAS KING
7. MAN OF CONSTANT SORROW 4:28
NORMAN BLAKE
8. KEEP ON THE SUNNY SIDE 3:33
THE WHITES
O BROTHER,
WHERE ART THOU?
BIG ROCK CANDY MOUNTAIN
ALBUM O BROTHER, WHERE ART THOU?
ARTIST ORIGINAL SOUNDTRACK
GENRES STAGE & SCREEN
STYLES NEO- TRADITIONAL FOLK, TRADITIONAL BLUEGRASS, TRADITIONAL COUNTRY, SOUNDTRACKS
1710
ALL-NEW
SUPER
BUILT Ford TOUGH
MEDIA QUEUE: (2)
0:12
0:30
BIG ROCK CANDY MOUNTAIN
JOIN ROV / SIGN IN
1700

FIG. 17

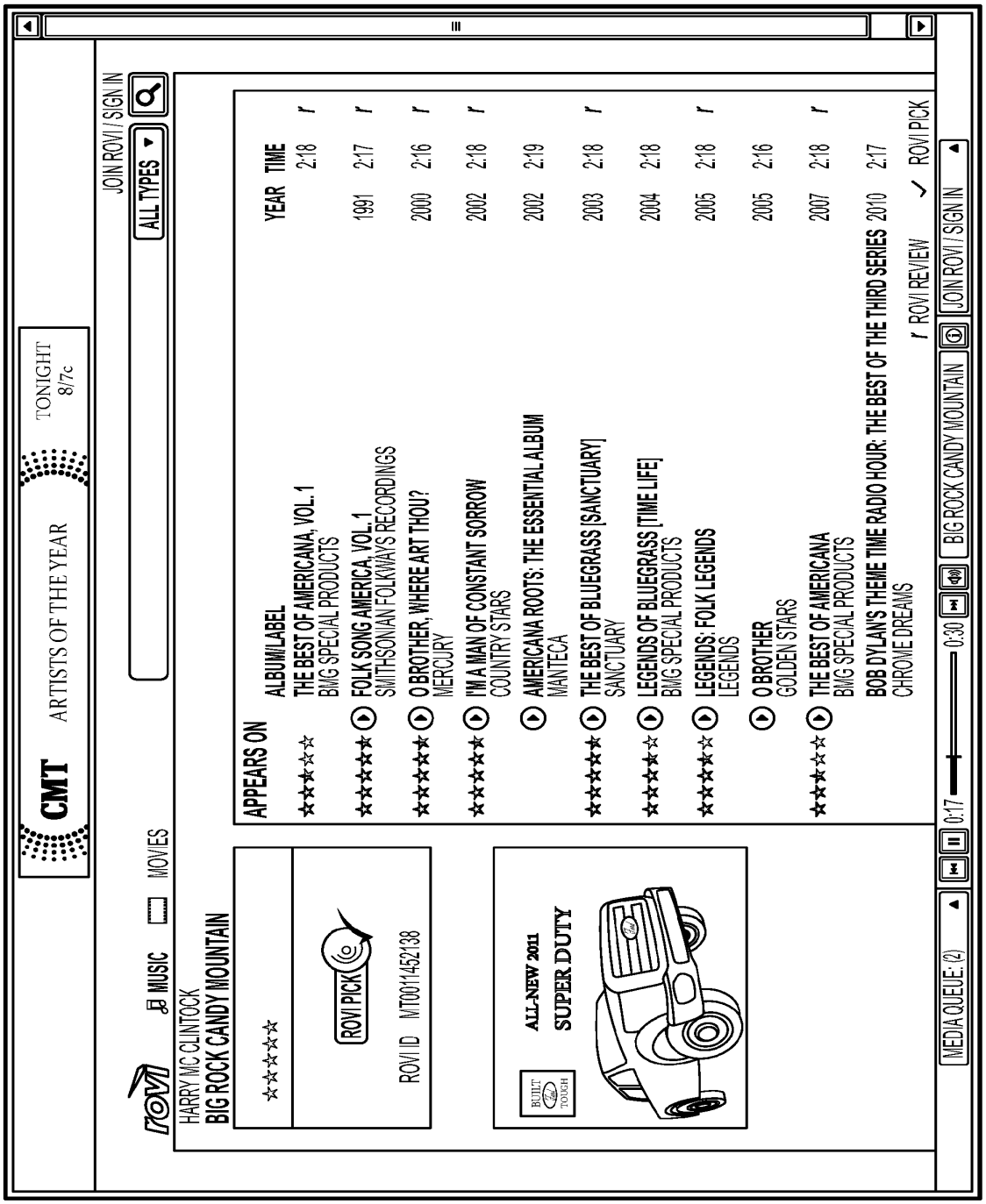

1800
CMT
ARTISTS OF THE YEAR
TONIGHT
8/7c
JOIN ROVI / SIGN IN
MUSIC
MOVIES
ALL TYPES
HARRY MC CLINTOCK
BIG ROCK CANDY MOUNTAIN
APPEARS ON
ALBUM/LABEL
YEAR
TIME
THE BEST OF AMERICANA, VOL. 1
BMG SPECIAL PRODUCTS
2:18
FOLK SONG AMERICA, VOL. 1
SMITHSONIAN FOLKWAYS RECORDINGS
1991
2:17
O BROTHER, WHERE ART THOU?
MERCURY
2000
2:16
I'M A MAN OF CONSTANT SORROW
COUNTRY STARS
2002
2:18
AMERICANA ROOTS: THE ESSENTIAL ALBUM
MANTECA
2002
2:19
THE BEST OF BLUEGRASS [SANCTUARY]
SANCTUARY
2003
2:18
LEGENDS OF BLUEGRASS [TIME LIFE]
BMG SPECIAL PRODUCTS
2004
2:18
LEGENDS: FOLK LEGENDS
LEGENDS
2005
2:18
O BROTHER
GOLDEN STARS
2005
2:16
THE BEST OF AMERICANA
BMG SPECIAL PRODUCTS
2007
2:18
BOB DYLAN'S THEME TIME RADIO HOUR: THE BEST OF THE THIRD SERIES
CHROME DREAMS
2010
2:17
ROVI REVIEW
ROVI PICK
ROVI PICK
ROVI ID MT0011452138
ALL-NEW 2011
SUPER DUTY
BUILT FORD TOUGH
MEDIA QUEUE: (2)
0:17
0:30
BIG ROCK CANDY MOUNTAIN
JOIN ROVI / SIGN IN

FIG. 18

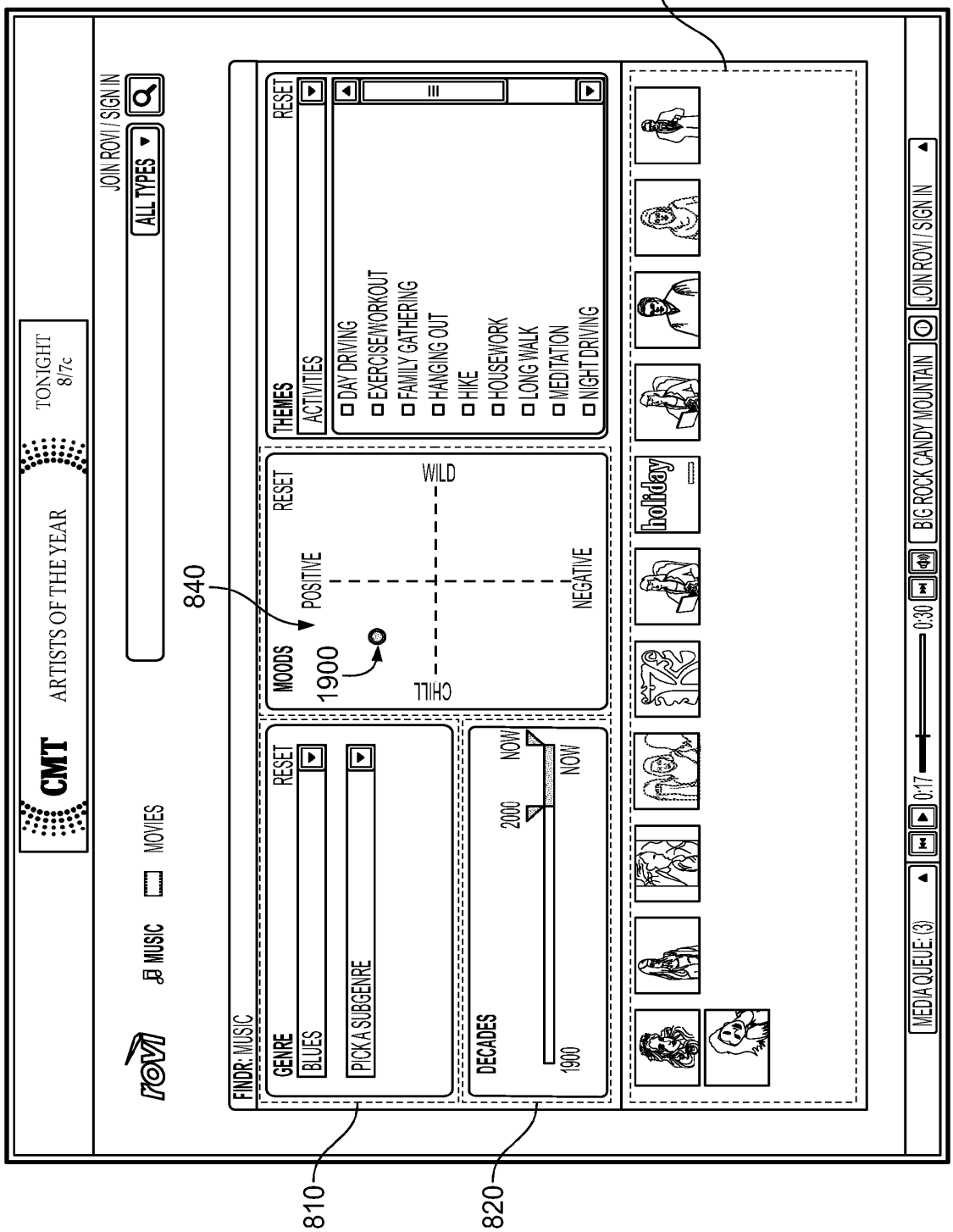

800
CMT
ARTISTS OF THE YEAR
TONIGHT 8/7c
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
840
FINDR: MUSIC
GENRE
RESET
BLUES
PICK A SUBGENRE
MOODS
RESET
POSITIVE
NEGATIVE
WILD
CHILL
1900
THEMES
RESET
ACTIVITIES
DAY DRIVING
EXERCISE/WORKOUT
FAMILY GATHERING
HANGING OUT
HIKE
HOUSEWORK
LONG WALK
MEDITATION
NIGHT DRIVING
DECADES
NOW
2000
1900
850
holiday
MEDIA QUEUE: (3)
0:17
0:30
BIG ROCK CANDY MOUNTAIN
JOIN ROVI / SIGN IN
810
820

FIG. 19

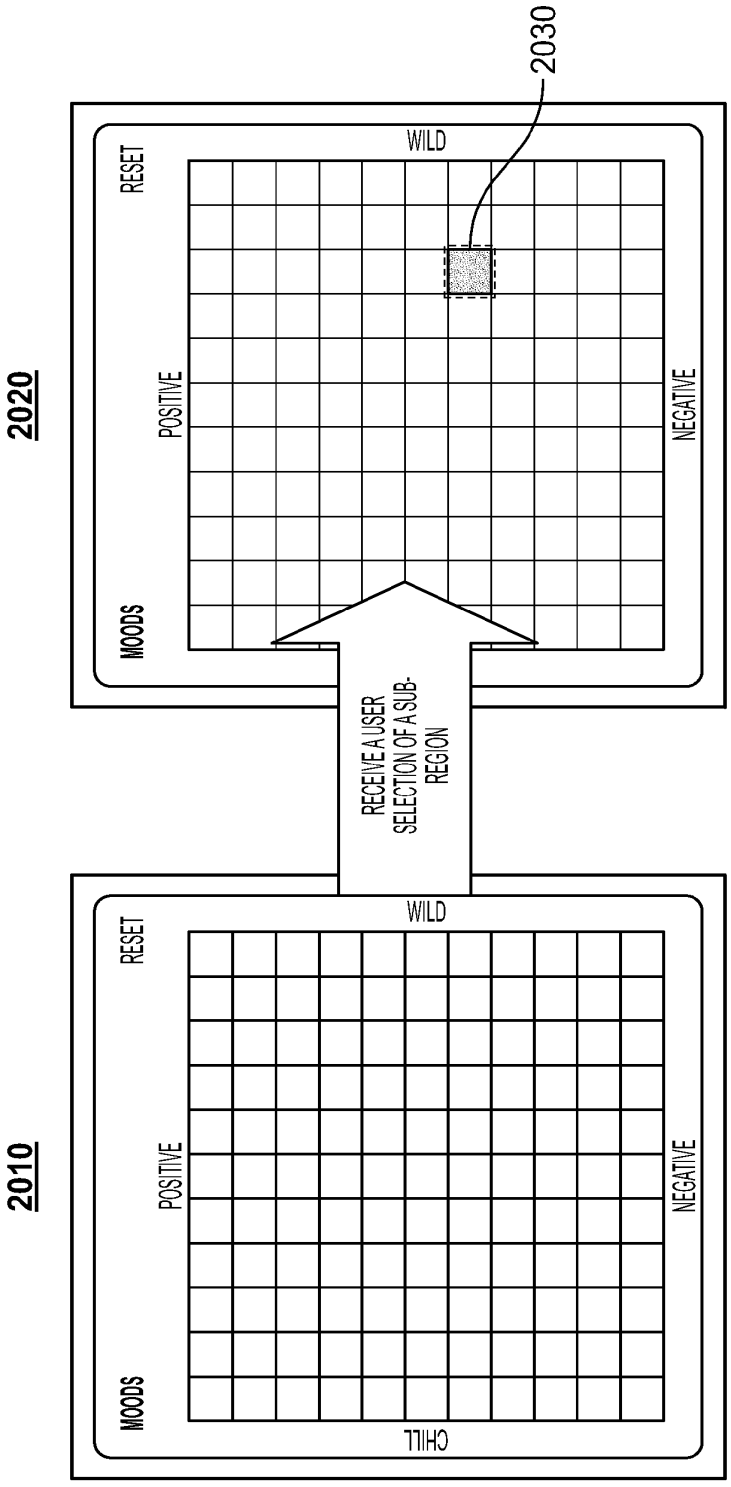

2030
2020
WILD
RESET
POSITIVE
NEGATIVE
MOODS
RECEIVE A USER SELECTION OF A SUB-REGION
2010
WILD
RESET
POSITIVE
NEGATIVE
MOODS
CHILL

FIG. 20

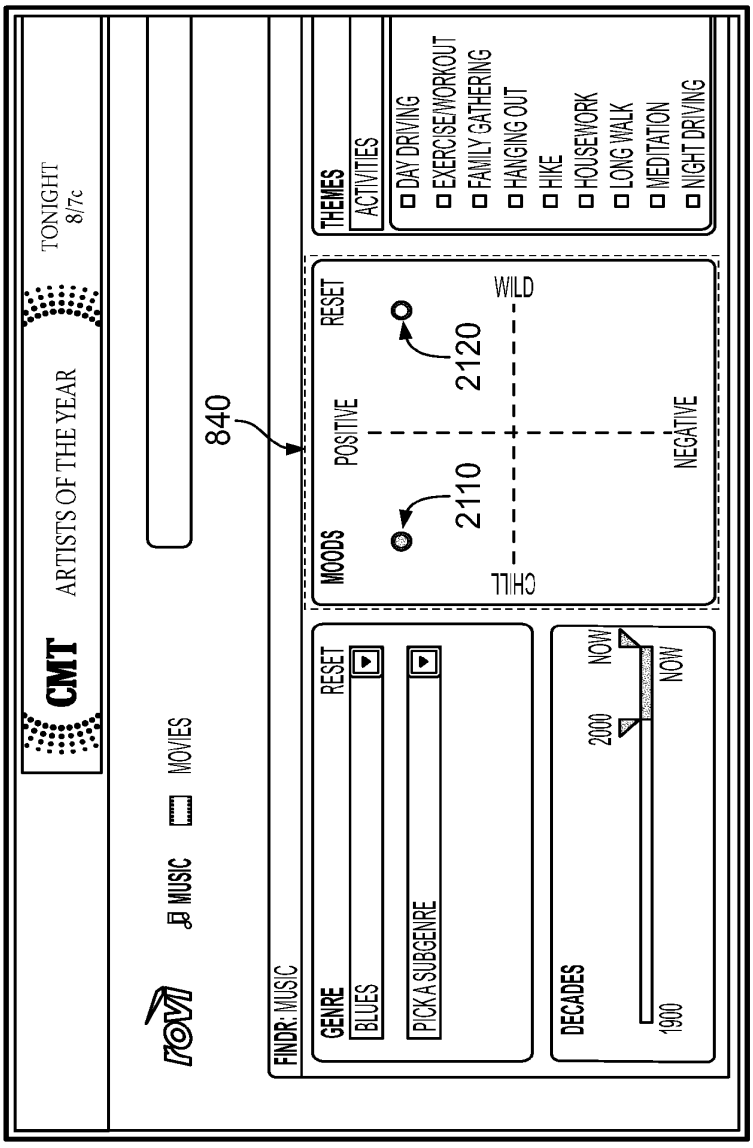

CMT
ARTISTS OF THE YEAR
TONIGHT
8/7c
MUSIC
MOVIES
840
FINDR: MUSIC
GENRE
RESET
BLUES
PICK A SUBGENRE
MOODS
POSITIVE
RESET
2120
WILD
2110
CHILL
NEGATIVE
THEMES
ACTIVITIES
DAY DRIVING
EXERCISE/WORKOUT
FAMILY GATHERING
HANGING OUT
HIKE
HOUSEWORK
LONG WALK
MEDITATION
NIGHT DRIVING
DECADES
2000
NOW
NOW
1900

FIG. 21

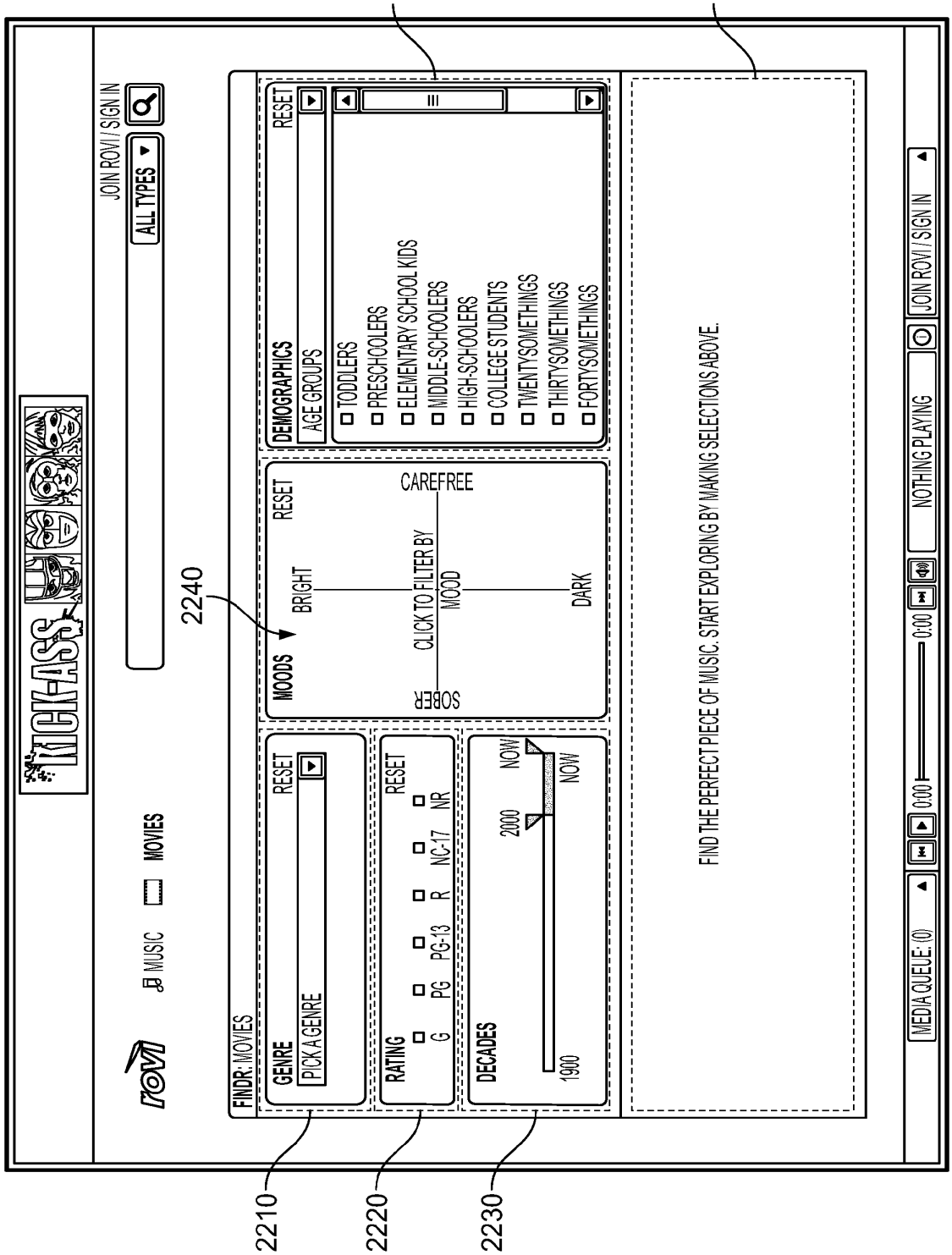

2200
2210
2220
2230
2240
2250
2260
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
FINDR: MOVIES
GENRE
RESET
PICK A GENRE
RATING
RESET
G
PG
PG-13
R
NC-17
NR
DECADES
2000
NOW
1900
NOW
MOODS
RESET
BRIGHT
CAREFREE
CLICK TO FILTER BY
MOOD
SOBER
DARK
DEMOGRAPHICS
RESET
AGE GROUPS
TODDLERS
PRESCHOOLERS
ELEMENTARY SCHOOL KIDS
MIDDLE-SCHOOLERS
HIGH-SCHOOLERS
COLLEGE STUDENTS
TWENTYSOMETHINGS
THIRTYSOMETHINGS
FORTYSOMETHINGS
FIND THE PERFECT PIECE OF MUSIC. START EXPLORING BY MAKING SELECTIONS ABOVE.
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 22

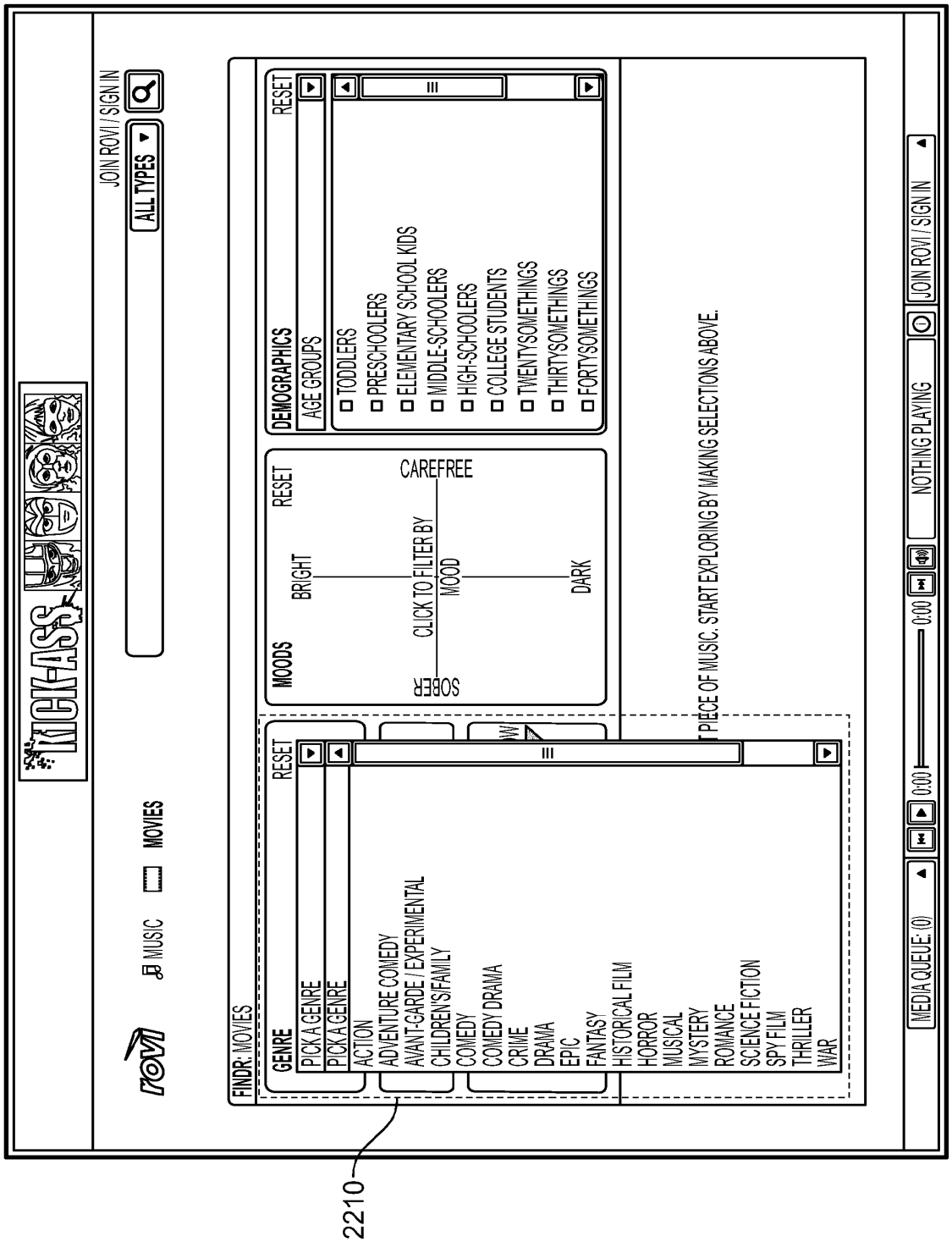

2200
2210
MOVIES
MUSIC
JOIN ROVI / SIGN IN
ALL TYPES
FINDR: MOVIES
GENRE
RESET
PICK A GENRE
PICK A GENRE
ACTION
ADVENTURE COMEDY
AVANT-GARDE / EXPERIMENTAL
CHILDREN'S/FAMILY
COMEDY
COMEDY DRAMA
CRIME
DRAMA
EPIC
FANTASY
HISTORICAL FILM
HORROR
MUSICAL
MYSTERY
ROMANCE
SCIENCE FICTION
SPY FILM
THRILLER
WAR
MOODS
RESET
BRIGHT
DARK
CAREFREE
SOBER
CLICK TO FILTER BY MOOD
DEMOGRAPHICS
RESET
AGE GROUPS
TODDLERS
PRESCHOOLERS
ELEMENTARY SCHOOL KIDS
MIDDLE-SCHOOLERS
HIGH-SCHOOLERS
COLLEGE STUDENTS
TWENTYSOMETHINGS
THIRTYSOMETHINGS
FORTYSOMETHINGS
PIECE OF MUSIC. START EXPLORING BY MAKING SELECTIONS ABOVE.
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 23

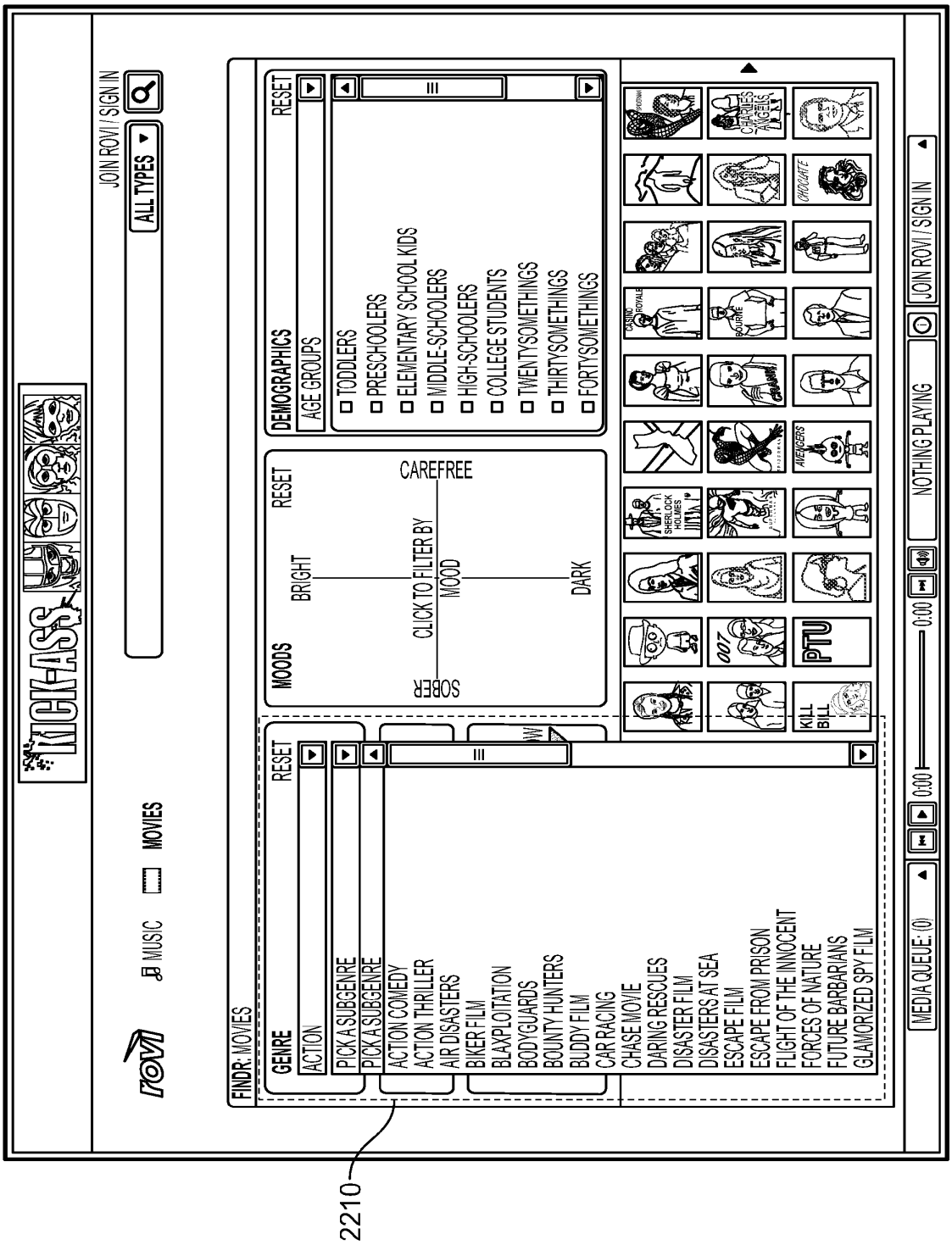

2200
2210
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
FINDR: MOVIES
GENRE
RESET
ACTION
PICK A SUBGENRE
PICK A SUBGENRE
ACTION COMEDY
ACTION THRILLER
AIR DISASTERS
BIKER FILM
BLAXPLOITATION
BODYGUARDS
BOUNTY HUNTERS
BUDDY FILM
CAR RACING
CHASE MOVIE
DARING RESCUES
DISASTER FILM
DISASTERS AT SEA
ESCAPE FILM
ESCAPE FROM PRISON
FLIGHT OF THE INNOCENT
FORCES OF NATURE
FUTURE BARBARIANS
GLAMORIZED SPY FILM
MOODS
RESET
BRIGHT
CAREFREE
CLICK TO FILTER BY
MOOD
SOBER
DARK
DEMOGRAPHICS
RESET
AGE GROUPS
TODDLERS
PRESCHOOLERS
ELEMENTARY SCHOOL KIDS
MIDDLE-SCHOOLERS
HIGH-SCHOOLERS
COLLEGE STUDENTS
TWENTYSOMETHINGS
THIRTYSOMETHINGS
FORTYSOMETHINGS
MEDIA QUEUE: (0)
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 24

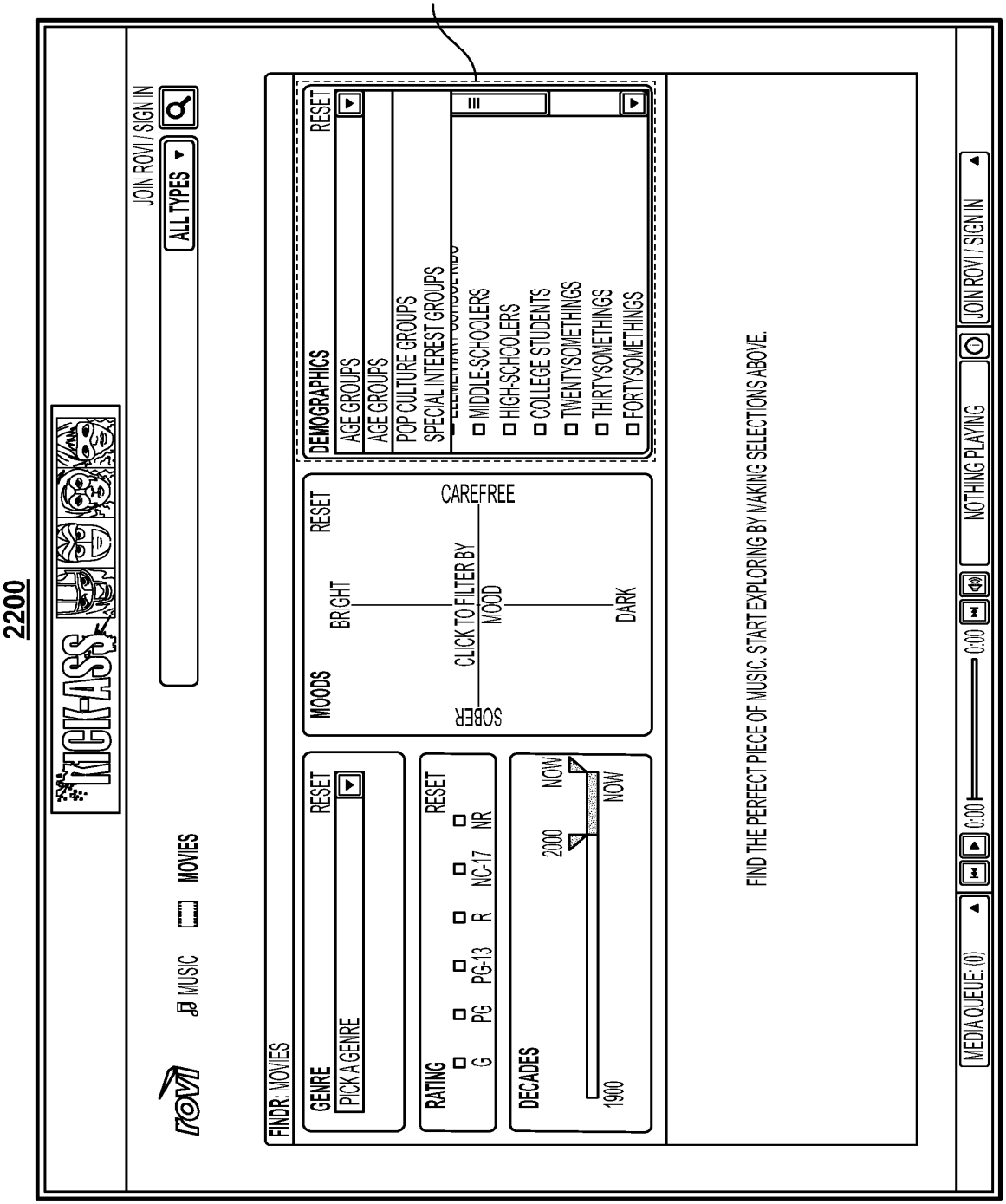

2200
2250
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
FINDR: MOVIES
GENRE
RESET
PICK A GENRE
RATING
RESET
G
PG
PG-13
R
NC-17
NR
DECADES
2000
NOW
1900
MOODS
RESET
BRIGHT
CAREFREE
CLICK TO FILTER BY MOOD
SOBER
DARK
DEMOGRAPHICS
RESET
AGE GROUPS
AGE GROUPS
POP CULTURE GROUPS
SPECIAL INTEREST GROUPS
MIDDLE-SCHOOLERS
HIGH-SCHOOLERS
COLLEGE STUDENTS
TWENTYSOMETHINGS
THIRTYSOMETHINGS
FORTYSOMETHINGS
FIND THE PERFECT PIECE OF MUSIC. START EXPLORING BY MAKING SELECTIONS ABOVE.
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 25

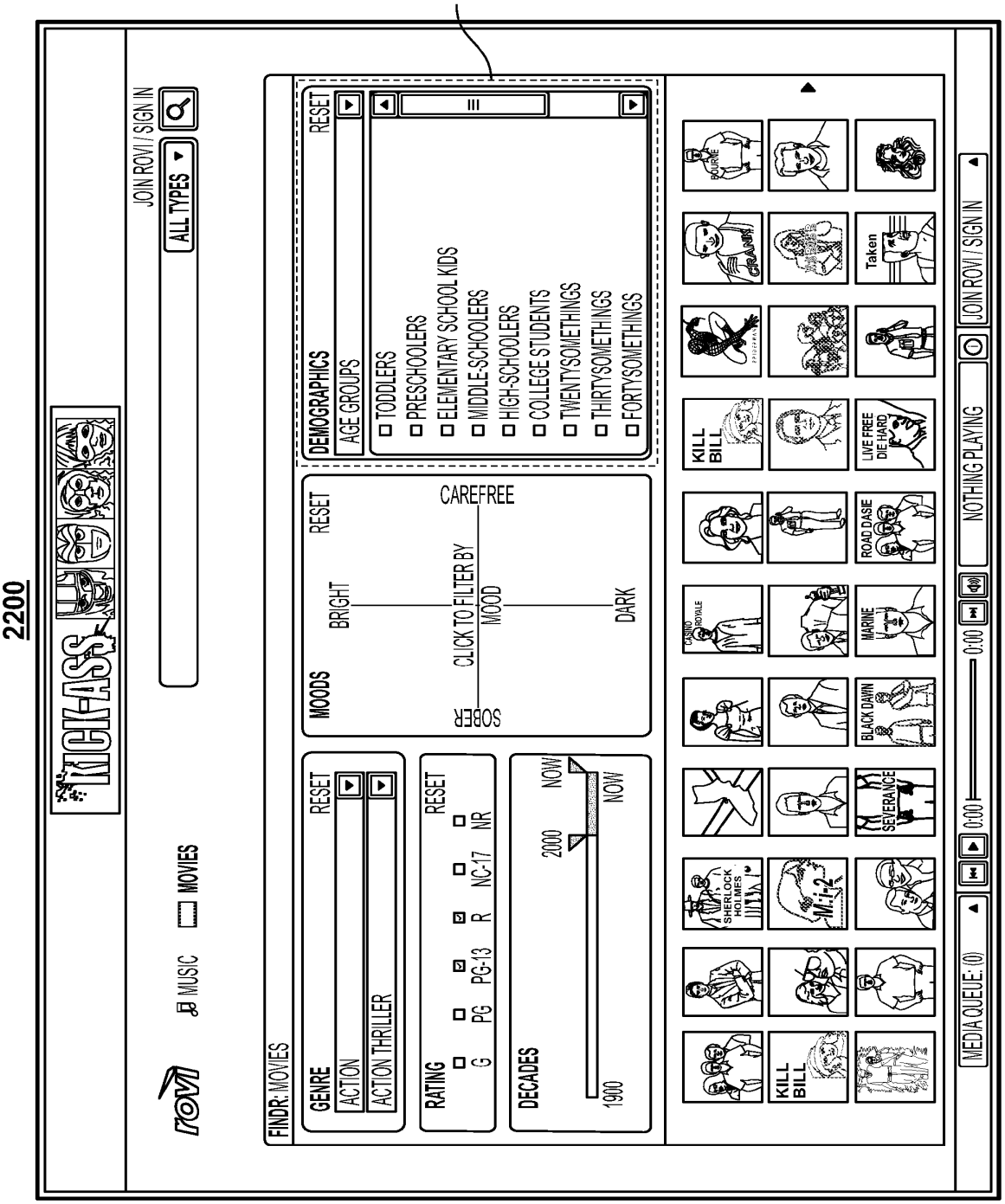

2200
2250
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
FINDR: MOVIES
GENRE
RESET
ACTION
ACTION THRILLER
RATING
RESET
G
PG
PG-13
R
NC-17
NR
DECADES
2000
NOW
1900
MOODS
RESET
BRIGHT
DARK
CAREFREE
SOBER
CLICK TO FILTER BY MOOD
DEMOGRAPHICS
RESET
AGE GROUPS
TODDLERS
PRESCHOOLERS
ELEMENTARY SCHOOL KIDS
MIDDLE-SCHOOLERS
HIGH-SCHOOLERS
COLLEGE STUDENTS
TWENTYSOMETHINGS
THIRTYSOMETHINGS
FORTYSOMETHINGS
KILL BILL
SHERLOCK HOLMES
M:I-2
SEVERANCE
BLACK DAWN
CASINO ROYALE
MARINE
ROAD DASIE
KILL BILL
LIVE FREE DIE HARD
BOURNE
GRAN
Taken
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 26

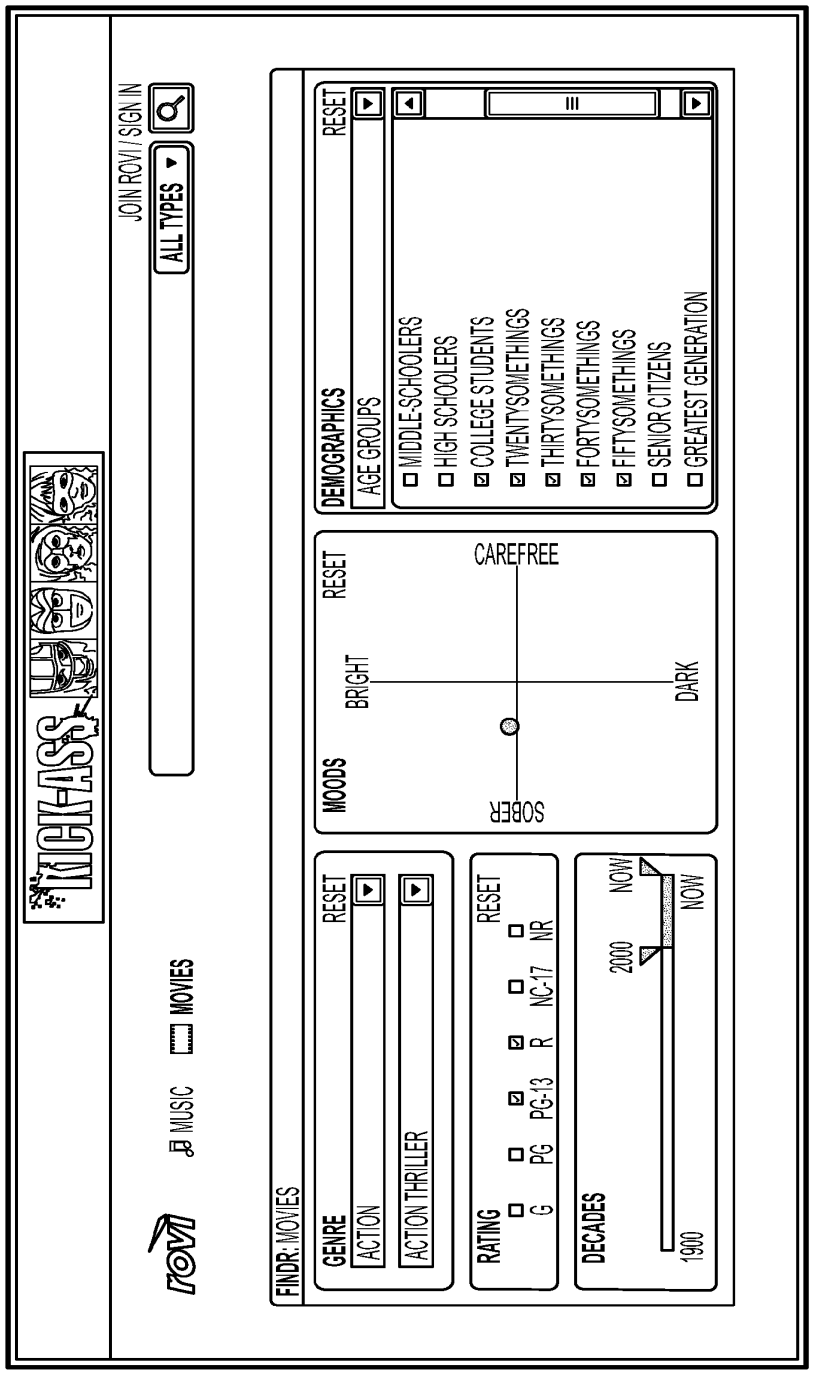

2200
KICKASS
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
FINDR: MOVIES
GENRE
RESET
ACTION
ACTION THRILLER
MOODS
RESET
BRIGHT
DARK
CAREFREE
SOBER
DEMOGRAPHICS
RESET
AGE GROUPS
MIDDLE-SCHOOLERS
HIGH SCHOOLERS
COLLEGE STUDENTS
TWENTYSOMETHINGS
THIRTYSOMETHINGS
FORTYSOMETHINGS
FIFTYSOMETHINGS
SENIOR CITIZENS
GREATEST GENERATION
RATING
RESET
G
PG
PG-13
R
NC-17
NR
DECADES
1900
2000
NOW
NOW

FIG. 27

2800
MOVIES
MUSIC
JOIN ROVI / SIGN IN
ALL TYPES
THE PIANIST
OVERVIEW
INFO
AWARDS
WINNER
3 ACADEMY AWARDS
BEST ACTOR
ADRIEN BRODY
BEST DIRECTOR
ROMAN POLANSKI
BEST SCREENPLAY
RONALD HARWOOD
THE PIANIST
"A RIVETING ADVENTURE STORY!"
FULL SCREEN
REVIEW
BY ADAM BREGMAN
THIS POWERFUL FILM BY ROMAN POLANSKI TACKLES A SUBJECT MATTER AND TIME THAT HAS BEEN COVERED EXHAUSTIVELY IN FEATURE FILMS, TV MOVIES AND DOCUMENTARIES, BUT THE PIANIST IS ANOTHER EXCEPTIONAL STORY THAT NEEDED TO BE TOLD. THERE HAVE BEEN PLENTY OF DRAMAS REGARDING THE WARSAW GHETTO AND THE JEWISH RESISTANCE, BUT LESS ABOUT THE NEARLY COMPLETE DESTRUCTION OF WARSAW BY THE NAZIS NEAR THE END OF THE WAR. JUST AS THE RUSSIANS WERE CLOSING IN, THE PIANIST IS MOSTLY FROM THE PERSPECTIVE OF WLADYSLAW SZPILMAN (ADRIEN BRODY), WHO ESCAPES THE CONCENTRATION CAMPS BY LUCK AND IS BRIEFLY INVOLVED IN SMUGGLING GUNS INTO THE WARSAW GHETTO. HE ESCAPES THE GHETTO WITH THE HELP OF THE POLISH RESISTANCE AND SPENDS THE REST OF THE FILM STRUGGLING TO SURVIVE. WHILE WATCHING THE UNFOLDING EVENTS IN WARSAW AS THE CITY IS TORN TO PIECES BY THE NAZIS, IT IS A HARROWING AND MOVING STORY AND SZPILMAN IS A COMPLETELY SYMPATHETIC CHARACTER WHO DOESN'T SEEM AT FIRST CUT OUT TO SURVIVE UNDER SUCH CONDITIONS. THERE ARE BOTH GOOD AND BAD JEWS, POLES AND NAZIS IN THE STORY, THOUGH MOST OF THE NAZI CHARACTERS WITH THE EXCEPTION OF CAPTAIN HOSENFELD (THOMAS KRETSCHMANN) ARE MONSTROUS. ASIDE FROM THE RELENTLESS HORRORS THAT SZPILMAN WITNESSES, THERE ARE MOMENTS OF GREAT BEAUTY IN THE FILM ESPECIALLY IN THE SCENES WHERE HE PLAYS PIANO. THE CINEMATOGRAPHY BY PAWEL EDELMAN IS FANTASTIC. BEYOND BEING A GREAT FILM, THE PIANIST IS A TESTAMENT TO THE INCREDIBLE STRUGGLE OF THE POLISH PEOPLE DURING WORLD WAR II.
OTHER RELATED WORKS
RELATIONSHIP
TITLE/DIRECTOR
YEAR
RATING
IS RELATED TO
THE ASSISI UNDERGROUND
ALEXANDER RAMATI
1984
IS RELATED TO
EUROPA, EUROPA
AGNIESZKA HOLLAND
1991
IS RELATED TO
WARSAW GHETTO
1969
IS RELATED TO
DALEKÁ CESTA
1949
ROVI RATING
MPAA RATING R
FLAGS VIOLENCE
ADULT SITUATIONS
NOT FOR CHILDREN
ADULT LANGUAGE
WATCH WITH YOUR TEEN
GENRES DRAMA
SUB-GENRES WAR DRAMA
RELEASED 2002
LENGTH 148 MIN.

FIG. 28

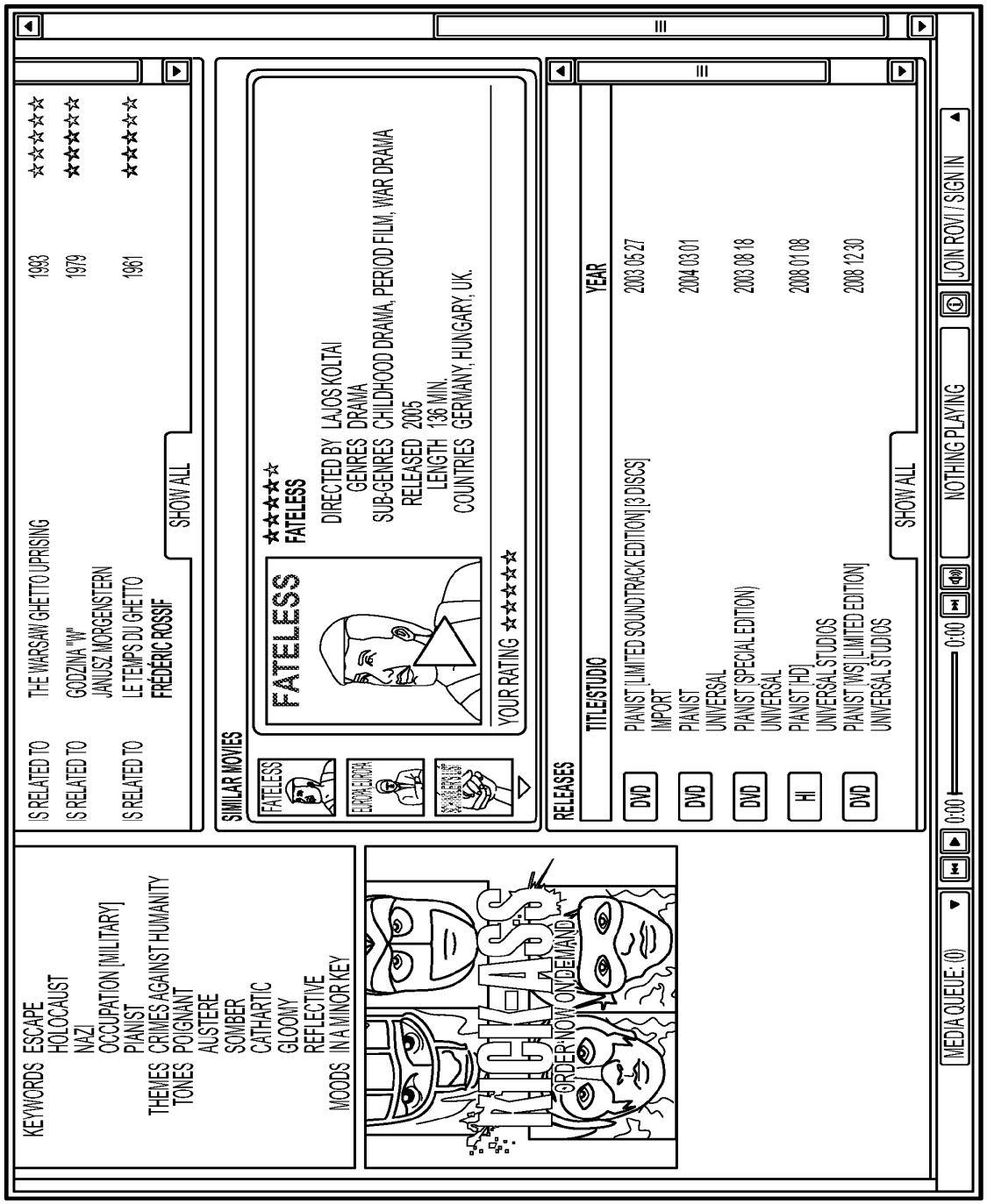

2800
KEYWORDS ESCAPE
HOLOCAUST
NAZI
OCCUPATION [MILITARY]
PIANIST
THEMES CRIMES AGAINST HUMANITY
TONES POIGNANT
AUSTERE
SOMBER
CATHARTIC
GLOOMY
REFLECTIVE
MOODS IN A MINOR KEY
IS RELATED TO THE WARSAW GHETTO UPRISING 1993 ☆☆☆☆☆
IS RELATED TO GODZINA "W" 1979 ★★★★★
JANUSZ MORGENSTERN
IS RELATED TO LE TEMPS DU GHETTO 1961 ★★★★☆
FRÉDÉRIC ROSSIF
SHOW ALL
SIMILAR MOVIES
FATELESS
EUROPA EUROPA
SCHINDLER'S LIST
★★★★☆
FATELESS
DIRECTED BY LAJOS KOLTAI
GENRES DRAMA
SUB-GENRES CHILDHOOD DRAMA, PERIOD FILM, WAR DRAMA
RELEASED 2005
LENGTH 136 MIN.
COUNTRIES GERMANY, HUNGARY, U.K.
YOUR RATING ☆☆☆☆☆
RELEASES
TITLE/STUDIO
YEAR
DVD PIANIST [LIMITED SOUNDTRACK EDITION] [3 DISCS]
IMPORT 2003 05 27
DVD PIANIST
UNIVERSAL 2004 03 01
DVD PIANIST [SPECIAL EDITION]
UNIVERSAL 2003 08 18
HI PIANIST [HD]
UNIVERSAL STUDIOS 2008 01 08
DVD PIANIST [WS] [LIMITED EDITION]
UNIVERSAL STUDIOS 2008 12 30
SHOW ALL
ORDER NOW ON DEMAND
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 29

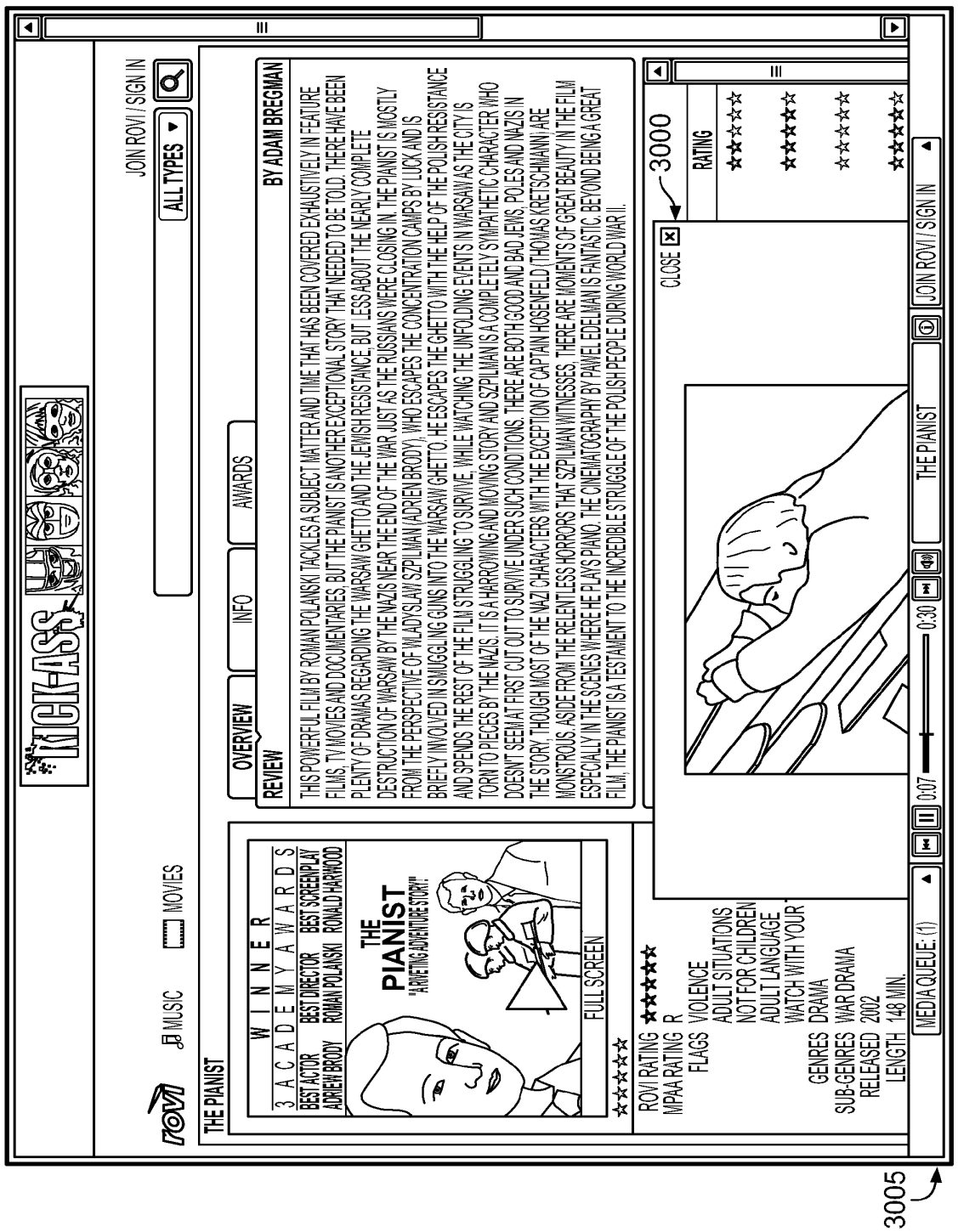

2800
KICK-ASS
JOIN ROVI / SIGN IN
MUSIC
MOVIES
ALL TYPES
THE PIANIST
OVERVIEW
INFO
AWARDS
REVIEW
BY ADAM BREGMAN
THIS POWERFUL FILM BY ROMAN POLANSKI TACKLES A SUBJECT MATTER AND TIME THAT HAS BEEN COVERED EXHAUSTIVELY IN FEATURE FILMS, TV MOVIES AND DOCUMENTARIES. BUT THE PIANIST IS ANOTHER EXCEPTIONAL STORY THAT NEEDED TO BE TOLD. THERE HAVE BEEN PLENTY OF DRAMAS REGARDING THE WARSAW GHETTO AND THE JEWISH RESISTANCE, BUT LESS ABOUT THE NEARLY COMPLETE DESTRUCTION OF WARSAW BY THE NAZIS NEAR THE END OF THE WAR. JUST AS THE RUSSIANS WERE CLOSING IN, THE PIANIST IS MOSTLY FROM THE PERSPECTIVE OF WLADYSLAW SZPILMAN (ADRIEN BRODY), WHO ESCAPES THE CONCENTRATION CAMPS BY LUCK AND IS BRIEFLY INVOLVED IN SMUGGLING GUNS INTO THE WARSAW GHETTO. HE ESCAPES THE GHETTO WITH THE HELP OF THE POLISH RESISTANCE AND SPENDS THE REST OF THE FILM STRUGGLING TO SURVIVE. WHILE WATCHING THE UNFOLDING EVENTS IN WARSAW AS THE CITY IS TORN TO PIECES BY THE NAZIS. IT IS A HARROWING AND MOVING STORY AND SZPILMAN IS A COMPLETELY SYMPATHETIC CHARACTER WHO DOESN'T SEEM AT FIRST CUT OUT TO SURVIVE UNDER SUCH CONDITIONS. THERE ARE BOTH GOOD AND BAD JEWS, POLES AND NAZIS IN THE STORY, THOUGH MOST OF THE NAZI CHARACTERS WITH THE EXCEPTION OF CAPTAIN HOSENFELD (THOMAS KRETSCHMANN) ARE MONSTROUS. ASIDE FROM THE RELENTLESS HORRORS THAT SZPILMAN WITNESSES, THERE ARE MOMENTS OF GREAT BEAUTY IN THE FILM ESPECIALLY IN THE SCENES WHERE HE PLAYS PIANO. THE CINEMATOGRAPHY BY PAWEL EDELMAN IS FANTASTIC. BEYOND BEING A GREAT FILM, THE PIANIST IS A TESTAMENT TO THE INCREDIBLE STRUGGLE OF THE POLISH PEOPLE DURING WORLD WAR II.
WINNER
3 ACADEMY AWARDS
BEST ACTOR ADRIEN BRODY
BEST DIRECTOR ROMAN POLANSKI
BEST SCREENPLAY RONALD HARWOOD
THE PIANIST
"A RIVETING ADVENTURE STORY!"
FULL SCREEN
ROVI RATING
MPAA RATING R
FLAGS VIOLENCE
ADULT SITUATIONS
NOT FOR CHILDREN
ADULT LANGUAGE
WATCH WITH YOUR
GENRES DRAMA
SUB-GENRES WAR DRAMA
RELEASED 2002
LENGTH 148 MIN.
CLOSE
3000
RATING
MEDIA QUEUE: (1)
0:07
0:30
THE PIANIST
JOIN ROVI / SIGN IN
3005

FIG. 30

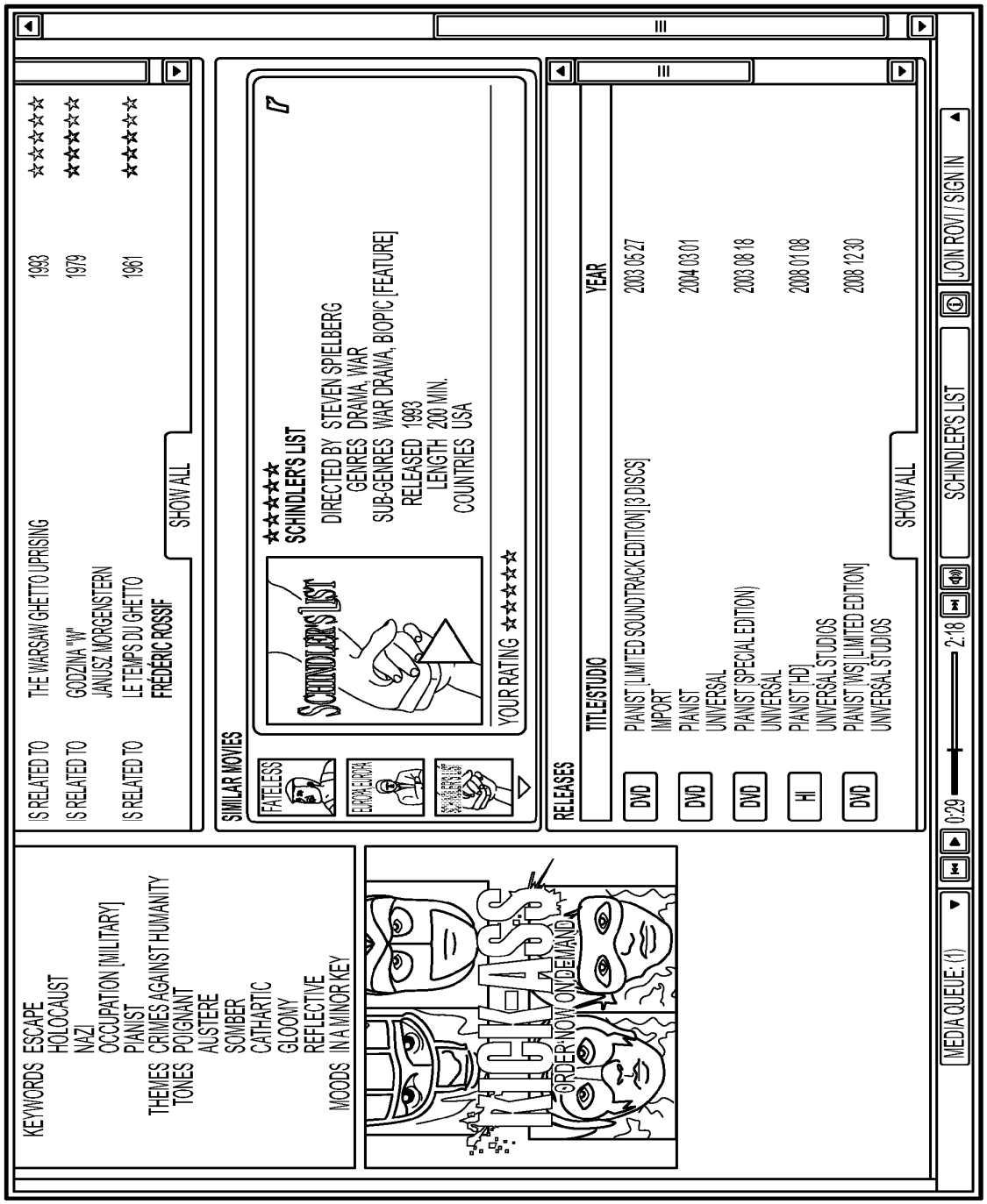

2800
KEYWORDS ESCAPE
HOLOCAUST
NAZI
OCCUPATION [MILITARY]
PIANIST
THEMES CRIMES AGAINST HUMANITY
TONES POIGNANT
AUSTERE
SOMBER
CATHARTIC
GLOOMY
REFLECTIVE
MOODS IN A MINOR KEY
ORDER NOW ON DEMAND
IS RELATED TO THE WARSAW GHETTO UPRISING 1993 ☆☆☆☆☆
IS RELATED TO GODZINA "W" 1979 ★★★★★
JANUSZ MORGENSTERN
IS RELATED TO LE TEMPS DU GHETTO 1961 ★★★★★
FRÉDÉRIC ROSSIF
SHOW ALL
SIMILAR MOVIES
FATELESS
EUROPA EUROPA
SCHINDLER'S LIST
★★★★★
SCHINDLER'S LIST
DIRECTED BY STEVEN SPIELBERG
GENRES DRAMA, WAR
SUB-GENRES WAR DRAMA, BIOPIC [FEATURE]
RELEASED 1993
LENGTH 200 MIN.
COUNTRIES USA
YOUR RATING ☆☆☆☆☆☆
RELEASES
TITLE/STUDIO
YEAR
DVD PIANIST [LIMITED SOUNDTRACK EDITION] [3 DISCS] 2003 05 27
IMPORT
DVD PIANIST 2004 03 01
UNIVERSAL
DVD PIANIST [SPECIAL EDITION] 2003 08 18
UNIVERSAL
HI PIANIST [HD] 2008 01 08
UNIVERSAL STUDIOS
DVD PIANIST [WS] [LIMITED EDITION] 2008 12 30
UNIVERSAL STUDIOS
SHOW ALL
MEDIA QUEUE: (1)
0:29
2:18
SCHINDLER'S LIST
JOIN ROVI / SIGN IN

FIG. 31

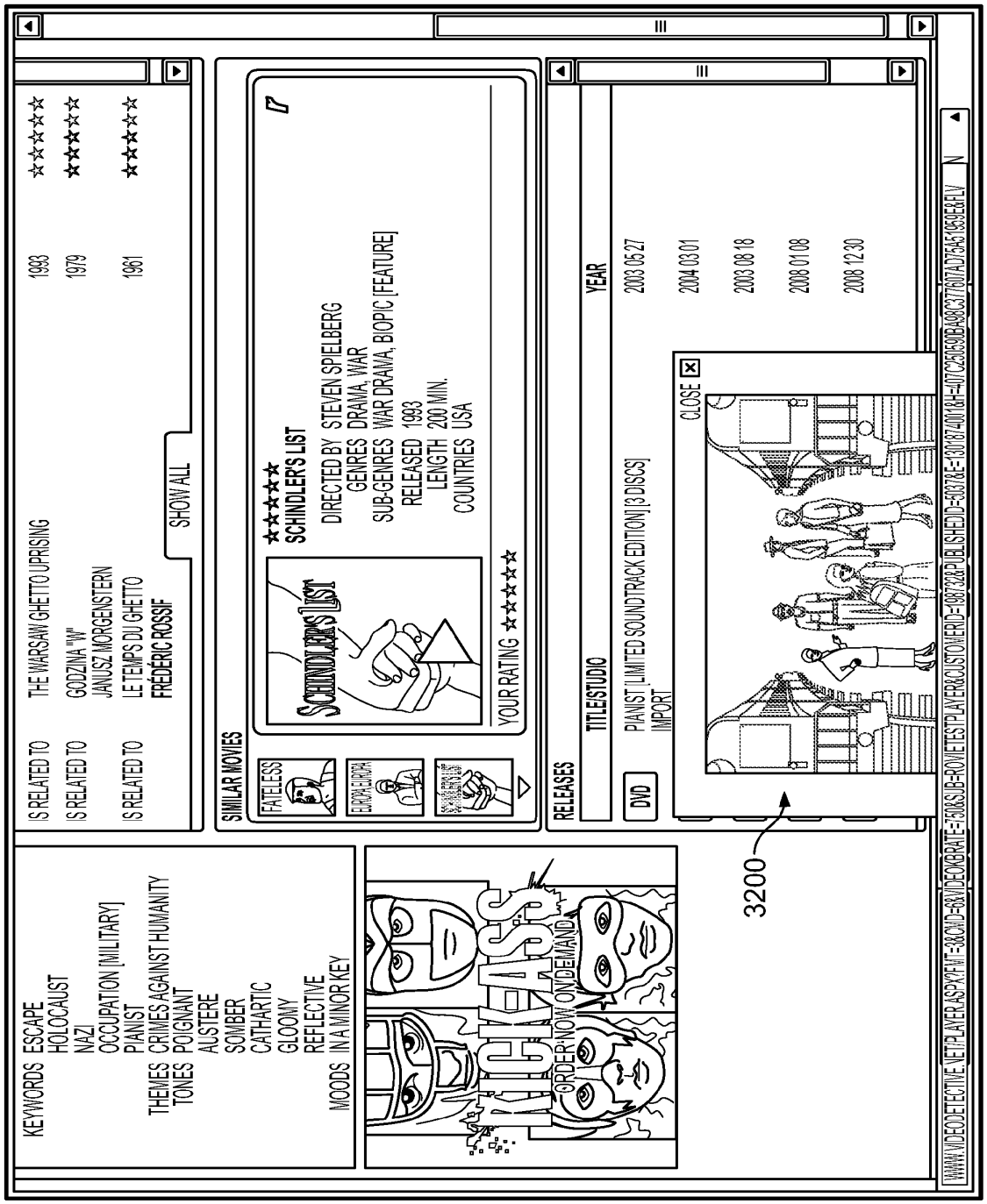

2800
KEYWORDS ESCAPE
HOLOCAUST
NAZI
OCCUPATION [MILITARY]
PIANIST
THEMES CRIMES AGAINST HUMANITY
TONES POIGNANT
AUSTERE
SOMBER
CATHARTIC
GLOOMY
REFLECTIVE
MOODS IN A MINOR KEY
IS RELATED TO THE WARSAW GHETTO UPRISING 1993
IS RELATED TO GODZINA "W" 1979
JANUSZ MORGENSTERN
IS RELATED TO LE TEMPS DU GHETTO 1961
FRÉDÉRIC ROSSIF
SHOW ALL
SIMILAR MOVIES
FATELESS
EUROPA EUROPA
SCHINDLER'S LIST
SCHINDLER'S LIST
DIRECTED BY STEVEN SPIELBERG
GENRES DRAMA, WAR
SUB-GENRES WAR DRAMA, BIOPIC [FEATURE]
RELEASED 1993
LENGTH 200 MIN.
COUNTRIES USA
YOUR RATING
RELEASES
TITLE/STUDIO
YEAR
DVD
PIANIST [LIMITED SOUNDTRACK EDITION] [3 DISCS]
IMPORT
2003 05 27
2004 03 01
2003 08 18
2008 01 08
2008 12 30
CLOSE
ORDER NOW ON DEMAND
3200

FIG. 32

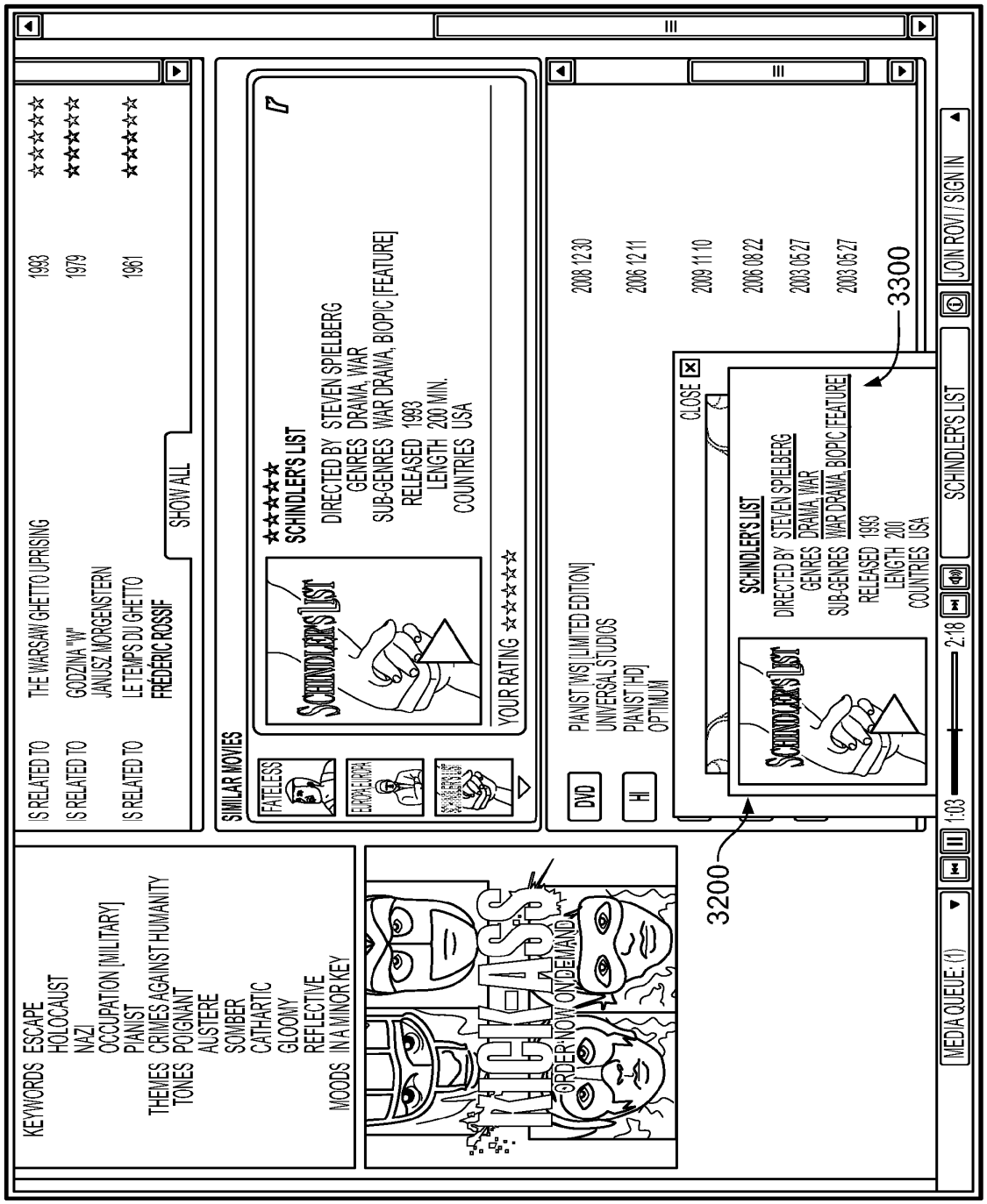

2800
KEYWORDS ESCAPE
HOLOCAUST
NAZI
OCCUPATION [MILITARY]
PIANIST
THEMES CRIMES AGAINST HUMANITY
TONES POIGNANT
AUSTERE
SOMBER
CATHARTIC
GLOOMY
REFLECTIVE
MOODS IN A MINOR KEY
ORDER NOW ON DEMAND
IS RELATED TO THE WARSAW GHETTO UPRISING 1993 ☆☆☆☆☆
IS RELATED TO GODZINA "W" 1979 ★★★★★
JANUSZ MORGENSTERN
IS RELATED TO LE TEMPS DU GHETTO 1961 ★★★★★
FRÉDÉRIC ROSSIF
SHOW ALL
SIMILAR MOVIES
FATELESS
EUROPA EUROPA
SCHINDLER'S LIST
★★★★★
SCHINDLER'S LIST
DIRECTED BY STEVEN SPIELBERG
GENRES DRAMA, WAR
SUB-GENRES WAR DRAMA, BIOPIC [FEATURE]
RELEASED 1993
LENGTH 200 MIN.
COUNTRIES USA
YOUR RATING ☆☆☆☆☆
DVD
PIANIST [WS] [LIMITED EDITION]
UNIVERSAL STUDIOS
2008 12 30
HI
PIANIST [HD]
OPTIMUM
2006 12 11
CLOSE
2009 11 10
2006 08 22
2003 05 27
2003 05 27
SCHINDLER'S LIST
DIRECTED BY STEVEN SPIELBERG
GENRES DRAMA, WAR
SUB-GENRES WAR DRAMA, BIOPIC [FEATURE]
RELEASED 1993
LENGTH 200
COUNTRIES USA
3300
3200
MEDIA QUEUE: (1)
1:03
2:18
SCHINDLER'S LIST
JOIN NOW! / SIGN IN

FIG. 33

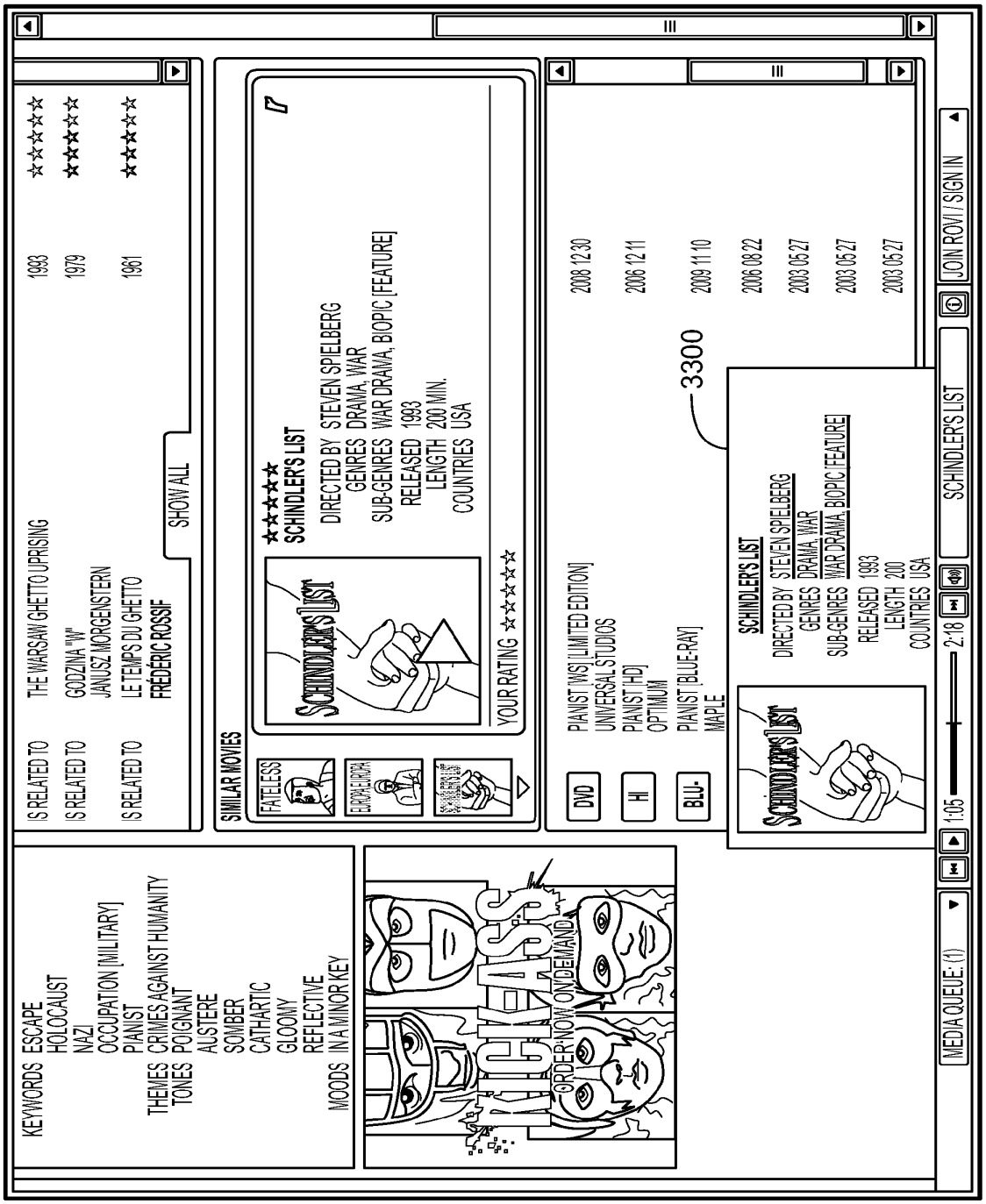

2800
KEYWORDS ESCAPE
HOLOCAUST
NAZI
OCCUPATION [MILITARY]
PIANIST
THEMES CRIMES AGAINST HUMANITY
TONES POIGNANT
AUSTERE
SOMBER
CATHARTIC
GLOOMY
REFLECTIVE
MOODS IN A MINOR KEY
ORDER NOW ON DEMAND
IS RELATED TO THE WARSAW GHETTO UPRISING 1993 ☆☆☆☆☆
IS RELATED TO GODZINA "W" 1979 ★★★★★
JANUSZ MORGENSTERN
IS RELATED TO LE TEMPS DU GHETTO 1961 ★★★★★
FRÉDÉRIC ROSSIF
SHOW ALL
SIMILAR MOVIES
FATELESS
EUROPA EUROPA
SCHINDLER'S LIST
★★★★★
SCHINDLER'S LIST
DIRECTED BY STEVEN SPIELBERG
GENRES DRAMA, WAR
SUB-GENRES WAR DRAMA, BIOPIC [FEATURE]
RELEASED 1993
LENGTH 200 MIN.
COUNTRIES USA
YOUR RATING ☆☆☆☆☆
DVD PIANIST [WS] [LIMITED EDITION] 2008 12 30
UNIVERSAL STUDIOS
HI PIANIST [HD] 2006 12 11
OPTIMUM
BLU- PIANIST [BLUE-RAY] 2009 11 10
MAPLE
3300
SCHINDLER'S LIST
DIRECTED BY STEVEN SPIELBERG
GENRES DRAMA WAR
SUB-GENRES WAR DRAMA BIOPIC [FEATURE]
RELEASED 1993
LENGTH 200
COUNTRIES USA
2006 08 22
2003 05 27
2003 05 27
2003 05 27
MEDIA QUEUE: (1)
1:05
2:18
SCHINDLER'S LIST
JOIN ROVI / SIGN IN

FIG. 34

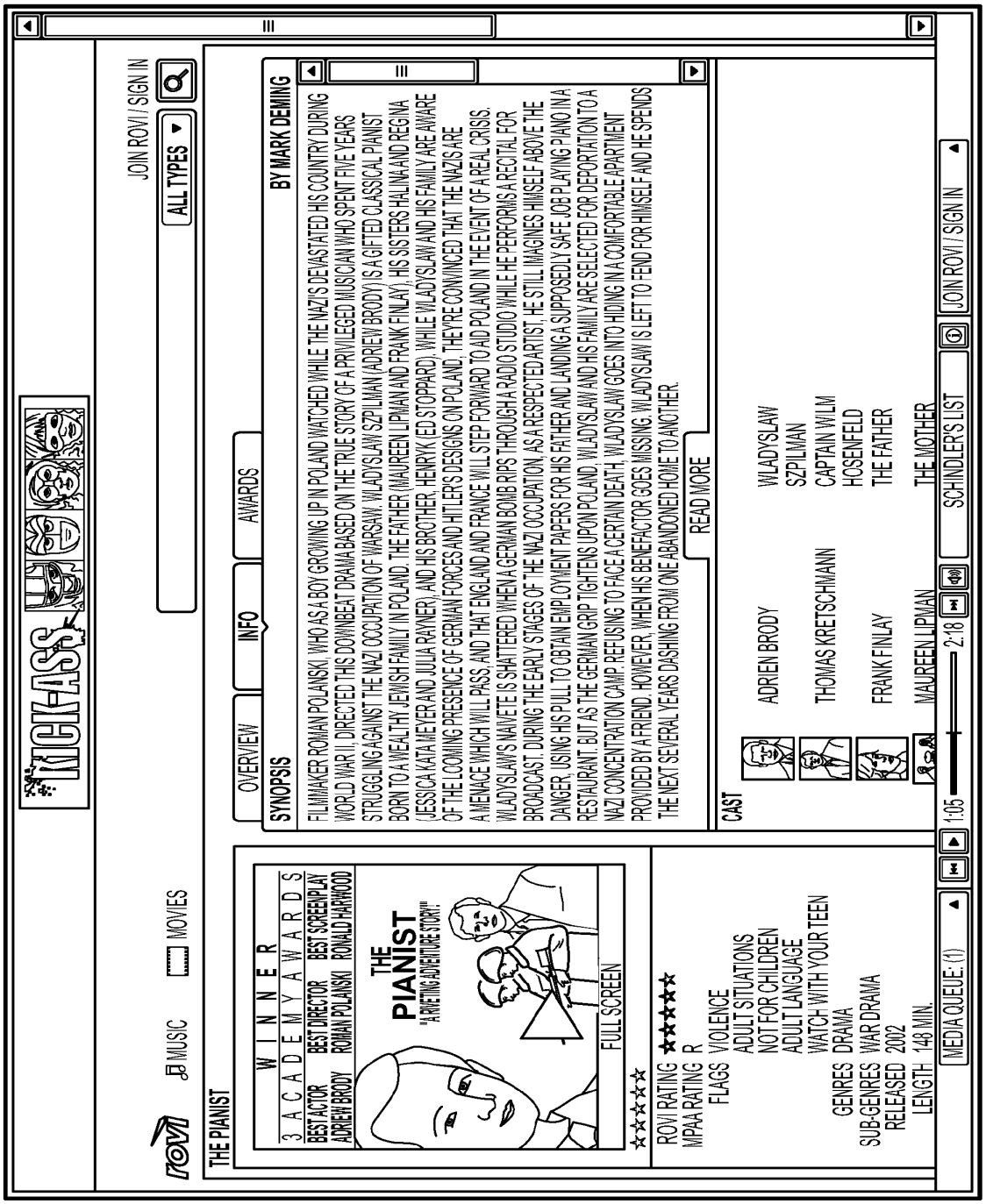

2800
MOVIES
MUSIC
JOIN ROVI / SIGN IN
ALL TYPES
THE PIANIST
OVERVIEW
INFO
AWARDS
SYNOPSIS
BY MARK DEMING
FILMMAKER ROMAN POLANSKI, WHO AS A BOY GROWING UP IN POLAND WATCHED WHILE THE NAZIS DEVASTATED HIS COUNTRY DURING WORLD WAR II, DIRECTED THIS DOWNBEAT DRAMA BASED ON THE TRUE STORY OF A PRIVILEGED MUSICIAN WHO SPENT FIVE YEARS STRUGGLING AGAINST THE NAZI OCCUPATION OF WARSAW. WLADYSLAW SZPILMAN (ADRIEN BRODY) IS A GIFTED CLASSICAL PIANIST BORN TO A WEALTHY JEWISH FAMILY IN POLAND. THE FATHER (MAUREEN LIPMAN AND FRANK FINLAY), HIS SISTERS HALINA AND REGINA (JESSICA KATA MEYER AND JULIA RAYNER), AND HIS BROTHER, HENRYK (ED STOPPARD), WHILE WLADYSLAW AND HIS FAMILY ARE AWARE OF THE LOOMING PRESENCE OF GERMAN FORCES AND HITLER'S DESIGNS ON POLAND, THEY'RE CONVINCED THAT THE NAZIS ARE A MENACE WHICH WILL PASS, AND THAT ENGLAND AND FRANCE WILL STEP FORWARD TO AID POLAND IN THE EVENT OF A REAL CRISIS. WLADYSLAW'S NAIVETE IS SHATTERED WHEN A GERMAN BOMB RIPS THROUGH A RADIO STUDIO WHILE HE PERFORMS A RECITAL FOR BROADCAST. DURING THE EARLY STAGES OF THE NAZI OCCUPATION, AS A RESPECTED ARTIST, HE STILL IMAGINES HIMSELF ABOVE THE DANGER, USING HIS PULL TO OBTAIN EMPLOYMENT PAPERS FOR HIS FATHER AND LANDING A SUPPOSEDLY SAFE JOB PLAYING PIANO IN A RESTAURANT. BUT AS THE GERMAN GRIP TIGHTENS UPON POLAND, WLADYSLAW AND HIS FAMILY ARE SELECTED FOR DEPORTATION TO A NAZI CONCENTRATION CAMP. REFUSING TO FACE A CERTAIN DEATH, WLADYSLAW GOES INTO HIDING IN A COMFORTABLE APARTMENT PROVIDED BY A FRIEND. HOWEVER, WHEN HIS BENEFACTOR GOES MISSING, WLADYSLAW IS LEFT TO FEND FOR HIMSELF AND HE SPENDS THE NEXT SEVERAL YEARS DASHING FROM ONE ABANDONED HOME TO ANOTHER.
READ MORE
CAST
ADRIEN BRODY WLADYSLAW SZPILMAN
THOMAS KRETSCHMANN CAPTAIN WILM HOSENFELD
FRANK FINLAY THE FATHER
MAUREEN LIPMAN THE MOTHER
WINNER
3 ACADEMY AWARDS
BEST ACTOR ADRIEN BRODY
BEST DIRECTOR ROMAN POLANSKI
BEST SCREENPLAY RONALD HARWOOD
THE PIANIST
"A RIVETING ADVENTURE STORY!"
FULL SCREEN
ROVI RATING
MPAA RATING R
FLAGS VIOLENCE
ADULT SITUATIONS
NOT FOR CHILDREN
ADULT LANGUAGE
WATCH WITH YOUR TEEN
GENRES DRAMA
SUB-GENRES WAR DRAMA
RELEASED 2002
LENGTH 148 MIN.
MEDIA QUEUE: (1)
1:05
2:18
SCHINDLER'S LIST
JOIN ROVI / SIGN IN

FIG. 35

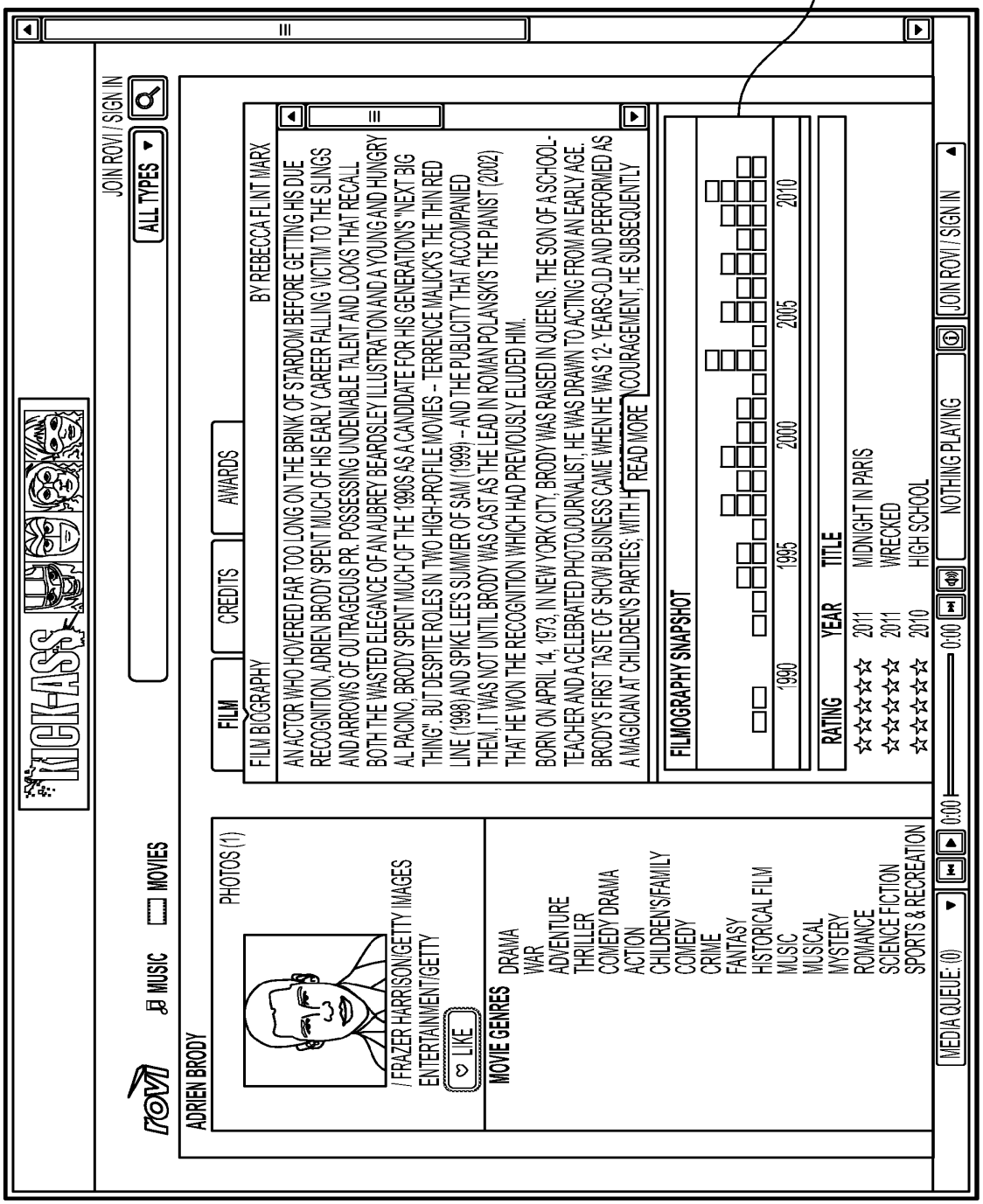

3600
3610
KICK-ASS
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
ADRIEN BRODY
PHOTOS (1)
/ FRAZER HARRISON/GETTY IMAGES
ENTERTAINMENT/GETTY
LIKE
MOVIE GENRES
DRAMA
WAR
ADVENTURE
THRILLER
COMEDY DRAMA
ACTION
CHILDREN'S/FAMILY
COMEDY
CRIME
FANTASY
HISTORICAL FILM
MUSIC
MUSICAL
MYSTERY
ROMANCE
SCIENCE FICTION
SPORTS & RECREATION
FILM
CREDITS
AWARDS
FILM BIOGRAPHY
BY REBECCA FLINT MARX
AN ACTOR WHO HOVERED FAR TOO LONG ON THE BRINK OF STARDOM BEFORE GETTING HIS DUE RECOGNITION, ADRIEN BRODY SPENT MUCH OF HIS EARLY CAREER FALLING VICTIM TO THE SLINGS AND ARROWS OF OUTRAGEOUS PR. POSSESSING UNDENIABLE TALENT AND LOOKS THAT RECALL BOTH THE WASTED ELEGANCE OF AN AUBREY BEARDSLEY ILLUSTRATION AND A YOUNG AND HUNGRY AL PACINO, BRODY SPENT MUCH OF THE 1990S AS A CANDIDATE FOR HIS GENERATION'S "NEXT BIG THING". BUT DESPITE ROLES IN TWO HIGH-PROFILE MOVIES – TERRENCE MALICK'S THE THIN RED LINE (1998) AND SPIKE LEE'S SUMMER OF SAM (1999) – AND THE PUBLICITY THAT ACCOMPANIED THEM, IT WAS NOT UNTIL BRODY WAS CAST AS THE LEAD IN ROMAN POLANSKI'S THE PIANIST (2002) THAT HE WON THE RECOGNITION WHICH HAD PREVIOUSLY ELUDED HIM.
BORN ON APRIL 14, 1973, IN NEW YORK CITY, BRODY WAS RAISED IN QUEENS. THE SON OF A SCHOOL-TEACHER AND A CELEBRATED PHOTOJOURNALIST, HE WAS DRAWN TO ACTING FROM AN EARLY AGE. BRODY'S FIRST TASTE OF SHOW BUSINESS CAME WHEN HE WAS 12- YEARS-OLD AND PERFORMED AS A MAGICIAN AT CHILDREN'S PARTIES; WITH H
READ MORE
COURAGEMENT, HE SUBSEQUENTLY
FILMOGRAPHY SNAPSHOT
1990
1995
2000
2005
2010
RATING
YEAR
TITLE
2011 MIDNIGHT IN PARIS
2011 WRECKED
2010 HIGH SCHOOL
MEDIA QUEUE: (0)
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 36

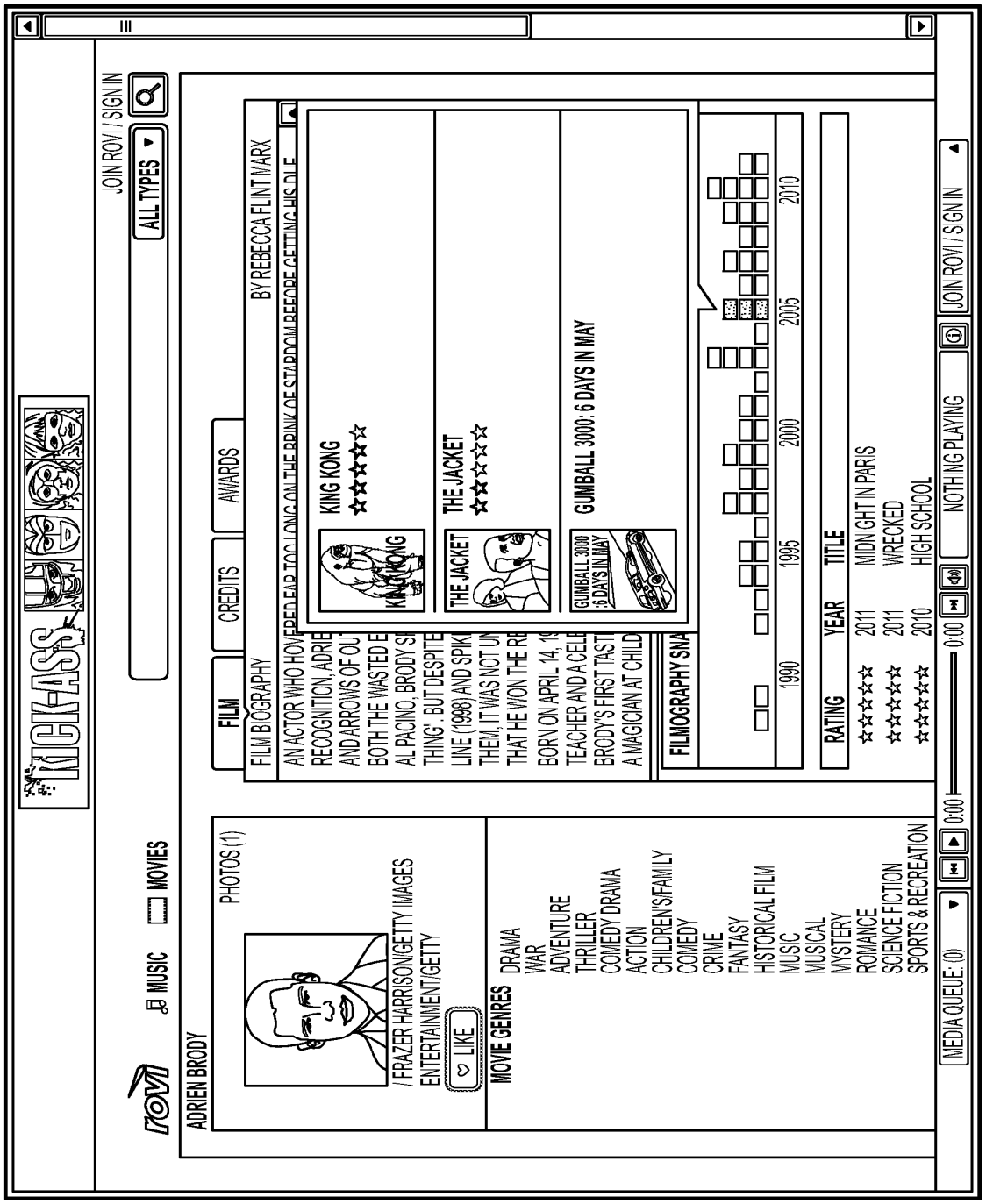

3600
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
ADRIEN BRODY
PHOTOS (1)
/ FRAZER HARRISON/GETTY IMAGES
ENTERTAINMENT/GETTY
LIKE
MOVIE GENRES
DRAMA
WAR
ADVENTURE
THRILLER
COMEDY DRAMA
ACTION
CHILDREN'S/FAMILY
COMEDY
CRIME
FANTASY
HISTORICAL FILM
MUSIC
MUSICAL
MYSTERY
ROMANCE
SCIENCE FICTION
SPORTS & RECREATION
FILM
CREDITS
AWARDS
FILM BIOGRAPHY
BY REBECCA FLINT MARX
KING KONG
THE JACKET
GUMBALL 3000: 6 DAYS IN MAY
FILMOGRAPHY SNA
1990
1995
2000
2005
2010
RATING
YEAR
TITLE
2011 MIDNIGHT IN PARIS
2011 WRECKED
2010 HIGH SCHOOL
MEDIA QUEUE: (0)
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 37

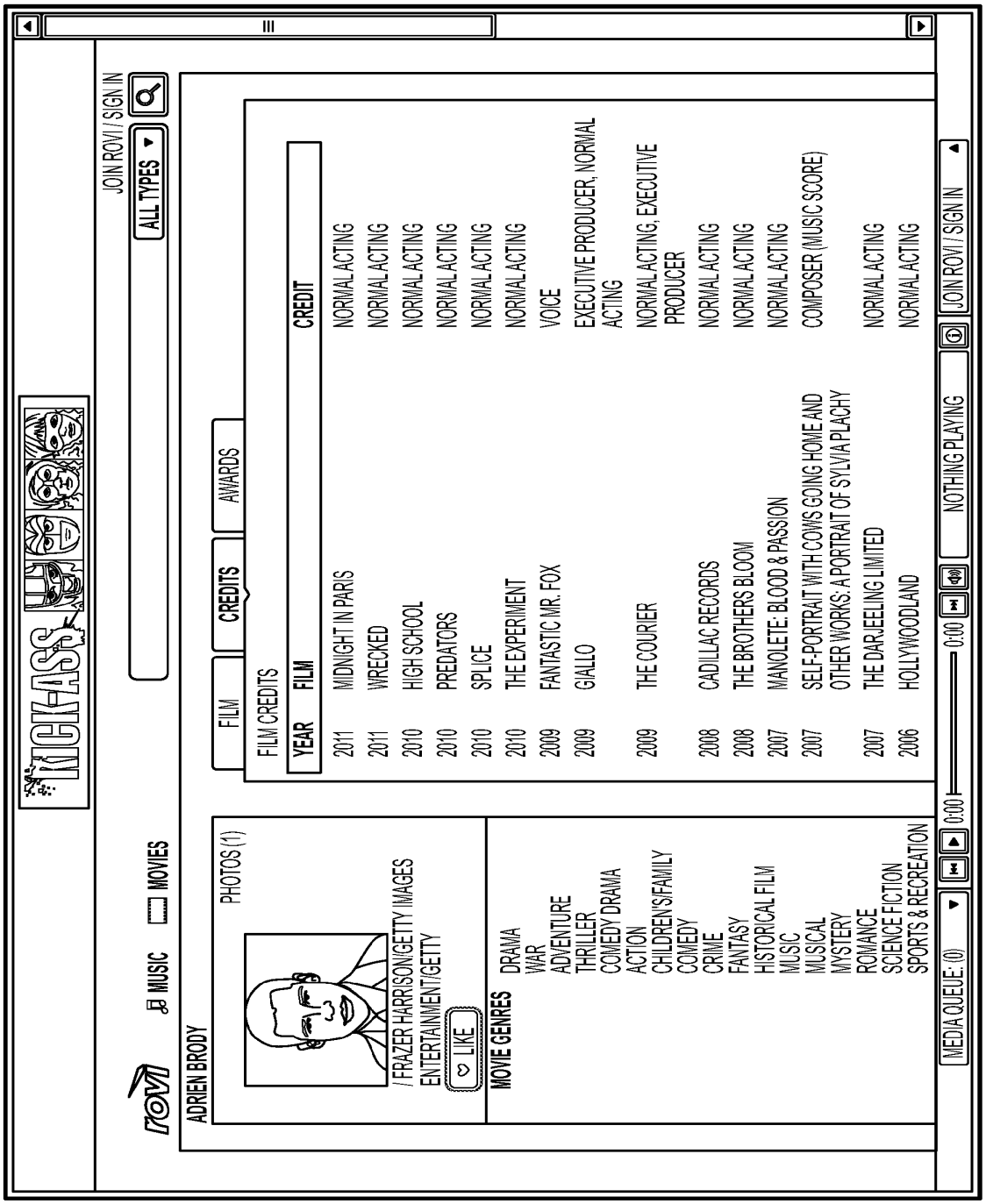

3600
KICK-ASS
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
ADRIEN BRODY
PHOTOS (1)
/ FRAZER HARRISON/GETTY IMAGES
ENTERTAINMENT/GETTY
LIKE
MOVIE GENRES
DRAMA
WAR
ADVENTURE
THRILLER
COMEDY DRAMA
ACTION
CHILDREN'S/FAMILY
COMEDY
CRIME
FANTASY
HISTORICAL FILM
MUSIC
MUSICAL
MYSTERY
ROMANCE
SCIENCE FICTION
SPORTS & RECREATION
FILM
CREDITS
AWARDS
FILM CREDITS
YEAR
FILM
CREDIT
2011 MIDNIGHT IN PARIS NORMAL ACTING
2011 WRECKED NORMAL ACTING
2010 HIGH SCHOOL NORMAL ACTING
2010 PREDATORS NORMAL ACTING
2010 SPLICE NORMAL ACTING
2010 THE EXPERIMENT NORMAL ACTING
2009 FANTASTIC MR. FOX VOICE
2009 GIALLO EXECUTIVE PRODUCER, NORMAL ACTING
2009 THE COURIER NORMAL ACTING, EXECUTIVE PRODUCER
2008 CADILLAC RECORDS NORMAL ACTING
2008 THE BROTHERS BLOOM NORMAL ACTING
2007 MANOLETE: BLOOD & PASSION NORMAL ACTING
2007 SELF-PORTRAIT WITH COWS GOING HOME AND OTHER WORKS: A PORTRAIT OF SYLVIA PLACHY COMPOSER (MUSIC SCORE)
2007 THE DARJEELING LIMITED NORMAL ACTING
2006 HOLLYWOODLAND NORMAL ACTING
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 38

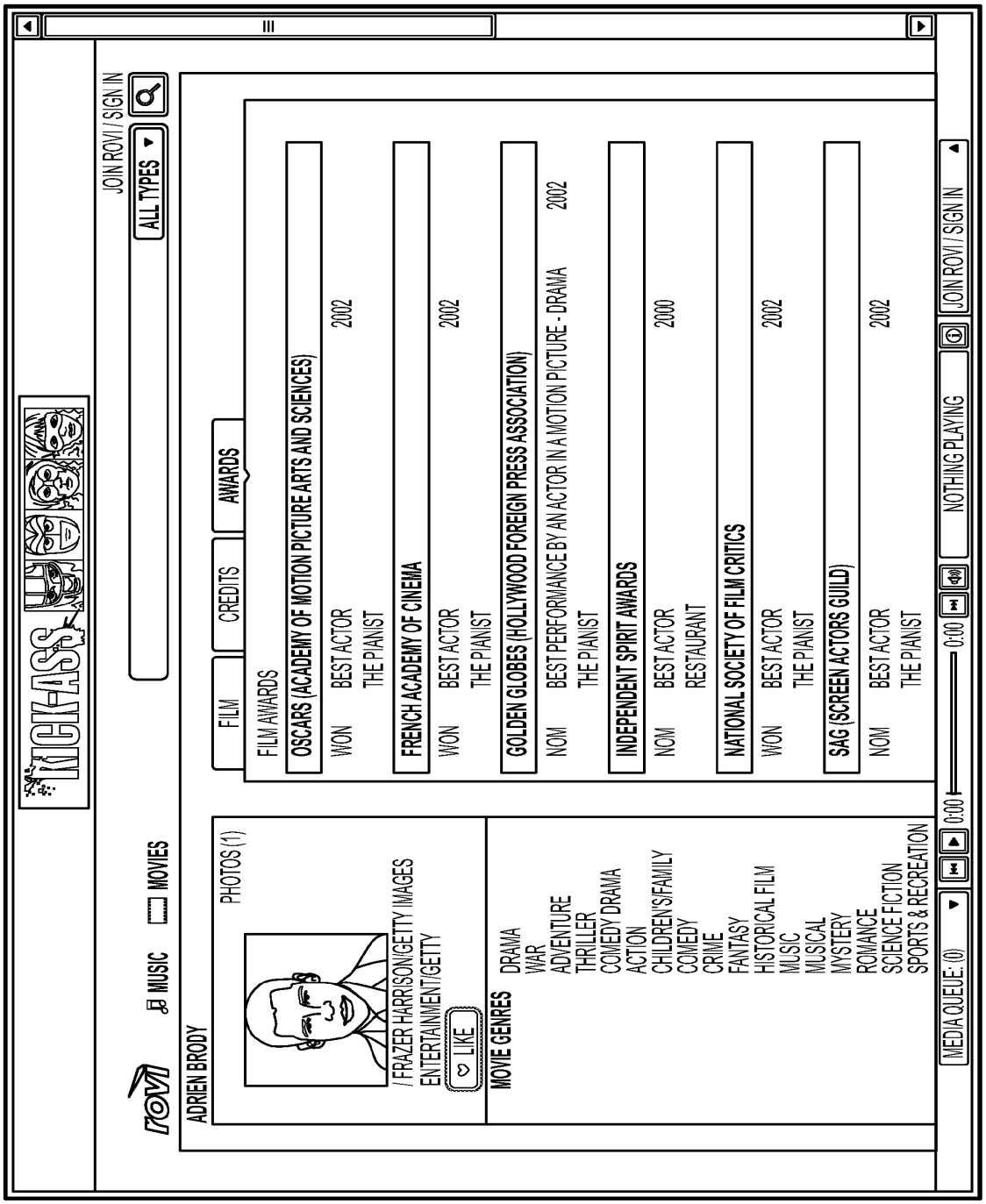

3600
KICK-ASS
JOIN ROVI / SIGN IN
ALL TYPES
MUSIC
MOVIES
ADRIEN BRODY
PHOTOS (1)
/ FRAZER HARRISON/GETTY IMAGES
ENTERTAINMENT/GETTY
LIKE
MOVIE GENRES
DRAMA
WAR
ADVENTURE
THRILLER
COMEDY DRAMA
ACTION
CHILDREN'S/FAMILY
COMEDY
CRIME
FANTASY
HISTORICAL FILM
MUSIC
MUSICAL
MYSTERY
ROMANCE
SCIENCE FICTION
SPORTS & RECREATION
FILM
CREDITS
AWARDS
FILM AWARDS
OSCARS (ACADEMY OF MOTION PICTURE ARTS AND SCIENCES)
WON BEST ACTOR 2002
THE PIANIST
FRENCH ACADEMY OF CINEMA
WON BEST ACTOR 2002
THE PIANIST
GOLDEN GLOBES (HOLLYWOOD FOREIGN PRESS ASSOCIATION)
NOM BEST PERFORMANCE BY AN ACTOR IN A MOTION PICTURE - DRAMA 2002
THE PIANIST
INDEPENDENT SPIRIT AWARDS
NOM BEST ACTOR 2000
RESTAURANT
NATIONAL SOCIETY OF FILM CRITICS
WON BEST ACTOR 2002
THE PIANIST
SAG (SCREEN ACTORS GUILD)
NOM BEST ACTOR 2002
THE PIANIST
MEDIA QUEUE: (0)
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 39

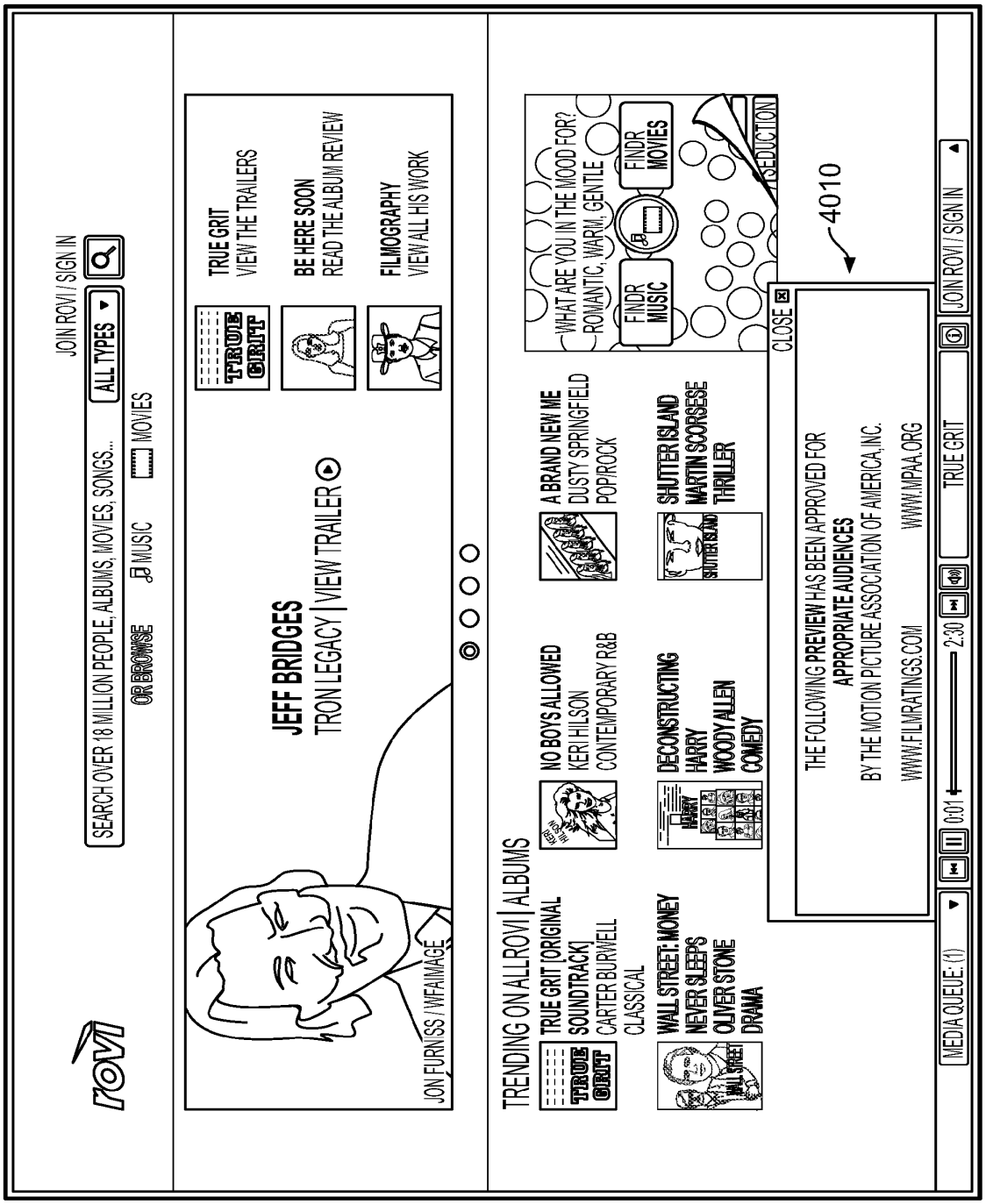

4000
JOIN ROVI / SIGN IN
SEARCH OVER 18 MILLION PEOPLE, ALBUMS, MOVIES, SONGS...
ALL TYPES
OR BROWSE
MUSIC
MOVIES
JEFF BRIDGES
TRON LEGACY | VIEW TRAILER
JON FURNISS / WFAIMAGE
TRUE GRIT
VIEW THE TRAILERS
BE HERE SOON
READ THE ALBUM REVIEW
FILMOGRAPHY
VIEW ALL HIS WORK
TRENDING ON ALL ROVI | ALBUMS
TRUE GRIT [ORIGINAL SOUNDTRACK]
CARTER BURWELL
CLASSICAL
NO BOYS ALLOWED
KERI HILSON
CONTEMPORARY R&B
A BRAND NEW ME
DUSTY SPRINGFIELD
POP/ROCK
DECONSTRUCTING HARRY
WOODY ALLEN
COMEDY
SHUTTER ISLAND
MARTIN SCORSESE
THRILLER
WALL STREET: MONEY NEVER SLEEPS
OLIVER STONE
DRAMA
WHAT ARE YOU IN THE MOOD FOR?
ROMANTIC, WARM, GENTLE
FINDR MUSIC
FINDR MOVIES
SEDUCTION
CLOSE
4010
THE FOLLOWING PREVIEW HAS BEEN APPROVED FOR
APPROPRIATE AUDIENCES
BY THE MOTION PICTURE ASSOCIATION OF AMERICA, INC.
WWW.FILMRATINGS.COM
WWW.MPAA.ORG
MEDIA QUEUE: (1)
0:01
2:30
TRUE GRIT
JOIN ROVI / SIGN IN

FIG. 40

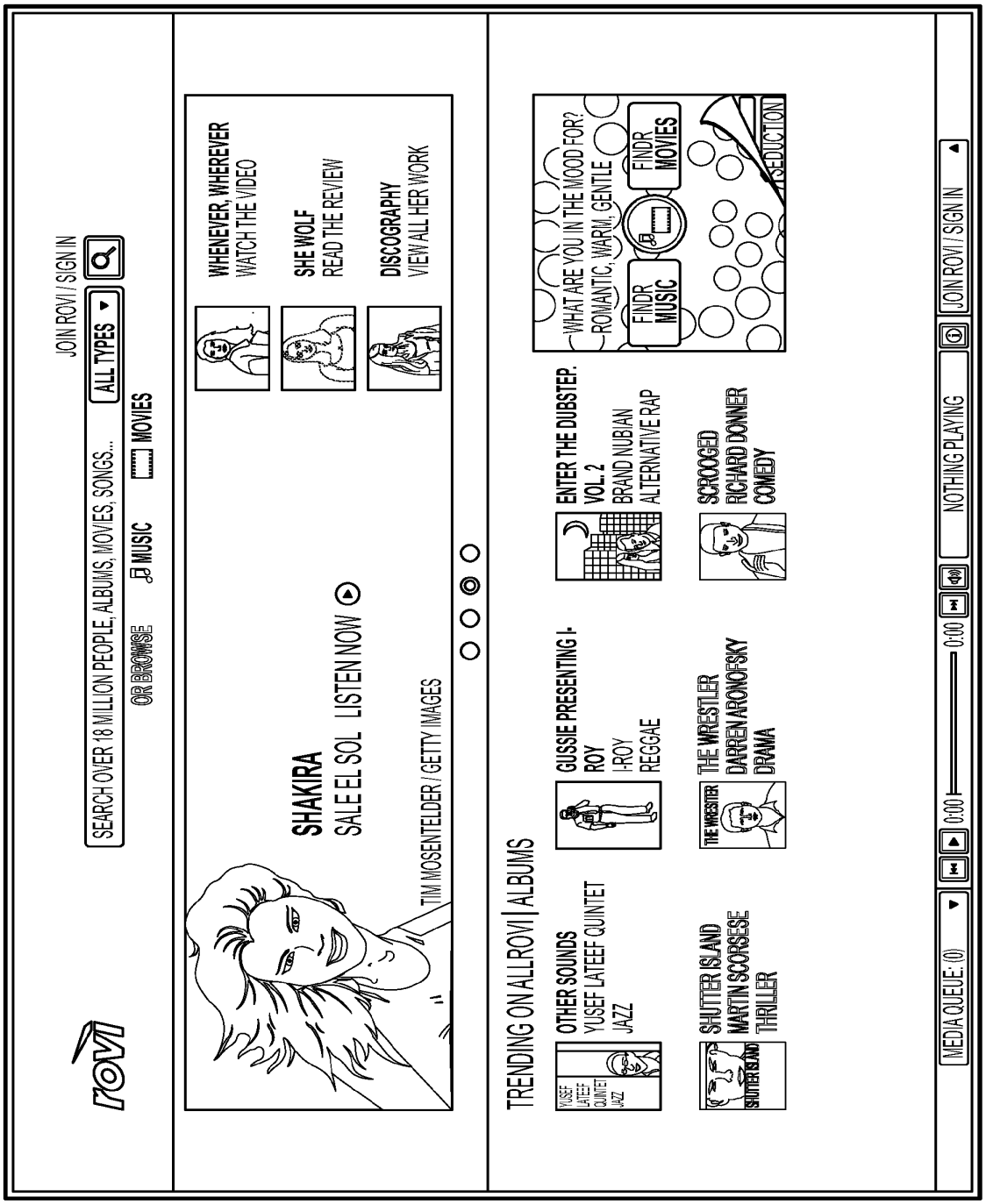

4100
JOIN ROVI / SIGN IN
SEARCH OVER 18 MILLION PEOPLE, ALBUMS, MOVIES, SONGS...
ALL TYPES
OR BROWSE
MUSIC
MOVIES
SHAKIRA
SALE EL SOL LISTEN NOW
TIM MOSENTELDER / GETTY IMAGES
WHENEVER, WHEREVER
WATCH THE VIDEO
SHE WOLF
READ THE REVIEW
DISCOGRAPHY
VIEW ALL HER WORK
TRENDING ON ALLROVI | ALBUMS
OTHER SOUNDS
YUSEF LATEEF QUINTET
JAZZ
GUSSIE PRESENTING I-ROY
I-ROY
REGGAE
ENTER THE DUBSTEP.
VOL. 2
BRAND NUBIAN
ALTERNATIVE RAP
SHUTTER ISLAND
MARTIN SCORSESE
THRILLER
THE WRESTLER
DARREN ARONOFSKY
DRAMA
SCROOGED
RICHARD DONNER
COMEDY
WHAT ARE YOU IN THE MOOD FOR?
ROMANTIC, WARM, GENTLE
FINDR MUSIC
FINDR MOVIES
SEDUCTION
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
JOIN ROVI / SIGN IN

FIG. 41

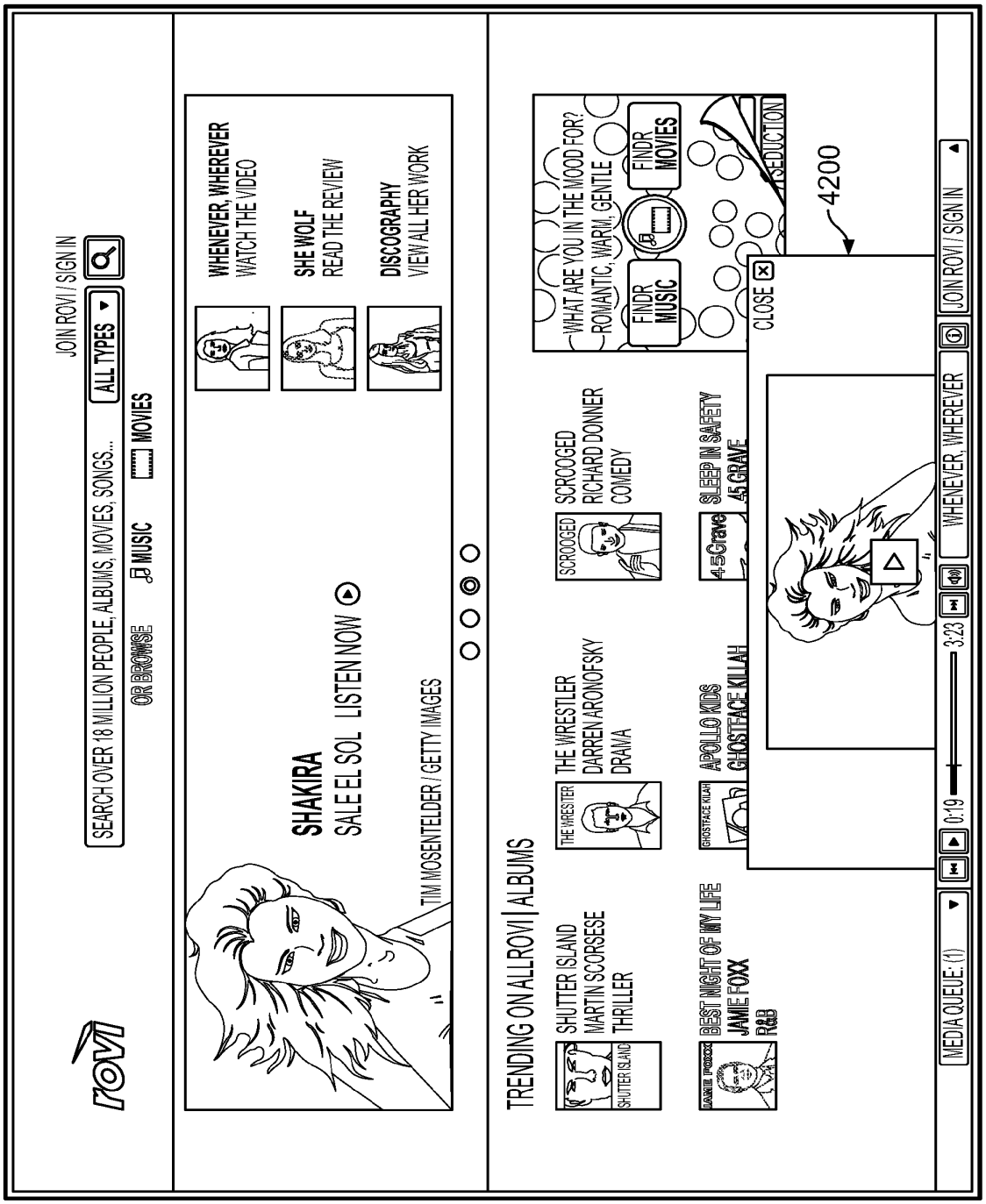

4100
rovi
JOIN ROVI / SIGN IN
SEARCH OVER 18 MILLION PEOPLE, ALBUMS, MOVIES, SONGS...
ALL TYPES
OR BROWSE
MUSIC
MOVIES
SHAKIRA
SALE EL SOL LISTEN NOW
TIM MOSENTELDER / GETTY IMAGES
WHENEVER, WHEREVER
WATCH THE VIDEO
SHE WOLF
READ THE REVIEW
DISCOGRAPHY
VIEW ALL HER WORK
TRENDING ON ALLROVI | ALBUMS
SHUTTER ISLAND
MARTIN SCORSESE
THRILLER
THE WRESTLER
DARREN ARONOFSKY
DRAMA
SCROOGED
RICHARD DONNER
COMEDY
BEST NIGHT OF MY LIFE
JAMIE FOXX
R&B
APOLLO KIDS
GHOSTFACE KILLAH
SLEEP IN SAFETY
45 GRAVE
WHAT ARE YOU IN THE MOOD FOR?
ROMANTIC, WARM, GENTLE
FINDR MUSIC
FINDR MOVIES
SEDUCTION
CLOSE
4200
MEDIA QUEUE: (1)
0:19
3:23
WHENEVER, WHEREVER
JOIN ROVI / SIGN IN

FIG. 42

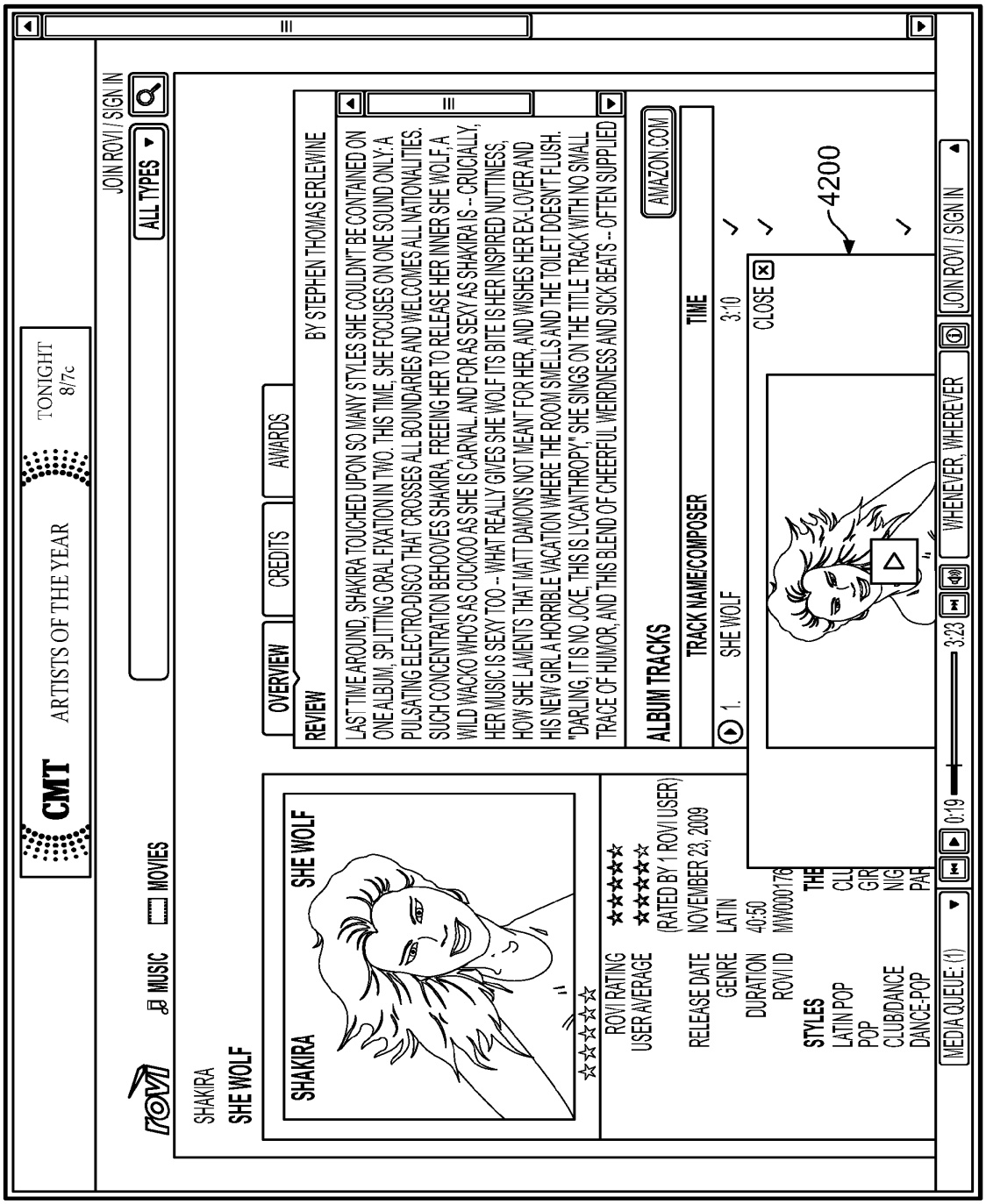

4300
CMT
ARTISTS OF THE YEAR
TONIGHT 8/7c
JOIN ROVI / SIGN IN
MUSIC
MOVIES
ALL TYPES
SHAKIRA
SHE WOLF
OVERVIEW
CREDITS
AWARDS
REVIEW
BY STEPHEN THOMAS ERLEWINE
LAST TIME AROUND, SHAKIRA TOUCHED UPON SO MANY STYLES SHE COULDN'T BE CONTAINED ON ONE ALBUM, SPLITTING ORAL FIXATION IN TWO. THIS TIME, SHE FOCUSES ON ONE SOUND ONLY: A PULSATING ELECTRO-DISCO THAT CROSSES ALL BOUNDARIES AND WELCOMES ALL NATIONALITIES. SUCH CONCENTRATION BEHOOVES SHAKIRA, FREEING HER TO RELEASE HER INNER SHE WOLF, A WILD WACKO WHO'S AS CUCKOO AS SHE IS CARNAL. AND FOR AS SEXY AS SHAKIRA IS -- CRUCIALLY, HER MUSIC IS SEXY TOO -- WHAT REALLY GIVES SHE WOLF ITS BITE IS HER INSPIRED NUTTINESS, HOW SHE LAMENTS THAT MATT DAMON'S NOT MEANT FOR HER, AND WISHES HER EX-LOVER AND HIS NEW GIRL A HORRIBLE VACATION WHERE THE ROOM SMELLS AND THE TOILET DOESN'T FLUSH. "DARLING, IT IS NO JOKE, THIS IS LYCANTHROPY," SHE SINGS ON THE TITLE TRACK WITH NO SMALL TRACE OF HUMOR, AND THIS BLEND OF CHEERFUL WEIRDNESS AND SICK BEATS -- OFTEN SUPPLIED
ROVI RATING
USER AVERAGE
(RATED BY 1 ROVI USER)
RELEASE DATE NOVEMBER 23, 2009
GENRE LATIN
DURATION 40:50
ROVI ID MW0000176
STYLES
LATIN POP
POP
CLUB/DANCE
DANCE-POP
ALBUM TRACKS
AMAZON.COM
TRACK NAME/COMPOSER
TIME
1. SHE WOLF 3:10
CLOSE
4200
MEDIA QUEUE: (1)
0:19
3:23
WHENEVER, WHEREVER
JOIN ROVI / SIGN IN

FIG. 43

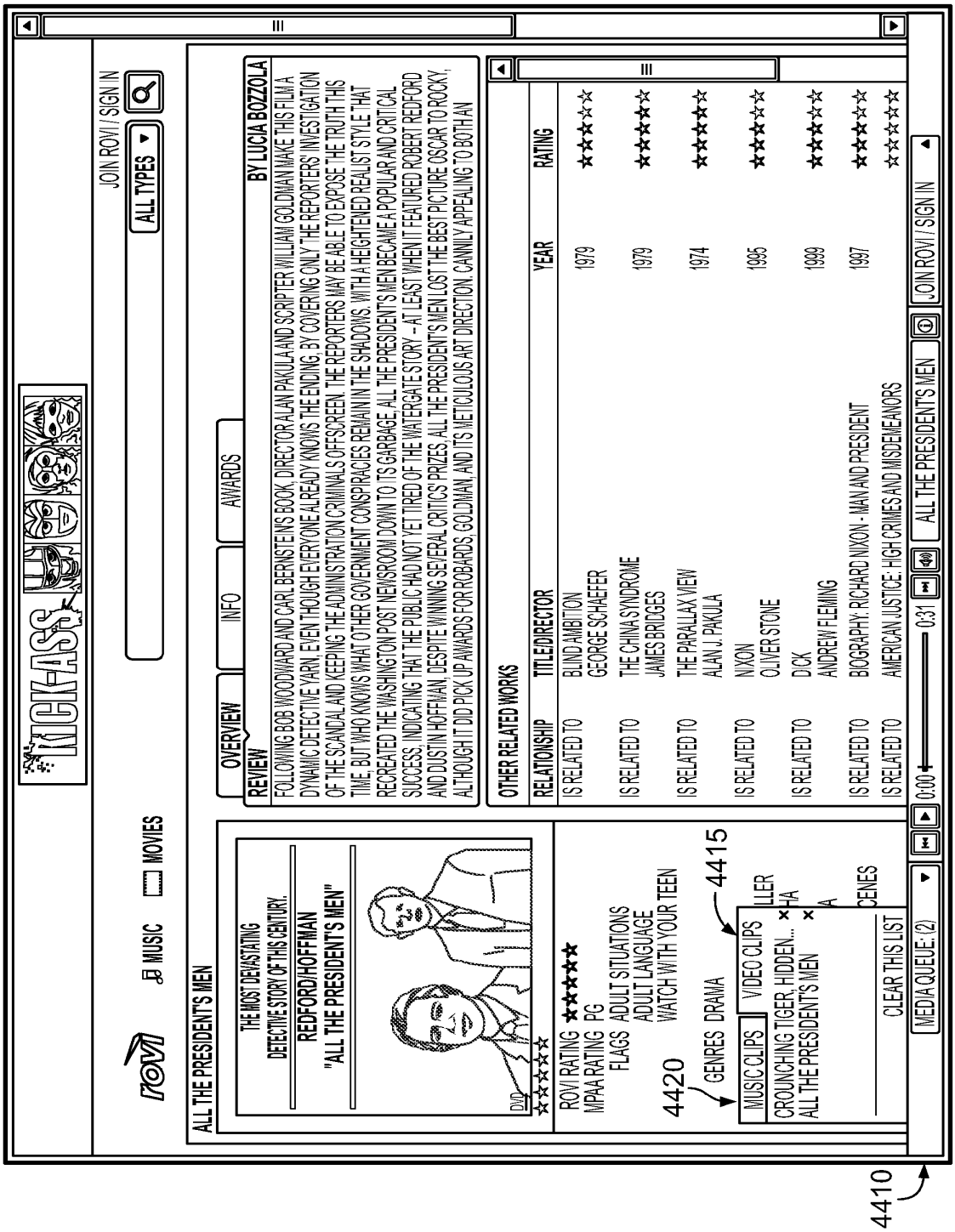

JOIN ROVI / SIGN IN
MUSIC
MOVIES
ALL TYPES
ALL THE PRESIDENT'S MEN
OVERVIEW
INFO
AWARDS
REVIEW
BY LUCIA BOZZOLA
FOLLOWING BOB WOODWARD AND CARL BERNSTEIN'S BOOK, DIRECTOR ALAN PAKULA AND SCRIPTER WILLIAM GOLDMAN MAKE THIS FILM A DYNAMIC DETECTIVE YARN, EVEN THOUGH EVERYONE ALREADY KNOWS THE ENDING, BY COVERING ONLY THE REPORTERS' INVESTIGATION OF THE SCANDAL AND KEEPING THE ADMINISTRATION CRIMINALS OFFSCREEN, THE REPORTERS MAY BE ABLE TO EXPOSE THE TRUTH THIS TIME, BUT WHO KNOWS WHAT OTHER GOVERNMENT CONSPIRACIES REMAIN IN THE SHADOWS. WITH A HEIGHTENED REALIST STYLE THAT RECREATED THE WASHINGTON POST NEWSROOM DOWN TO ITS GARBAGE, ALL THE PRESIDENT'S MEN BECAME A POPULAR AND CRITICAL SUCCESS, INDICATING THAT THE PUBLIC HAD NOT YET TIRED OF THE WATERGATE STORY. - AT LEAST WHEN IT FEATURED ROBERT REDFORD AND DUSTIN HOFFMAN. DESPITE WINNING SEVERAL CRITICS' PRIZES, ALL THE PRESIDENT'S MEN LOST THE BEST PICTURE OSCAR TO ROCKY, ALTHOUGH IT DID PICK UP AWARDS FOR ROBARDS, GOLDMAN, AND ITS METICULOUS ART DIRECTION. CANNILY APPEALING TO BOTH AN
THE MOST DEVASTATING DETECTIVE STORY OF THIS CENTURY.
REDFORD/HOFFMAN
"ALL THE PRESIDENT'S MEN"
DVD
OTHER RELATED WORKS
RELATIONSHIP
TITLE/DIRECTOR
YEAR
RATING
IS RELATED TO
BLIND AMBITION
GEORGE SCHAEFER
1979
IS RELATED TO
THE CHINA SYNDROME
JAMES BRIDGES
1979
IS RELATED TO
THE PARALLAX VIEW
ALAN J. PAKULA
1974
IS RELATED TO
NIXON
OLIVER STONE
1995
IS RELATED TO
DICK
ANDREW FLEMING
1999
IS RELATED TO
BIOGRAPHY: RICHARD NIXON - MAN AND PRESIDENT
1997
IS RELATED TO
AMERICAN JUSTICE: HIGH CRIMES AND MISDEMEANORS
ROVI RATING
MPAA RATING PG
FLAGS ADULT SITUATIONS
ADULT LANGUAGE
WATCH WITH YOUR TEEN
4420
GENRES DRAMA
4415
MUSIC CLIPS
VIDEO CLIPS
CROUNCHING TIGER, HIDDEN...
ALL THE PRESIDENT'S MEN
CLEAR THIS LIST
MEDIA QUEUE: (2)
0:00
0:31
ALL THE PRESIDENT'S MEN
JOIN ROVI / SIGN IN
4410

FIG. 44

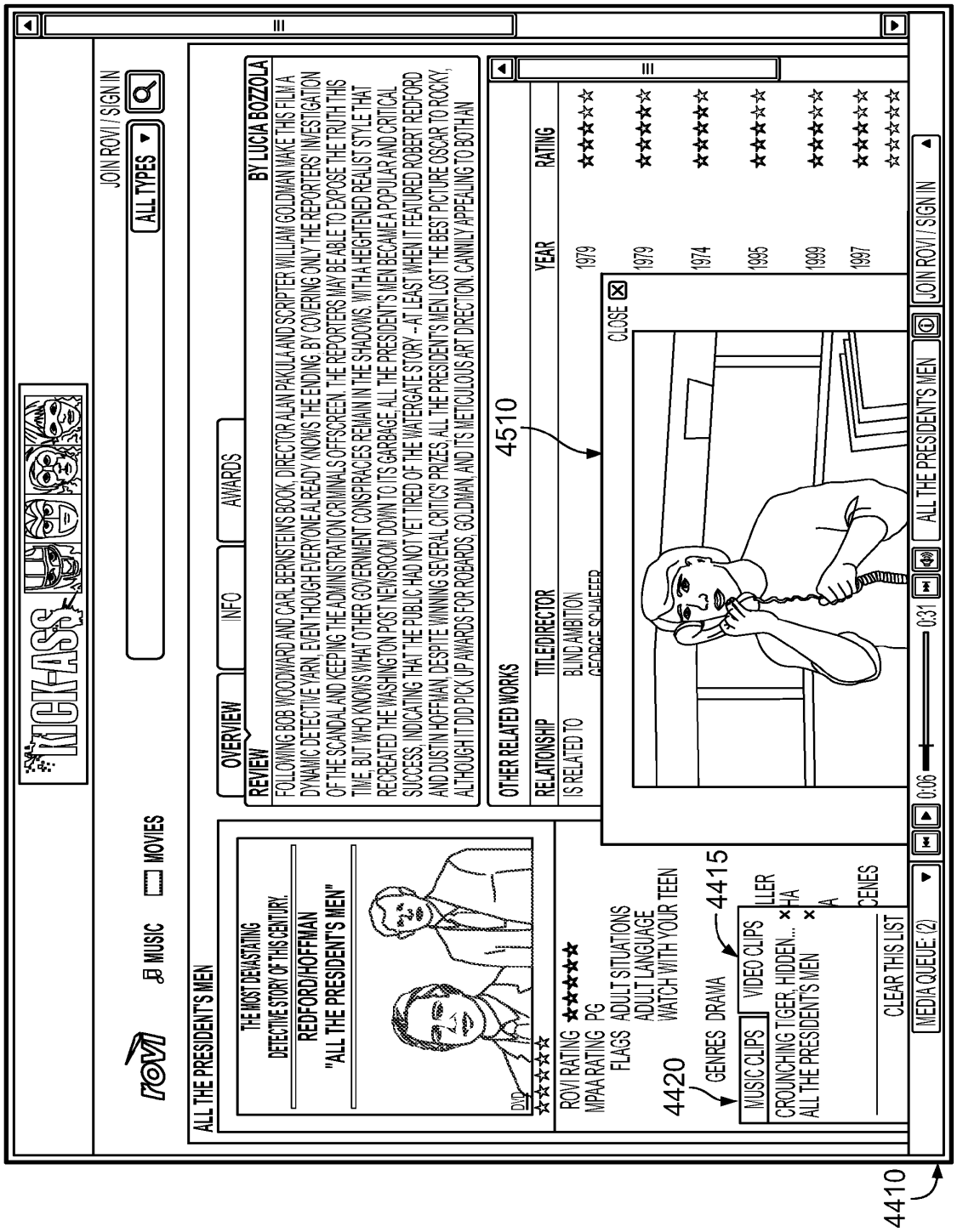

KICK-ASS
JOIN ROVI / SIGN IN
MUSIC
MOVIES
ALL TYPES
ALL THE PRESIDENT'S MEN
OVERVIEW
INFO
AWARDS
REVIEW
BY LUCIA BOZZOLA
FOLLOWING BOB WOODWARD AND CARL BERNSTEIN'S BOOK, DIRECTOR ALAN PAKULA AND SCRIPTER WILLIAM GOLDMAN MAKE THIS FILM A DYNAMIC DETECTIVE YARN. EVEN THOUGH EVERYONE ALREADY KNOWS THE ENDING, BY COVERING ONLY THE REPORTERS' INVESTIGATION OF THE SCANDAL AND KEEPING THE ADMINISTRATION CRIMINALS OFFSCREEN, THE REPORTERS MAY BE ABLE TO EXPOSE THE TRUTH THIS TIME, BUT WHO KNOWS WHAT OTHER GOVERNMENT CONSPIRACIES REMAIN IN THE SHADOWS. WITH A HEIGHTENED REALIST STYLE THAT RECREATED THE WASHINGTON POST NEWSROOM DOWN TO ITS GARBAGE, ALL THE PRESIDENT'S MEN BECAME A POPULAR AND CRITICAL SUCCESS, INDICATING THAT THE PUBLIC HAD NOT YET TIRED OF THE WATERGATE STORY - AT LEAST WHEN IT FEATURED ROBERT REDFORD AND DUSTIN HOFFMAN. DESPITE WINNING SEVERAL CRITICS' PRIZES, ALL THE PRESIDENT'S MEN LOST THE BEST PICTURE OSCAR TO ROCKY, ALTHOUGH IT DID PICK UP AWARDS FOR ROBARDS, GOLDMAN, AND ITS METICULOUS ART DIRECTION. CANNILY APPEALING TO BOTH AN
4510
OTHER RELATED WORKS
RELATIONSHIP
TITLE/DIRECTOR
YEAR
RATING
IS RELATED TO
BLIND AMBITION
GEORGE SCHAEFER
1979
1979
1974
1995
1999
1997
CLOSE
THE MOST DEVASTATING DETECTIVE STORY OF THIS CENTURY.
REDFORD/HOFFMAN
"ALL THE PRESIDENT'S MEN"
DVD
ROVI RATING
MPAA RATING PG
FLAGS ADULT SITUATIONS
ADULT LANGUAGE
WATCH WITH YOUR TEEN
4420
GENRES DRAMA
4415
MUSIC CLIPS
VIDEO CLIPS
CROUNCHING TIGER, HIDDEN...
ALL THE PRESIDENT'S MEN
CLEAR THIS LIST
MEDIA QUEUE (2)
0:06
0:31
ALL THE PRESIDENT'S MEN
JOIN ROVI / SIGN IN
4410

FIG. 45

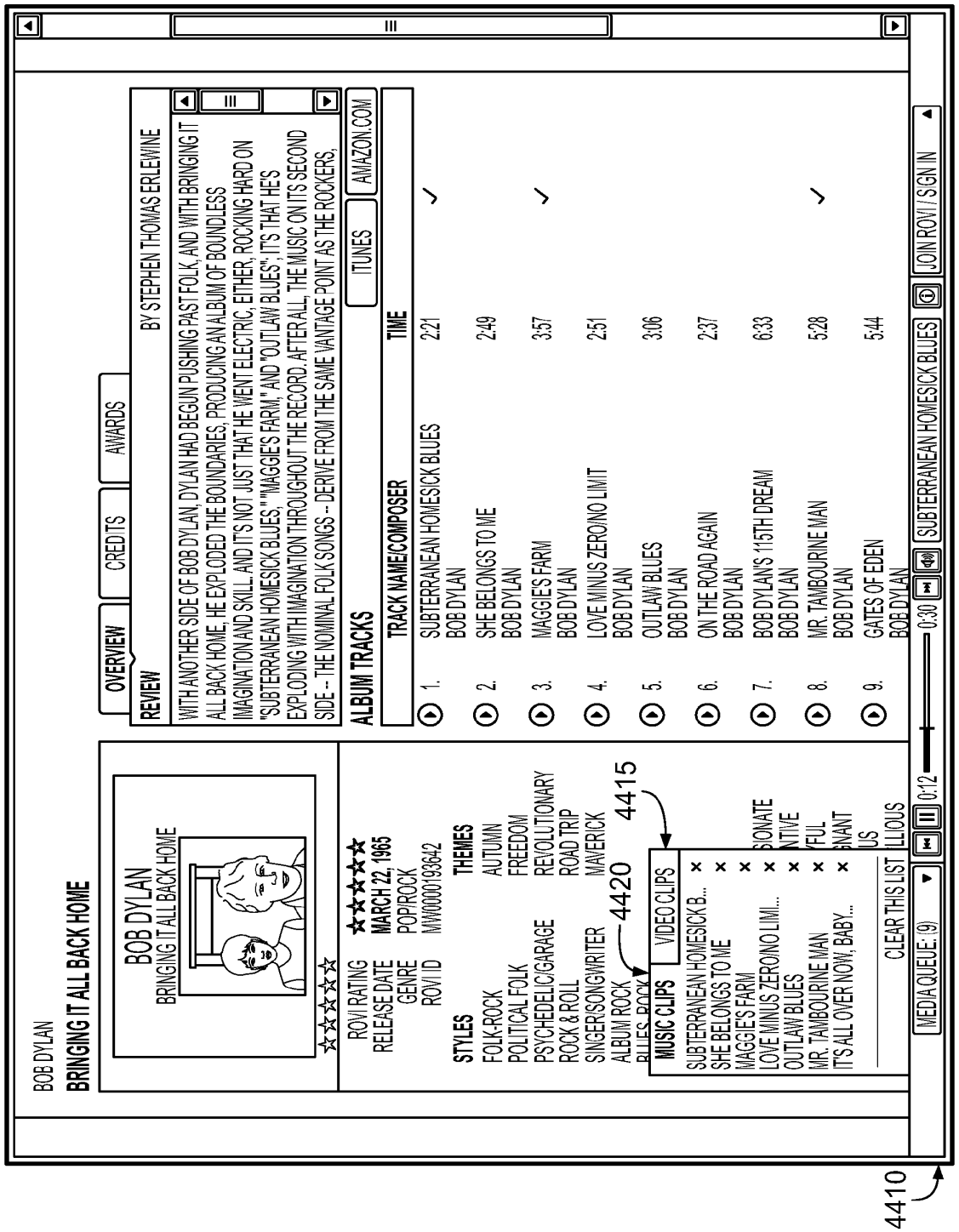

4410
BOB DYLAN
BRINGING IT ALL BACK HOME
BOB DYLAN
BRINGING IT ALL BACK HOME
ROVI RATING
RELEASE DATE MARCH 22, 1965
GENRE POP/ROCK
ROVI ID MW0000193842
STYLES
FOLK-ROCK
POLITICAL FOLK
PSYCHEDELIC/GARAGE
ROCK & ROLL
SINGER/SONGWRITER
ALBUM ROCK
BLUES ROCK
THEMES
AUTUMN
FREEDOM
REVOLUTIONARY
ROAD TRIP
MAVERICK
4420
MUSIC CLIPS
VIDEO CLIPS
SUBTERRANEAN HOMESICK B...
SHE BELONGS TO ME
MAGGIE'S FARM
LOVE MINUS ZERO/NO LIMI...
OUTLAW BLUES
MR. TAMBOURINE MAN
IT'S ALL OVER NOW, BABY...
CLEAR THIS LIST
4415
OVERVIEW
CREDITS
AWARDS
REVIEW
BY STEPHEN THOMAS ERLEWINE
WITH ANOTHER SIDE OF BOB DYLAN, DYLAN HAD BEGUN PUSHING PAST FOLK, AND WITH BRINGING IT ALL BACK HOME, HE EXPLODED THE BOUNDARIES, PRODUCING AN ALBUM OF BOUNDLESS IMAGINATION AND SKILL. AND IT'S NOT JUST THAT HE WENT ELECTRIC, EITHER, ROCKING HARD ON "SUBTERRANEAN HOMESICK BLUES," "MAGGIE'S FARM," AND "OUTLAW BLUES"; IT'S THAT HE'S EXPLODING WITH IMAGINATION THROUGHOUT THE RECORD. AFTER ALL, THE MUSIC ON ITS SECOND SIDE -- THE NOMINAL FOLK SONGS -- DERIVE FROM THE SAME VANTAGE POINT AS THE ROCKERS,
ALBUM TRACKS
ITUNES
AMAZON.COM
TRACK NAME/COMPOSER
TIME
1. SUBTERRANEAN HOMESICK BLUES
BOB DYLAN
2:21
2. SHE BELONGS TO ME
BOB DYLAN
2:49
3. MAGGIE'S FARM
BOB DYLAN
3:57
4. LOVE MINUS ZERO/NO LIMIT
BOB DYLAN
2:51
5. OUTLAW BLUES
BOB DYLAN
3:06
6. ON THE ROAD AGAIN
BOB DYLAN
2:37
7. BOB DYLAN'S 115TH DREAM
BOB DYLAN
6:33
8. MR. TAMBOURINE MAN
BOB DYLAN
5:28
9. GATES OF EDEN
BOB DYLAN
5:44
MEDIA QUEUE: (9)
0:12
0:30
SUBTERRANEAN HOMESICK BLUES
JOIN ROVI / SIGN IN

FIG. 46

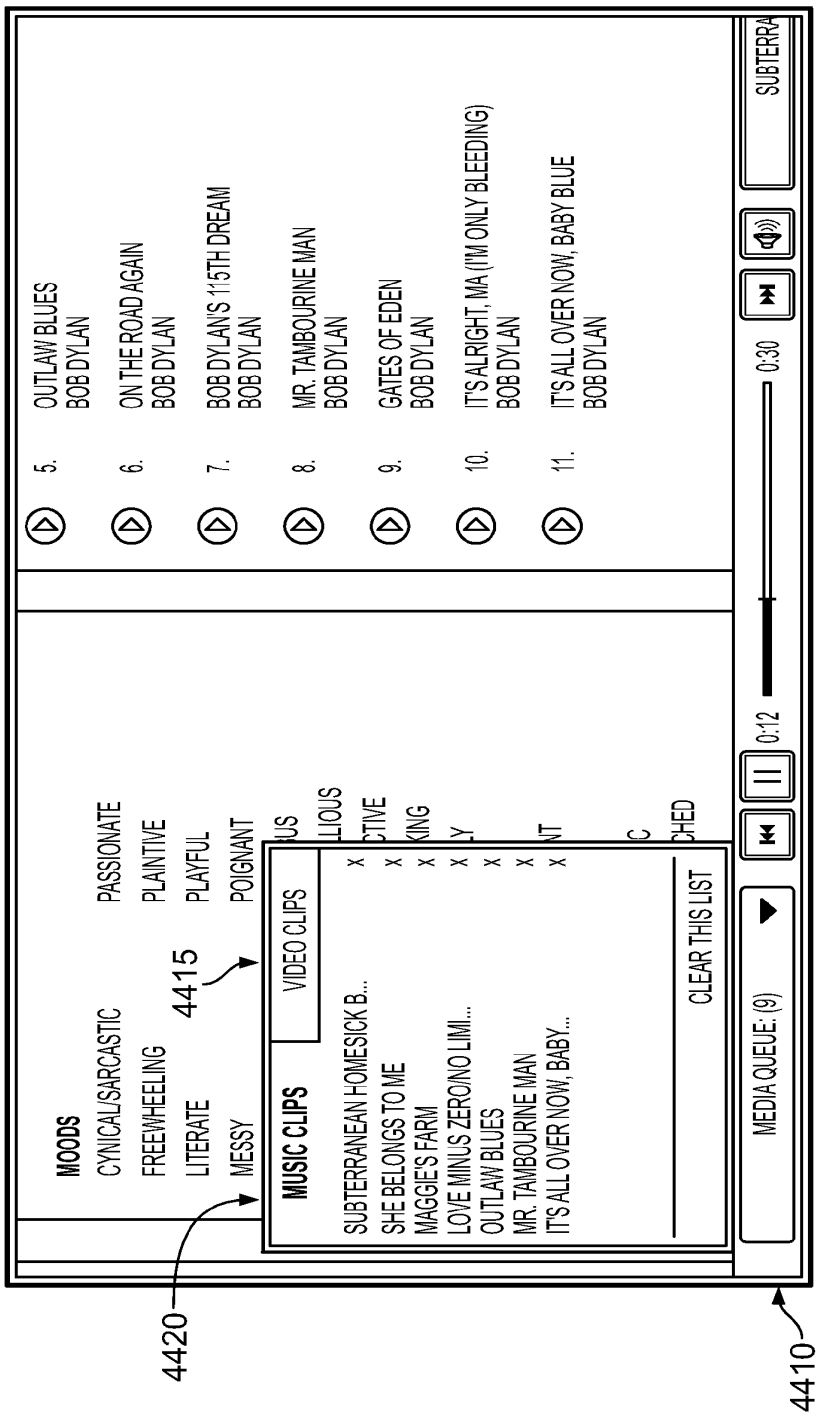

MOODS
CYNICAL/SARCASTIC
FREEWHEELING
LITERATE
MESSY
PASSIONATE
PLAINTIVE
PLAYFUL
POIGNANT
4415
MUSIC CLIPS
VIDEO CLIPS
SUBTERRANEAN HOMESICK B...
SHE BELONGS TO ME
MAGGIE'S FARM
LOVE MINUS ZERO/NO LIMI...
OUTLAW BLUES
MR. TAMBOURINE MAN
IT'S ALL OVER NOW, BABY...
CLEAR THIS LIST
MEDIA QUEUE: (9)
0:12
0:30
5. OUTLAW BLUES BOB DYLAN
6. ON THE ROAD AGAIN BOB DYLAN
7. BOB DYLAN'S 115TH DREAM BOB DYLAN
8. MR. TAMBOURINE MAN BOB DYLAN
9. GATES OF EDEN BOB DYLAN
10. IT'S ALRIGHT, MA (I'M ONLY BLEEDING) BOB DYLAN
11. IT'S ALL OVER NOW, BABY BLUE BOB DYLAN
SUBTERRA
4420
4410

FIG. 47

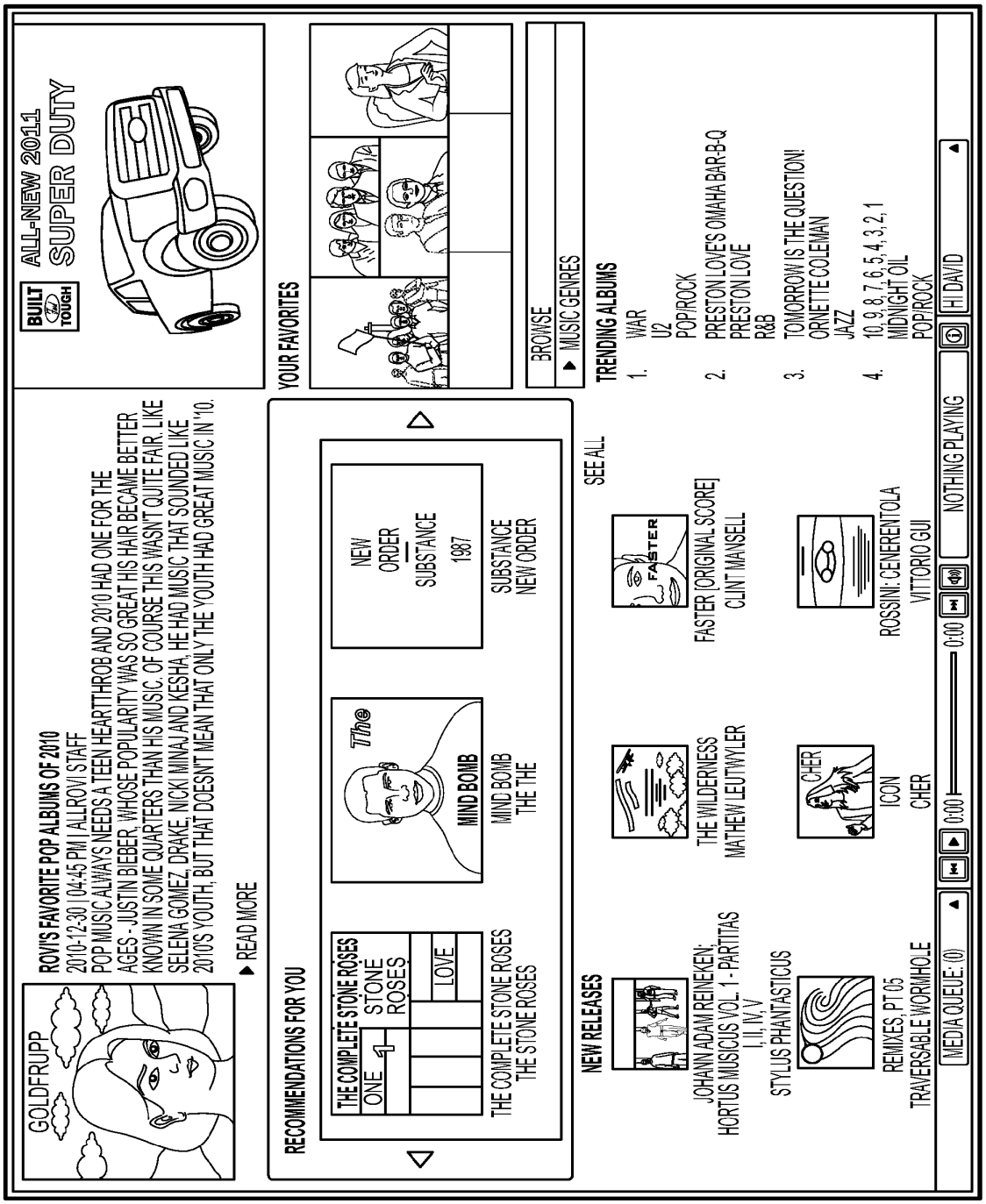

GOLDFRUPP
ROVI'S FAVORITE POP ALBUMS OF 2010
2010-12-30 | 04:45 PM | ALLROVI STAFF
POP MUSIC ALWAYS NEEDS A TEEN HEARTTHROB AND 2010 HAD ONE FOR THE AGES - JUSTIN BIEBER, WHOSE POPULARITY WAS SO GREAT HIS HAIR BECAME BETTER KNOWN IN SOME QUARTERS THAN HIS MUSIC. OF COURSE THIS WASN'T QUITE FAIR. LIKE SELENA GOMEZ, DRAKE, NICKI MINAJ AND KESHA, HE HAD MUSIC THAT SOUNDED LIKE 2010'S YOUTH, BUT THAT DOESN'T MEAN THAT ONLY THE YOUTH HAD GREAT MUSIC IN '10.
▶ READ MORE
BUILT TOUGH
ALL-NEW 2011
SUPER DUTY
RECOMMENDATIONS FOR YOU
THE COMPLETE STONE ROSES
ONE
STONE ROSES
LOVE
THE COMPLETE STONE ROSES
THE STONE ROSES
The
MIND BOMB
MIND BOMB
THE THE
NEW ORDER
SUBSTANCE 1987
SUBSTANCE
NEW ORDER
YOUR FAVORITES
BROWSE
▶ MUSIC GENRES
NEW RELEASES
SEE ALL
JOHANN ADAM REINEKEN:
HORTUS MUSICUS VOL. 1 - PARTITAS I, II, IV, V
STYLUS PHANTASTICUS
THE WILDERNESS
MATHEW LEUTMYLER
FASTER
FASTER [ORIGINAL SCORE]
CLINT MANSELL
REMIXES, PT 05
TRAVERSABLE WORMHOLE
ICON
CHER
ROSSINI: CENERENTOLA
VITTORIO GUI
TRENDING ALBUMS
1. WAR
U2
POP/ROCK
2. PRESTON LOVES OMAHA BAR-B-Q
PRESTON LOVE
R&B
3. TOMORROW IS THE QUESTION!
ORNETTE COLEMAN
JAZZ
4. 10, 9, 8, 7, 6, 5, 4, 3, 2, 1
MIDNIGHT OIL
POP/ROCK
MEDIA QUEUE: (0)
0:00
0:00
NOTHING PLAYING
HI DAVID

FIG. 48

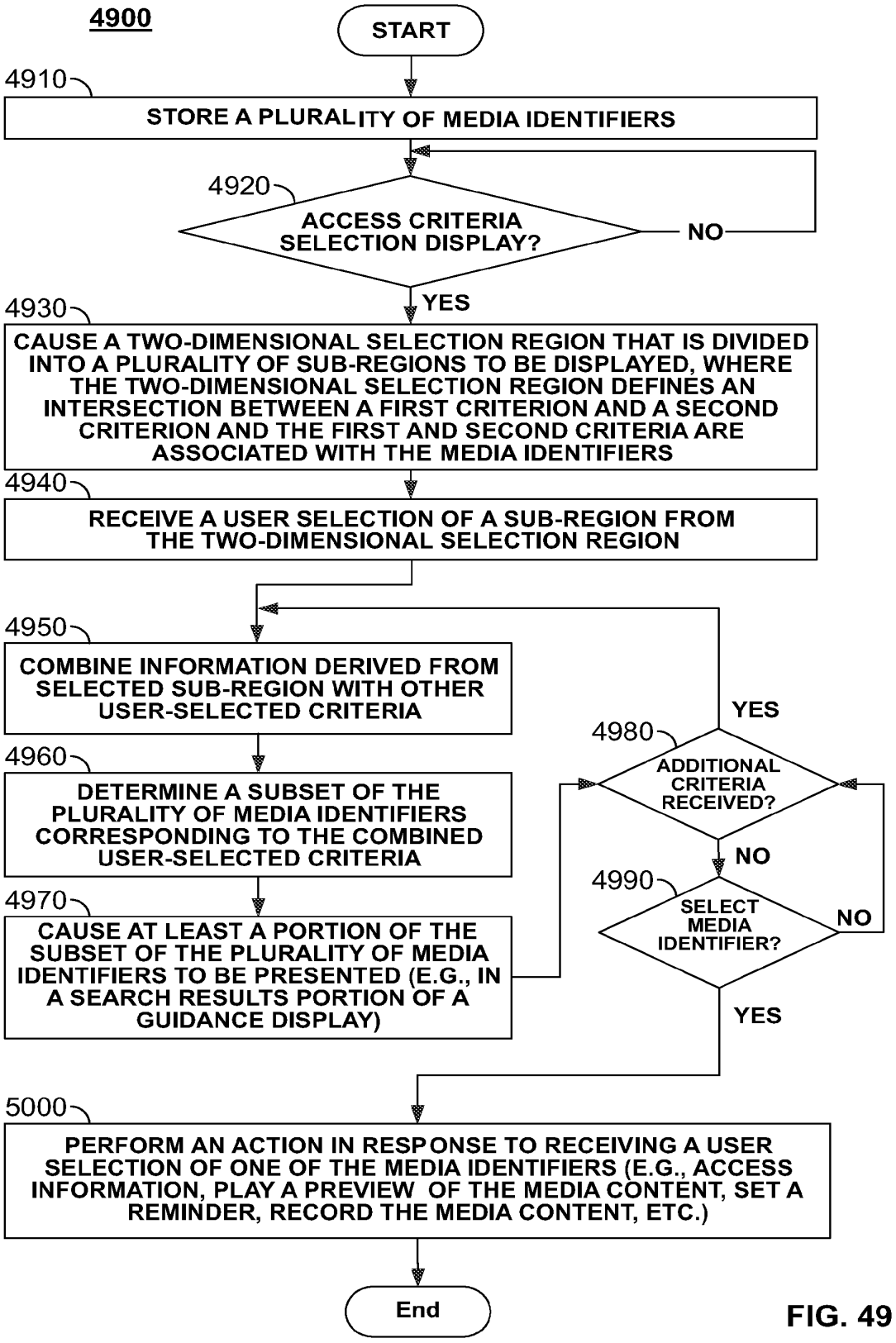

4900
START
4910
STORE A PLURALITY OF MEDIA IDENTIFIERS
4920
ACCESS CRITERIA SELECTION DISPLAY?
NO
YES
4930
CAUSE A TWO-DIMENSIONAL SELECTION REGION THAT IS DIVIDED INTO A PLURALITY OF SUB-REGIONS TO BE DISPLAYED, WHERE THE TWO-DIMENSIONAL SELECTION REGION DEFINES AN INTERSECTION BETWEEN A FIRST CRITERION AND A SECOND CRITERION AND THE FIRST AND SECOND CRITERIA ARE ASSOCIATED WITH THE MEDIA IDENTIFIERS
4940
RECEIVE A USER SELECTION OF A SUB-REGION FROM THE TWO-DIMENSIONAL SELECTION REGION
4950
COMBINE INFORMATION DERIVED FROM SELECTED SUB-REGION WITH OTHER USER-SELECTED CRITERIA
4960
DETERMINE A SUBSET OF THE PLURALITY OF MEDIA IDENTIFIERS CORRESPONDING TO THE COMBINED USER-SELECTED CRITERIA
4970
CAUSE AT LEAST A PORTION OF THE SUBSET OF THE PLURALITY OF MEDIA IDENTIFIERS TO BE PRESENTED (E.G., IN A SEARCH RESULTS PORTION OF A GUIDANCE DISPLAY)
4980
ADDITIONAL CRITERIA RECEIVED?
YES
NO
4990
SELECT MEDIA IDENTIFIER?
NO
YES
5000
PERFORM AN ACTION IN RESPONSE TO RECEIVING A USER SELECTION OF ONE OF THE MEDIA IDENTIFIERS (E.G., ACCESS INFORMATION, PLAY A PREVIEW OF THE MEDIA CONTENT, SET A REMINDER, RECORD THE MEDIA CONTENT, ETC.)
End

FIG. 49

```
<?xml version="1.0" encoding="ISO-8859-1" ?>

<music_data>
        <item1=track1>
                <artist>"John Lee Hooker"</artist>
                <genre>blues</genre>
                <subgenre>country_blues, harmonic_blues</subgenre>
                <record_date>1997</record_date>
                <track title>"Alone"</listing>
                <content_type>music</content_type>
                <mood_keywords>negative, sullen, somber</mood_keywords>
                <mood_bright>30%</mood_bright>
                <mood_dark>70%</mood_dark>
                <mood_positive>5%</mood_positive>
                <mood_negative>95%</mood_negative>
                <theme>jealousy, introspection</theme>
        </item1>

        <item2=movie1>
                <title>"The Pianist"</title>
                <synopsis>"Filmmaker Roman Polanski…</synopsis>
                <cast>"Adrien Brody" "Thomas Kretschmann" ... </cast>
                <date>2002</date>
                <genre>drama</genre>
                <keyword>escape, Holocaust, occupation, pianist</keyword>
                <mood1>poignant</mood1>
                <mood2>austere</mood2>
                <mood3>somber</mood3>
                <mood4>cathartic</mood4>
                <mood5>gloomy</mood5>
                <mood6>reflective</mood6>
        </item2>

</listing_data>

<queue_data>
                <position1>track_12345</position1>
                <position2>clip_23456</position2>
                <position3>clip_78901</position 3>
</queue_data>
```

FIG. 50

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

(72) Inventor; and
(71) Applicant *(for US only)*: **ZHANG, Xin** [CN/CN]; No. 11 Jiangxi Road, Qingdao, Shandong 266071 (CN).

(72) Inventors: **SHOYKHER, Mikhail**; 32 Bentoak Crescent, Thornhill, Ontario L4J8S5 (CA). **MILANO, Eduardo Diego Torres**; 629 Marley Road, Burlington, Ontario L7T 3R8 (CA). **VISOSKY, John S.**; 11 Lady Diana Court, Gormley, Ontario L0H 1G0 (CA). **CHEN, Tong**; 19 Campden Place, Markham, Ontario L6C 2J4 (CA). **CAO, Zhe**; Hisense Key Lab, Jamdeo, No. 11 Jiangxi Road, Qingdao, Shandong 266071 (CN).

(74) Agent: **LIU, SHEN & ASSOCIATES**; A0601, Huibin Building, No.8 Beichen Dong Street, Chaoyang District, Beijing 100101 (CN).

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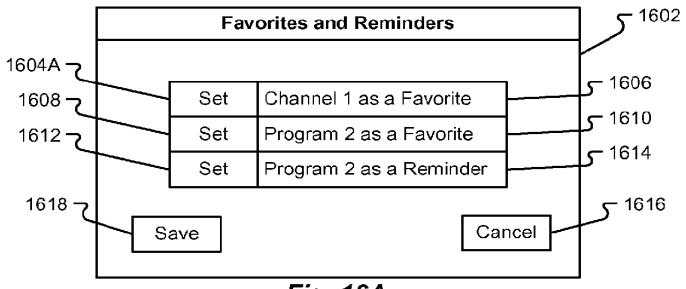


Fig. 16A

(57) Abstract: An intelligent TV is provided. The intelligent TV provides a management system for favorites and reminders. Selecting a program, associated with a television channel, allows a user to be presented with a list of options, such as making the program a favorite, the associated channel a favorite, or setting a reminder for programs of a like title, channel, and time.

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MANAGEMENT OF PROGRAM INFORMATION AND REMINDERS

CROSS REFERENCE TO RELATED APPLICATION

The present application claims the benefits of and priority, under 35 U.S.C. § 119(e), to U.S. Provisional Application Serial Nos. 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"; and 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

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.

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.

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

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.

The embodiments herein, include a method, comprising: presenting, on a television operable to present live television content, a programming guide, the programming guide, further comprising, a number of television channels and a number of programs associated with ones of the number of television channels; receiving a selection from a user indicating one of (a) a reminder and (b) a favorite; upon determining the selection indicates the reminder, searching the programming guide for matches between the first selected program and a number of future programs by determining equivalency of name and channel; upon determining that one of the number of future programs that match the first selected program will begin within a first predetermined time, displaying a reminder dialog; and removing the reminder dialog upon the reminder dialog receiving one of (a) a second user input selecting the one of the future programs to be presented by the television, (b) the second user input selecting a cancel operation, and (c) a signal indicating the occurrence of no user input within a second predetermined time.

In another embodiment, a television is disclosed, comprising: a processor to execute instructions; a data storage to store at least one of data and instructions; a network interface to receive television content information, the television content information further comprising, a programming guide with a number of television channels and a number of programs associated with ones of the number of television channels; and whereby the processor is further operable to (a) cause the television to present the programming guide, (b) receive a first user input associated with a first selected program of the number of programs, the first user input indicating a selection of one of (i) a reminder and (ii) a favorite; (c) search the programming guide for matches between the first selected program and a number of future programs by determining equivalency of name and channel; (d) upon determining that one of the number of future programs that match the first selected program will begin within a first predetermined time, display a reminder dialog; and (e) remove the reminder dialog upon the reminder dialog receiving one of (i) a second user input selecting the one of the future programs to be presented by the television, (ii) the second user input selecting a cancel operation, and (iii) a signal indicating the occurrence of no user input within a second predetermined time.

In another embodiment, a non-transitory medium is disclosed with instructions that when executed cause a machine to perform: presenting, on a television operable to present live television content, a programming guide, the programming guide, further comprising, a number of television channels and a number of programs associated with ones of the number of television channels; receiving a first user input associated with a first selected program of the number of programs, the first user input indicating a selection of one of (a) a reminder and (b) a favorite; searching the programming guide for matches between the first selected program and a number of future programs by determining equivalency of name and channel; upon determining that one of the number of future programs that match the first selected program will begin within a first predetermined time, displaying a reminder dialog; and removing the reminder dialog upon the reminder dialog receiving one of (a) a second user input selecting the one of the future programs to be presented by the television, (b) the second user input selecting a cancel operation, and (c) a signal indicating the occurrence of no user input within a second predetermined time.

The present disclosure can provide a number of advantages depending on the particular aspect, embodiment, and/or configuration. One advantage is the unified presentation of operations for reminders and favorites to a user.

These and other advantages will be apparent from the disclosure.

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.

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.

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."

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.

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

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.

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.).

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 forms 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.

The term "enhanced television" (ETV) 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.

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.

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; and iWanTV! in the Philippines.

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.

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.

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.

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.

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.

The term "Intelligent TV," as used herein, refers to a television configured to provide one or more intuitive user interfaces and interactions based on a unique application platform and architecture. The Intelligent TV utilizes processing resources associated with the television to integrate Internet connectivity with parallel application functionality. This integration allows a user the ability to intuitively access various sources of media and content (e.g., Internet, over-the-top content, on-demand streaming media, over-the-air broadcast media, and/or other forms of information) via the Intelligent TV in a quick and efficient manner. Although the Intelligent TV disclosed herein may comprise one or more components of a "smart TV," it is an aspect of the Intelligent TV to provide expanded intuitive user interaction capability for navigating and executing the various features of the television. A "smart TV," sometimes referred to as a 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 smart TV 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. As can be appreciated, the Intelligent TV encompasses a broader range of technology than that of the smart TV defined above.

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.

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

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.

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.

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 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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

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.

The term "satellite TV" refers to television programming delivered by the means of communications satellites 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.

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.

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

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.

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.

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.

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(f). 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.

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

Fig. 1A includes a first view of an embodiment of an environment of an intelligent television;

Fig. 1B includes a second view of an embodiment of an environment of an intelligent television;

Fig. 2A includes a first view of an embodiment of an intelligent television;

Fig. 2B includes a second view of an embodiment of an intelligent television;

Fig. 2C includes a third view of an embodiment of an intelligent television;

Fig. 2D includes a fourth view of an embodiment of an intelligent television;

Fig. 3 is a block diagram of an embodiment of the hardware of an intelligent television;

Fig. 4 is a block diagram of an embodiment of the intelligent television software and/or firmware;

Fig. 5 is a second block diagram of an embodiment of the intelligent television software and/or firmware;

Fig. 6 is a third block diagram of an embodiment of the intelligent television software and/or firmware;

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

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

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

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

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

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

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

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

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

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

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

Fig. 14 is a block diagram of an embodiment of a program management and reminder system;

Fig. 15 illustrates one embodiment of a channel displayed on intelligent TV;

Figs. 16A-16B illustrate one set of interactions upon a particular program, such as program 2 of Fig. 15;

Figs. 17A-17B illustrate a flowchart providing one embodiment of a process for managing favorites and reminders; and

Fig. 18 illustrates one embodiment of a reminder dialog.

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

Presented herein are embodiments of a device. The device can be a network-enabled 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.

Intelligent Television (TV) Environment:

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 100 can be used to enhance the user interactive experience whether at home or at work.

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.

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.

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).

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 to connect via cellular base antenna 142 to telephone networks operated by telephone company 146, and by using a telephone line 120 to connect to telephone networks operated by telephone company 146. These connections 104 enable the Intelligent TV 100 to access one or more communication networks 132. 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 a 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.

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.

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 132 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 an online community (e.g., Facebook™, Twitter™, LinkedIn™, Pinterest™, Google+™, 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.

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™, or 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.

Intelligent TV:

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.

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.

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.

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.

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.

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.

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.

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.

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.

Hardware Features:

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.

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.

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.

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.

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.

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.

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.

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 368 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.

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.

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.

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.

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).

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 314 may be provided. Like the memory 308, the data storage 314 may comprise a solid state memory device or devices. Alternatively or in addition, the data storage 314 may comprise a hard disk drive or other random access memory.

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.

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.

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.

Communication between components of the Intelligent TV 100 is provided by bus 322. Bus 322 may comprise one or more physical buses for control, addressing, and/or data

transmission. Bus 322 may be parallel, serial, a hybrid thereof, or other technology.

Firmware and Software:

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.

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.

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 hardware abstraction layer (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.

The TV services hardware abstraction layer library 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 hardware abstraction layer.

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.

The application framework 412 can include a general abstraction for providing functionality that can be selected by one or more applications 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 components 448.

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 444 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.

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.

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.

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.

The media center application 460 can provide applications 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.

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.

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 event 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 event dispatcher 508 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.

The applications layer 416 can include a user interface application 468 and/or a silo application 512. The applications layer 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 468 can include a silo manager 532, a panel manager 536, and one or more types of panels 516-528. 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.

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.

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.

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.

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 subservices 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 660 may obtain thumbnail information from one of the data subservices 620, 624, 628 and store that information in the thumbnails database 668. Further, the thumbnail cache manager 660 may extract or retrieve that information from the thumbnails database 668 to provide to one of the data subservices 620, 624, 628.

An exemplary content aggregation architecture 1300 is shown in Fig. 13. The architecture can include a user interface layer 1304 and a content aggregation layer 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.

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).

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 1340, such as an Android application interface and digital device interfaces.

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.

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 by an action associated with 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.

Remote Control:

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 visual indicia 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.

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.

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).

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.

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).

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).

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.

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.

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.

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.

The window 1100 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 process can be done in an nonintrusive 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.

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™, Google+™, 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.

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.).

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).

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).

Fig. 14 is a block diagram of an embodiment of a program management and reminder system. Intelligent TV 100 contains, inter alia, processor 364, data storage 314 and network connection 1402. As illustrated with respect to Fig. 1A, network connection 104 is variously embodied and may include interfaces to wired 108 or wireless 112 means to connect, via network 132, to EPG 136.

In one embodiment, EPG 136 is accessed from a remote source for downloading a number of channels 1404 to intelligent TV 100. Processor 364 may then perform a number of operations on the programming data and utilize data storage 314 for the storage of EPG 136 data or portions or derivatives thereof.

Fig. 15 illustrates one embodiment of a channel 1404A displayed on intelligent TV 100. Channel 1404A further comprises a number of programs 1502. In a further embodiment, programs 1502 are arranged in order of presentation time. In another embodiment, programs 1502 are arranged in alphabetical order. Ones of programs 1502 may represent identical programming content, individual programs of a series, or distinct programs.

In other embodiments, intelligent TV 100 displays a number of channels 1404A-1404n (only channel 1404A is shown for clarity). In one embodiment, intelligent TV scrolls channels 1404 vertically and programs 1502 horizontally.

In one embodiment, a user has selected one particular program – program 2 (1502B) – for further interaction.

Figs. 16A-16B illustrate one set of interactions upon a particular program, such as

program 2 (1502B) of Fig. 15. Dialog 1602 displays on intelligent TV 100. For the purposes of avoiding undue complexity, Figs. 16A-16B are discussed herein with reference to a user selecting program 2 (1502B). However, it should be noted that substantially any programs 1502, on any channel 1404, may be selected and processed as contemplated in the embodiments herein. Toggle buttons 1604, 1608 and 1612 provide on/off, set/clear, or other operations with associated operation descriptions 1606, 1610, and 16014 respectively.

In one embodiment, as illustrated by Fig. 16A, program 2 (1502B) is selected. Program 2 (1502B) is a program to be presented and/or is being presented on channel 1 (1404A). In one embodiment, program 2 (1502B) is not a favorite or a reminder and channel 1 (1404A) is not a favorite. Fig. 16A then displays to provide the user with the option of setting toggle button 1604A, 1608, 1612 to set channel 1 (1404A) as a favorite, program 2 (1502B) as a favorite, or program 2 (1502B) as a reminder. Optionally, cancel button 1616 may be used to terminate dialog 1602 without change. As a further option, save button 1618 terminates dialog 1602 and preserves any changes made. In a further option, save and cancel operations are provide by user interaction with remote control 700.

Upon the user selecting toggle button 1604A, button 1604B reflects in the input as set and, as illustrated in Fig. 16B, is now operable to be selected to clear channel 1 (1404A) as a reminder. In other embodiments, the user selecting toggle button 1608 and/or 1612 toggles settings for program 2 (1502B) as a favorite and setting program 2 (1502) as a reminder, respectively.

In another embodiment, channels and programs identified as favorites and/or programs with an associated reminder are tagged with an icon for ready identification of such within the programming display or other display.

Fig. 17 illustrates flowchart 1700 providing one embodiment of a process for managing favorites and reminders. Step 1702 begins with presentation of a programming guide, such as EPG 136 on intelligent TV 100. Step 1704 receives a selection upon a program and/or channel 1704. Ste p 1706 determines if the selection is associated with a favorite or a reminder. If step 1706 determines the selection is associated with a reminder, processing continues with steps illustrated in Fig. 17B. If step 1706 determines the selection is associated with reminders, processing continues with step 1708, which stores the reminder, such as in

data storage 314.

Step 1710 searches the programming guide for matches. Searching step 1710 may be performed periodically, upon request, and/or upon receiving a signal indicating updated programming information is available. The user is then presented with a display by step 1712.

The display opened in step 1712 is closed upon step 1714 determining a "close" event occurred. A close event include, but is not limited to, a timeout, whereby a certain amount of time has lapsed without any user input or without a specific user input. A "cancel" or "exit" button is pressed on remote 700 or a "cancel" button is selected on a dialog, such as illustrated by cancel button 1616. If a close event is detected, processing continues to step 1716 to close the dialog otherwise processing continues to 1712 and the dialog is continued to be displayed.

Fig. 17B continues processing from step 1706 determining the selection is for favorites. Step 1717 presents a second dialog to a user. In one embodiment, the second dialog solicits a user selection of the channel or the program to receive "favorite" status. Step 1722 determines if the response is for a program or a channel. If channel, processing continues to step 1726 to set the channel as a favorite. If program, processing continues to step 1724 to set the program as the favorite.

Fig. 18 illustrates one embodiment of reminder dialog 1802. Various rules may be implemented to display reminders. In the embodiment illustrated program 1 (1806) and program 2 (1810) have a reminder set and are each beginning at the same, or substantially the same, time. The user is presented with options within dialog 1802 and provided the opportunity to select program 1 by selecting button 1804 or program 2 by selecting button 1808. If the user does not make any selection within a period of time, such as by the time the program starts or within 5 minutes after the program begins, dialog 1802 may close without any further action by the user. If the user does select button 1804 or 1808, intelligent TV 100 presents the program to the user and closes dialog 1802. In a further embodiment, dialog 1802 may be displayed for an additional time after intelligent TV 100 is powered on. For example, dialog 1802 may be displayed within 10 minutes of a program beginning, for which a reminder is set, upon intelligent TV being powered on.

In another embodiment, additional programs have associated reminders and dialog 1802 presents a portion of the programs is a scrollable format.

The exemplary systems and methods of this disclosure have been described in relation to managing favorites or reminders. 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.

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 an entertainment system 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.

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.

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.

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.

For example in one alternative embodiment, a non-modal window is provided for setting and managing favorites and reminders.

In another alternative embodiment, the non-modal window is external to intelligent TV 100.

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.

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.

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.

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.

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.

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.

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.

CLAIMS

1. A method, comprising:

presenting, on a television operable to present live television content, a programming guide, the programming guide, further comprising, a number of television channels and a number of programs associated with ones of the number of television channels;

receiving a selection from a user indicating one of (a) a reminder and (b) a favorite;

upon determining the selection indicates the reminder, searching the programming guide for matches between the first selected program and a number of future programs by determining equivalency of name and channel;

upon determining that one of the number of future programs that match the first selected program will begin within a first predetermined time, displaying a reminder dialog; and

removing the reminder dialog upon the reminder dialog receiving one of (a) a second user input selecting the one of the future programs to be presented by the television, (b) the second user input selecting a cancel operation, and (c) a signal indicating the occurrence of no user input within a second predetermined time.

2. The method of claim 1, further comprising, upon the selection indicating the favorite, determining that the input is associated with one of the number of television channels which is not a favorite and one of the number of programs which is not a favorite and presenting, on the television, a dialog soliciting the user to (a) set the one of the number of television channels as the favorite and (b) set the one of the number of programs as the favorite.

3. The method of claim 1, further comprising, upon the selection indicating the favorite, determining that the input is associated with one of the number of television channels which is a favorite and one of the number of programs which is a favorite and presenting, on the television, a dialog soliciting the user to (a) clear the one of the number of television channels as the favorite and (b) set the one of the number of programs as the favorite.

4. The method of claim 1, further comprising, upon the selection indicating the favorite,

determining that the input is associated with one of the number of television channels which is not a favorite and one of the number of programs which is a favorite and presenting, on the television, a dialog soliciting the user to (a) set the one of the number of television channels as the favorite and (b) clear the one of the number of programs as the favorite.

5. The method of claim 1, further comprising, upon the selection indicating the favorite, determining that the input is associated with one of the number of television channels which is a favorite and one of the number of programs which is not a favorite and presenting, on the television, a dialog soliciting the user to (a) clear the one of the number of television channels as the favorite and (b) set the one of the number of programs as the favorite.

6. The method of claim 1, further comprising:

wherein the selection indicates the reminder and the second user input indicates the one of the number of programs to be reminded, searching the programming guide for matches between the second selected program and a number of future programs, a match being determined by commonality of name and channel; and

upon determining that one of the future programs that match the first selected program and second selected program will begin with a first predetermined time, displaying a reminder dialog.

7. The method of claim 6, further comprising:

storing the reminder in a data storage portion of the television; and

upon determining the reminder is in the past, deleting the reminder.

8. The method of claim 1, wherein the match, further comprises, equivalency of time of day.

9. A television, comprising:

a processor to execute instructions;

a data storage to store at least one of data and instructions;

a network interface to receive television content information, the television content information further comprising, a programming guide with a number of television channels and a number of programs associated with ones of the number of television channels; and

whereby the processor is further operable to (a) cause the television to present the programming guide, (b) receive a first user input associated with a first selected program of the number of programs, the first user input indicating a selection of one of (i) a reminder and (ii) a favorite; (c) search the programming guide for matches between the first selected program and a number of future programs by determining equivalency of name and channel; (d) upon determining that one of the number of future programs that match the first selected program will begin within a first predetermined time, display a reminder dialog; and (e) remove the reminder dialog upon the reminder dialog receiving one of (i) a second user input selecting the one of the future programs to be presented by the television, (ii) the second user input selecting a cancel operation, and (iii) a signal indicating the occurrence of no user input within a second predetermined time.

10. The television of claim 9, wherein the processor is further operable to, upon the selection indicating the favorite, determine that the input is associated with one of the number of television channels which is not a favorite and one of the number of programs which is not a favorite, and present a dialog to solicit the user to (a) set the one of the number of television channels as the favorite and (b) set the one of the number of programs as the favorite.

11. The television of claim 9, wherein the processor is further operable to, upon the selection indicating the favorite, determine that the input is associated with one of the number of television channels which is a favorite and one of the number of programs which is not a favorite, and present a dialog to solicit the user to (a) clear the one of the number of television channels as the favorite and (b) set the one of the number of programs as the favorite.

12. The television of claim 9, wherein the processor is further operable to, upon receive the selection indicating the favorite, determine that the input is associated with one of the number of television channels which is not a favorite and one of the number of programs

which is a favorite, and present a dialog to solicit the user to (a) set the one of the number of television channels as the favorite and (b) clear the one of the number of programs as the favorite.

13. The television of claim 9, wherein the processor is further operable to, upon receive the selection indicating the favorite, determine that the input is associated with one of the number of television channels which is a favorite and one of the number of programs which is a favorite, and present a dialog to solicit the user to (a) clear the one of the number of television channels as the favorite and (b) clear the one of the number of programs as the favorite.

14. The television of claim 9, further comprising:

wherein the processor is further operable to determine that the selection indicates a favorite and the second user input indicates the one of the number of programs as the favorite and search the programming guide for matches between the second selected program and a number of future programs, a match being determined by commonality of name and channel; and

determine that one of the future programs that match the first selected program and second selected program will begin with a first predetermined time, displaying a reminder dialog.

15. The television of claim 14, further comprising, the processor being operable to (a) store, in the data storage, the reminder and (b) determine the reminder is in the past and deleting the reminder.

16. A non-transitory medium with instructions that when executed cause a machine to perform:

presenting, on a television operable to present live television content, a programming guide, the programming guide, further comprising, a number of television channels and a number of programs associated with ones of the number of television channels;

receiving a first user input associated with a first selected program of the number of programs, the first user input indicating a selection of one of (a) a reminder and (b) a favorite;

searching the programming guide for matches between the first selected program and a number of future programs by determining equivalency of name and channel;

upon determining that one of the number of future programs that match the first selected program will begin within a first predetermined time, displaying a reminder dialog; and

removing the reminder dialog upon the reminder dialog receiving one of (a) a second user input selecting the one of the future programs to be presented by the television, (b) the second user input selecting a cancel operation, and (c) a signal indicating the occurrence of no user input within a second predetermined time.

17. The instructions of claim 16, further comprising, upon the selection indicating the favorite, determining that the input is associated with one of the number of television channels which is not a favorite and one of the number of programs which is not a favorite and presenting, on the television, a dialog soliciting the user to (a) set the one of the number of television channels as the favorite and (b) set the one of the number of programs as the favorite.

18. The instructions of claim 16, further comprising:

wherein the selection indicates a favorite and the second user input indicates the one of the number of programs as the favorite, searching the programming guide for matches between the second selected program and a number of future programs, a match being determined by commonality of name and channel; and

upon determining that one of the future programs that match the first selected program and second selected program will begin with a first predetermined time, displaying a reminder dialog.

19. The instructions of claim 18, further comprising:

storing the reminder in a data storage portion of the television; and

upon determining the reminder is in the past, deleting the reminder.

20. The instructions of claim 16, wherein the match, further comprises, equivalency of time of day.

5

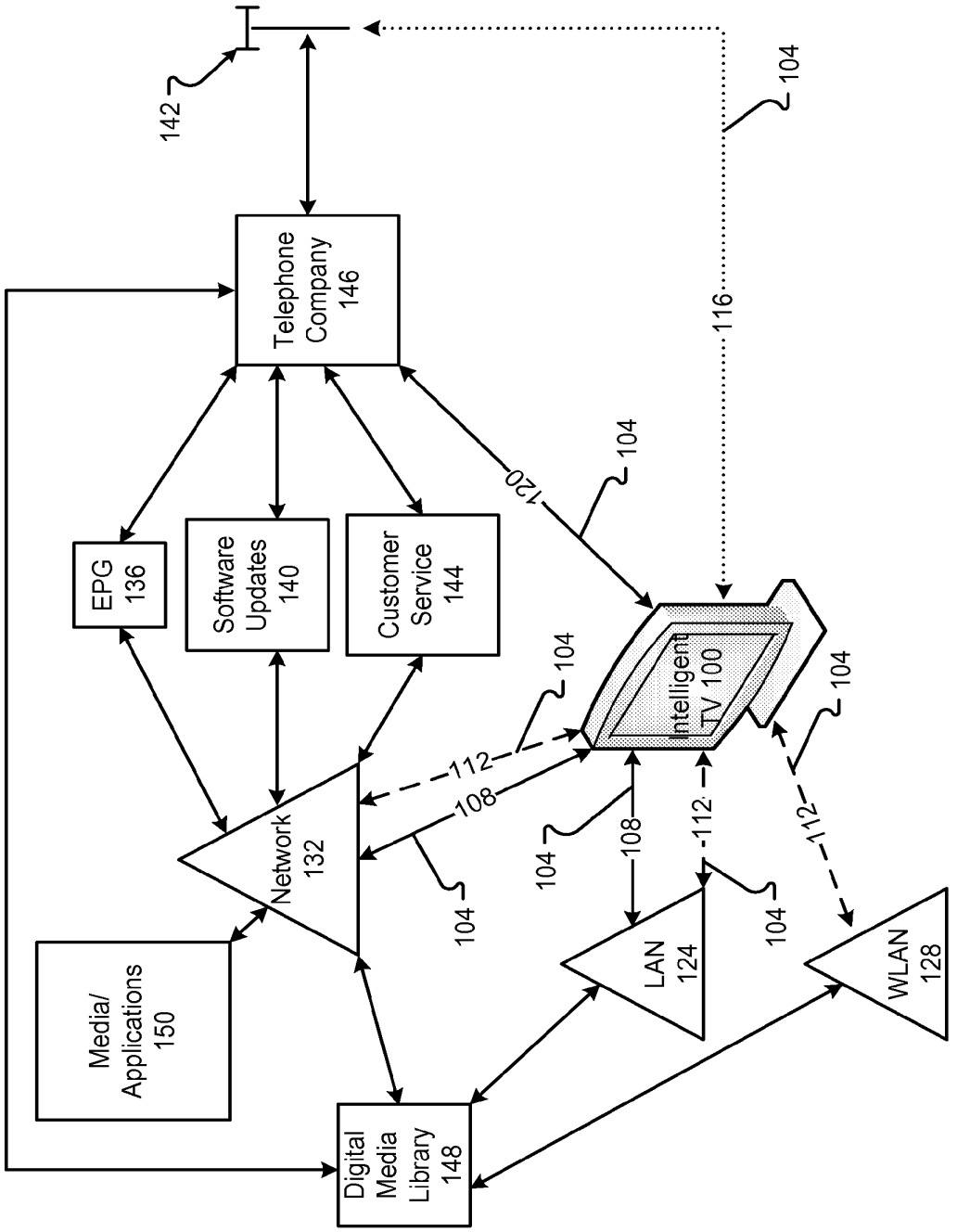

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Telephone Company 146
116
120
104
EPG 136
Software Updates 140
Customer Service 144
Intelligent TV 100
104
104
112
108
Network 132
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104
108
112
112
104
104
Media/ Applications 150
LAN 124
WLAN 128
Digital Media Library 148

Fig. 1A

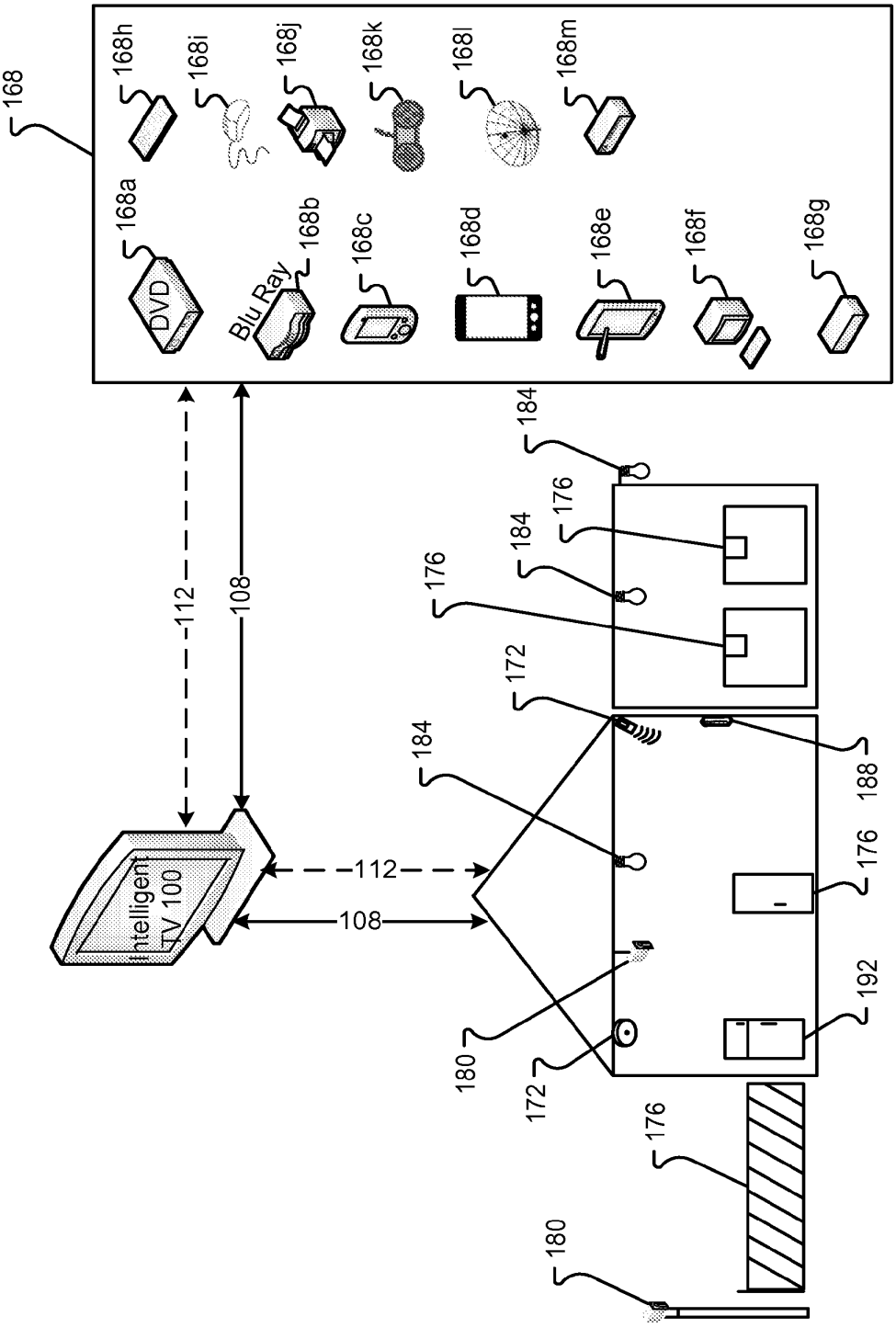

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168j
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168l
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DVD
168b
Blu Ray
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168d
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168f
168g
112
108
Intelligent TV 100
184
176
172
188
180
192

Fig. 1B

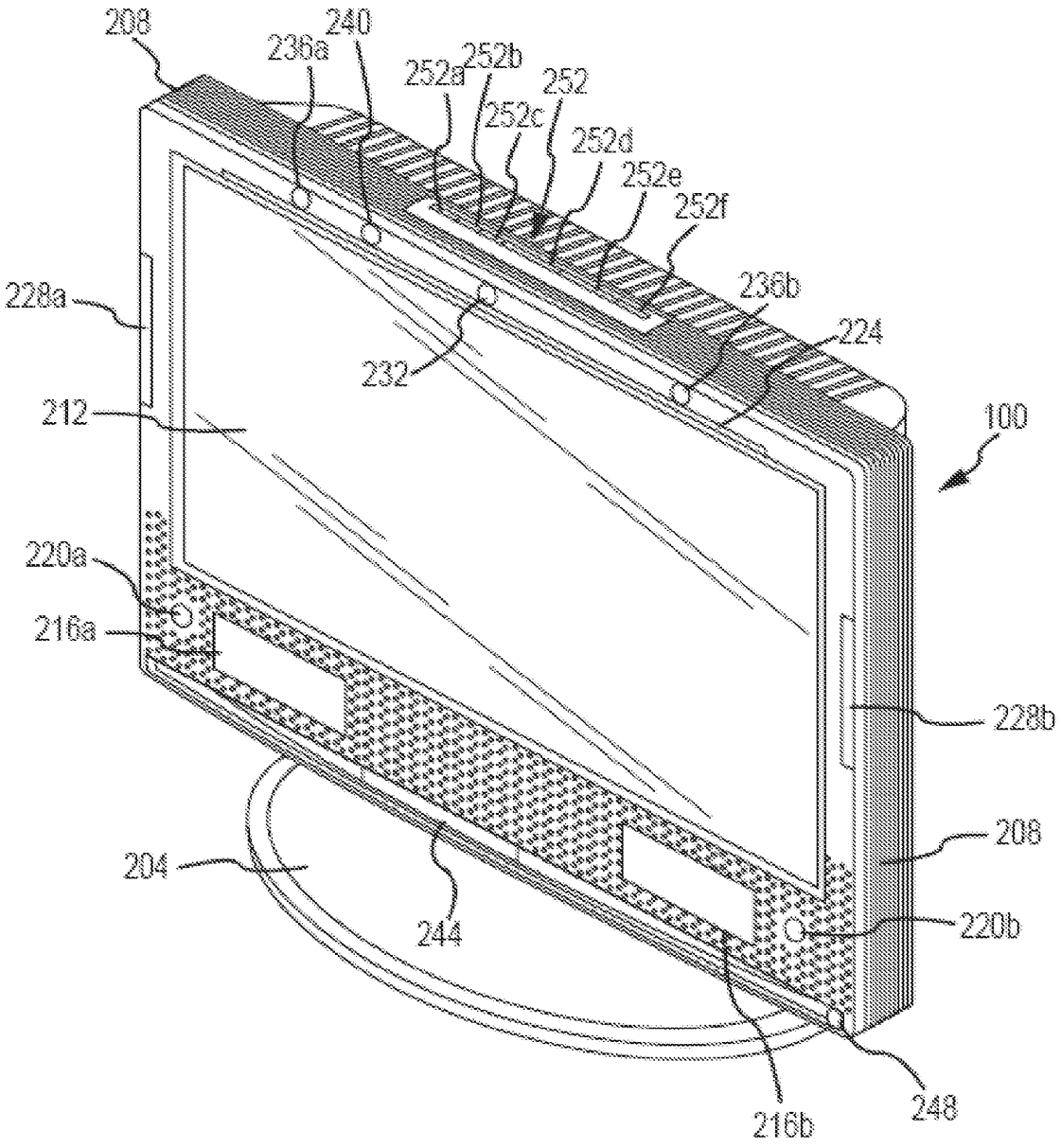

208
240
236a
252a
252b
252
252c
252d
252e
252f
236b
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228a
232
212
100
220a
216a
228b
208
204
244
220b
216b
248

Fig. 2A

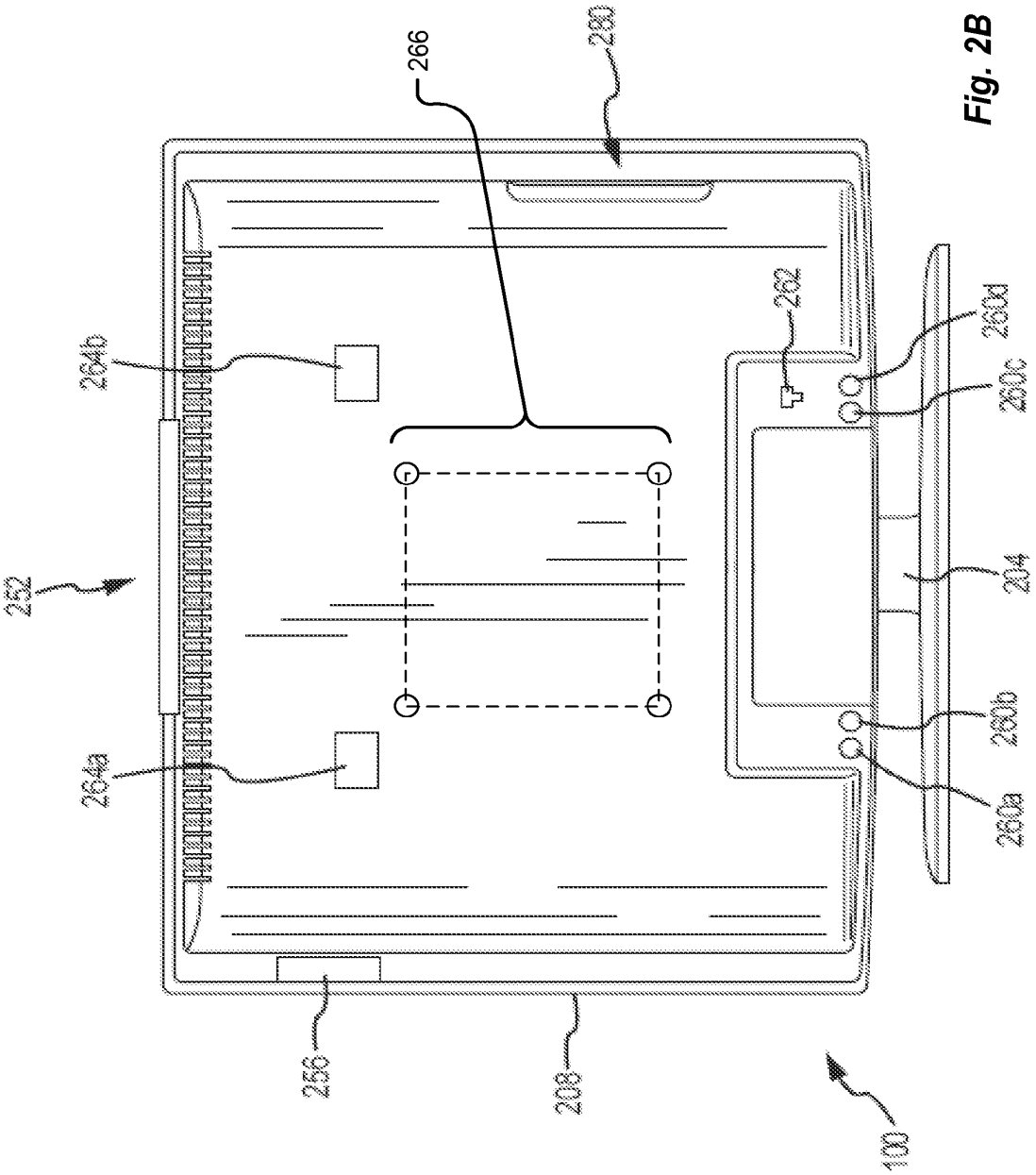


Fig. 2B

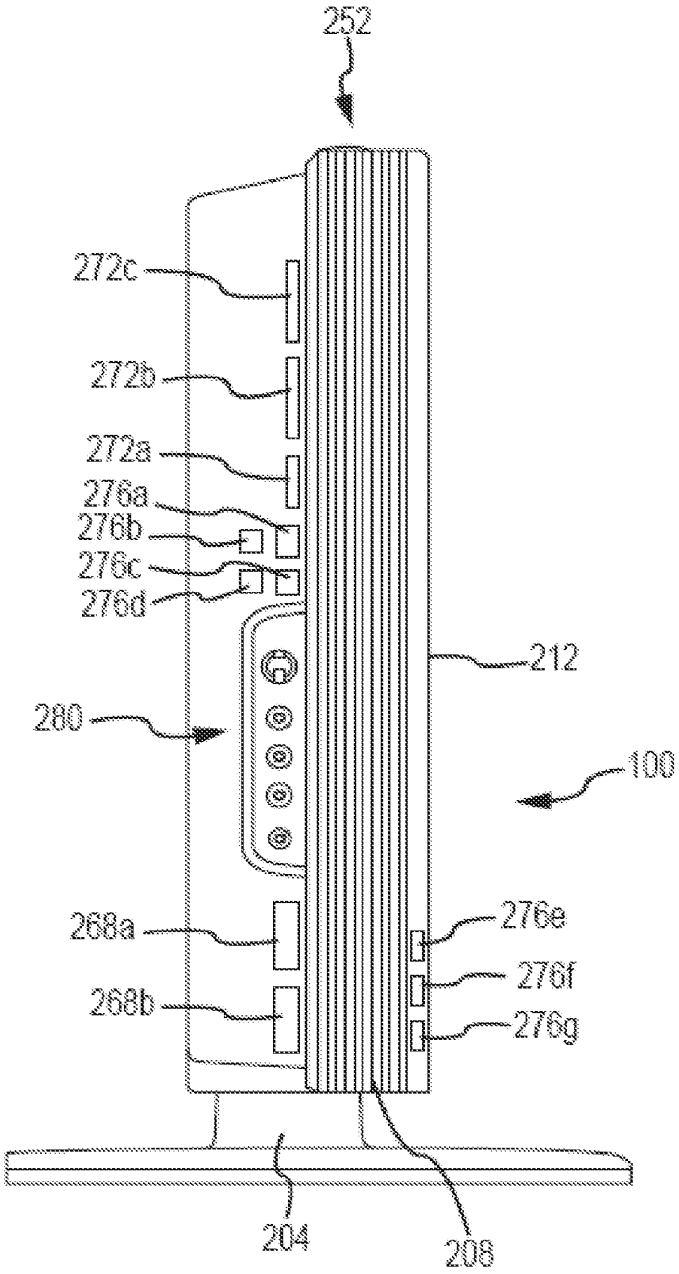

252
272c
272b
272a
276a
276b
276c
276d
212
280
100
268a
268b
276e
276f
276g
204
208

Fig. 2C

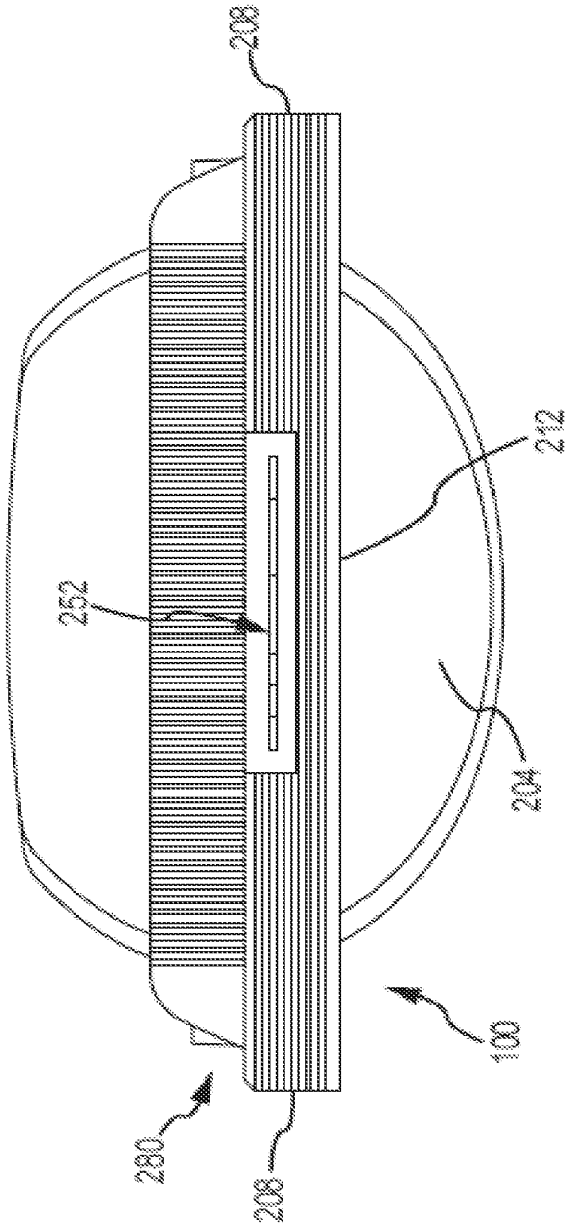


Fig. 2D

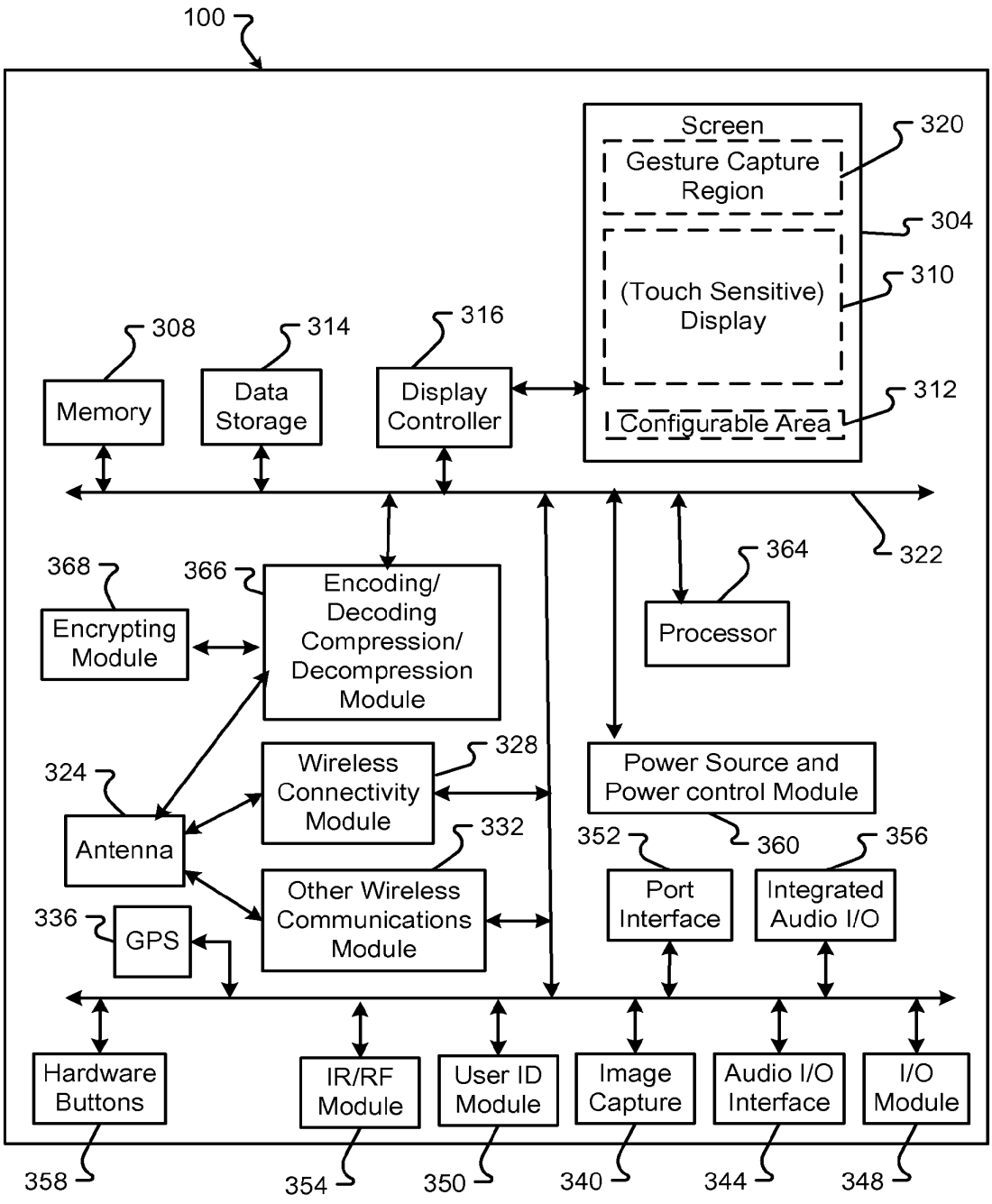

100
Screen
Gesture Capture Region
320
304
(Touch Sensitive) Display
310
312
Configurable Area
308
Memory
314
Data Storage
316
Display Controller
322
364
Processor
368
Encrypting Module
366
Encoding/ Decoding Compression/ Decompression Module
328
Wireless Connectivity Module
324
Antenna
332
Other Wireless Communications Module
336
GPS
Power Source and Power control Module
352
360
356
Port Interface
Integrated Audio I/O
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

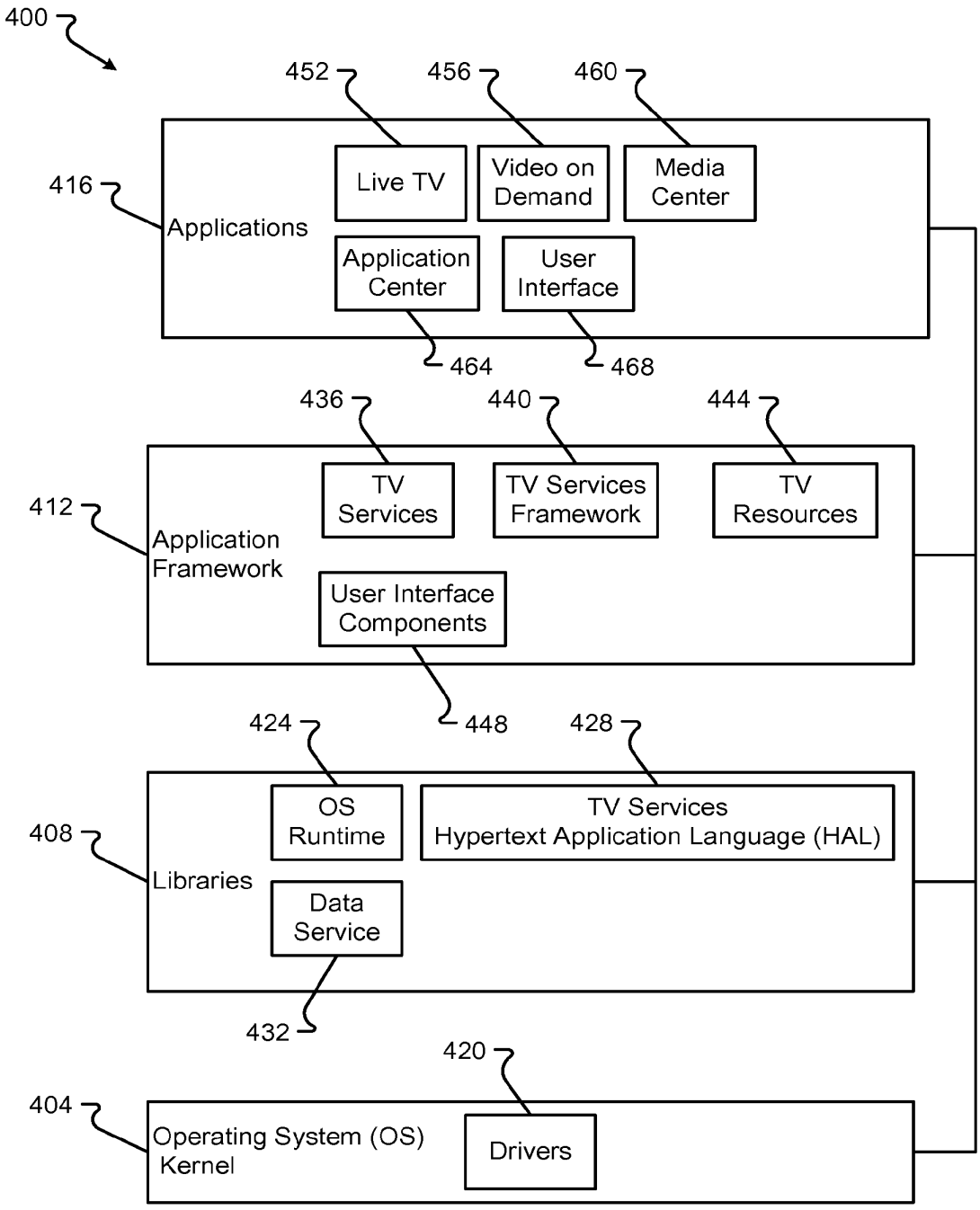

400
452
456
460
416
Applications
Live TV
Video on Demand
Media Center
Application Center
User Interface
464
468
436
440
444
412
Application Framework
TV Services
TV Services Framework
TV Resources
User Interface Components
448
424
428
408
Libraries
OS Runtime
TV Services Hypertext Application Language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

FIG. 4

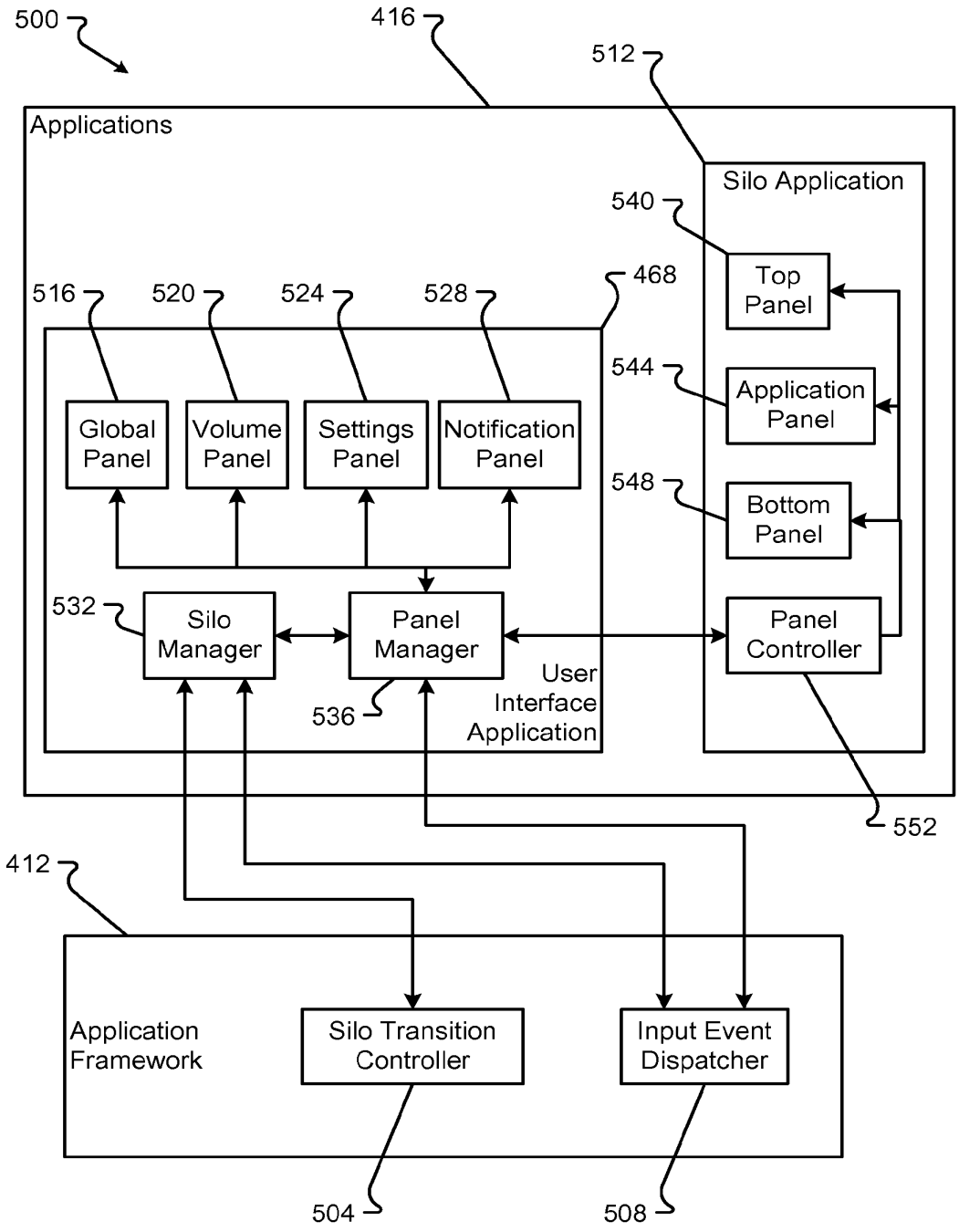

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416
512
Applications
Silo Application
540
Top Panel
468
516
520
524
528
544
Application Panel
Global Panel
Volume Panel
Settings Panel
Notification Panel
548
Bottom Panel
532
Silo Manager
Panel Manager
Panel Controller
User Interface Application
536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

FIG. 5

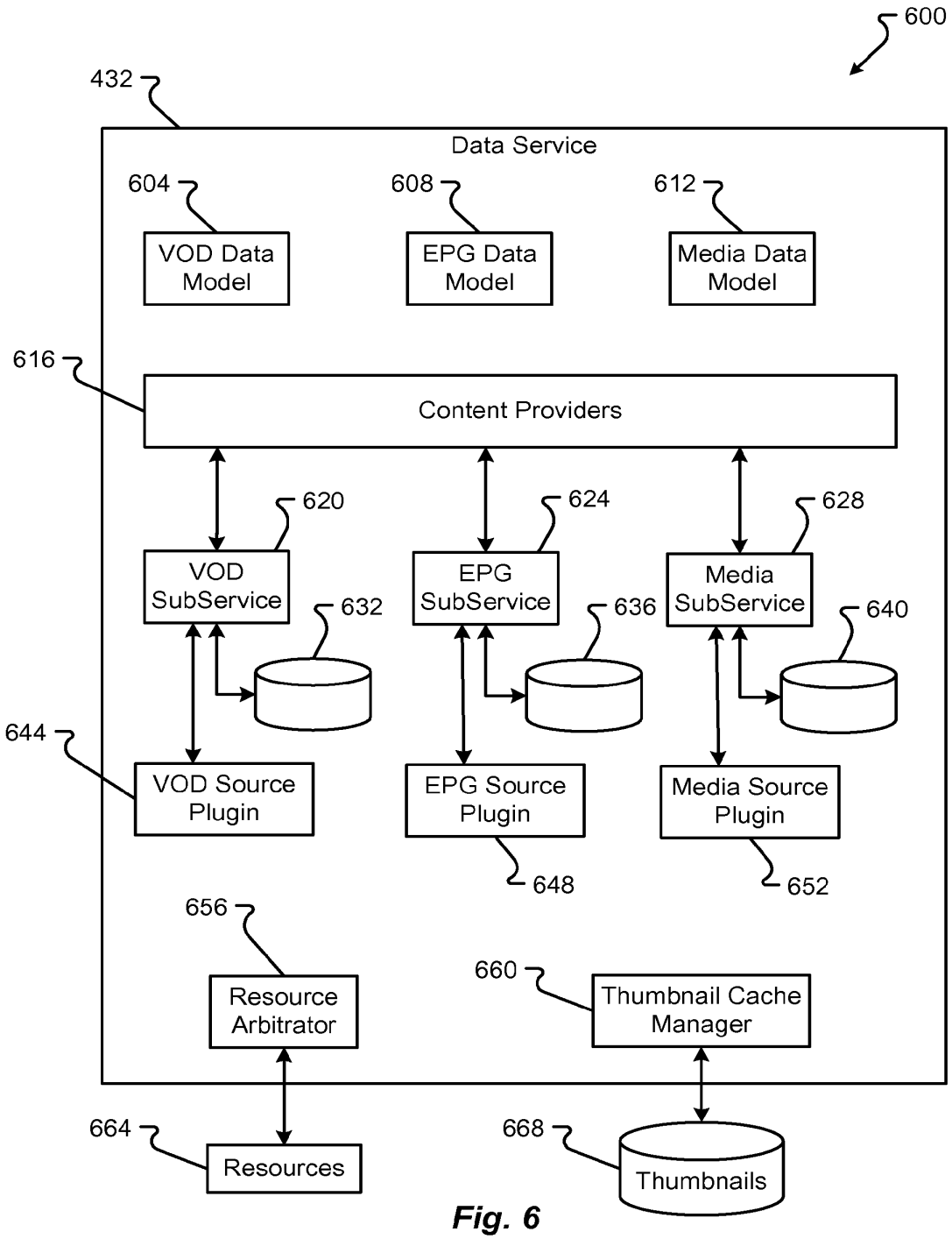

600
432
Data Service
604
VOD Data Model
608
EPG Data Model
612
Media Data Model
616
Content Providers
620
VOD SubService
624
EPG SubService
628
Media SubService
632
636
640
644
VOD Source Plugin
EPG Source Plugin
Media Source Plugin
648
652
656
Resource Arbitrator
660
Thumbnail Cache Manager
664
Resources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

Fig. 6

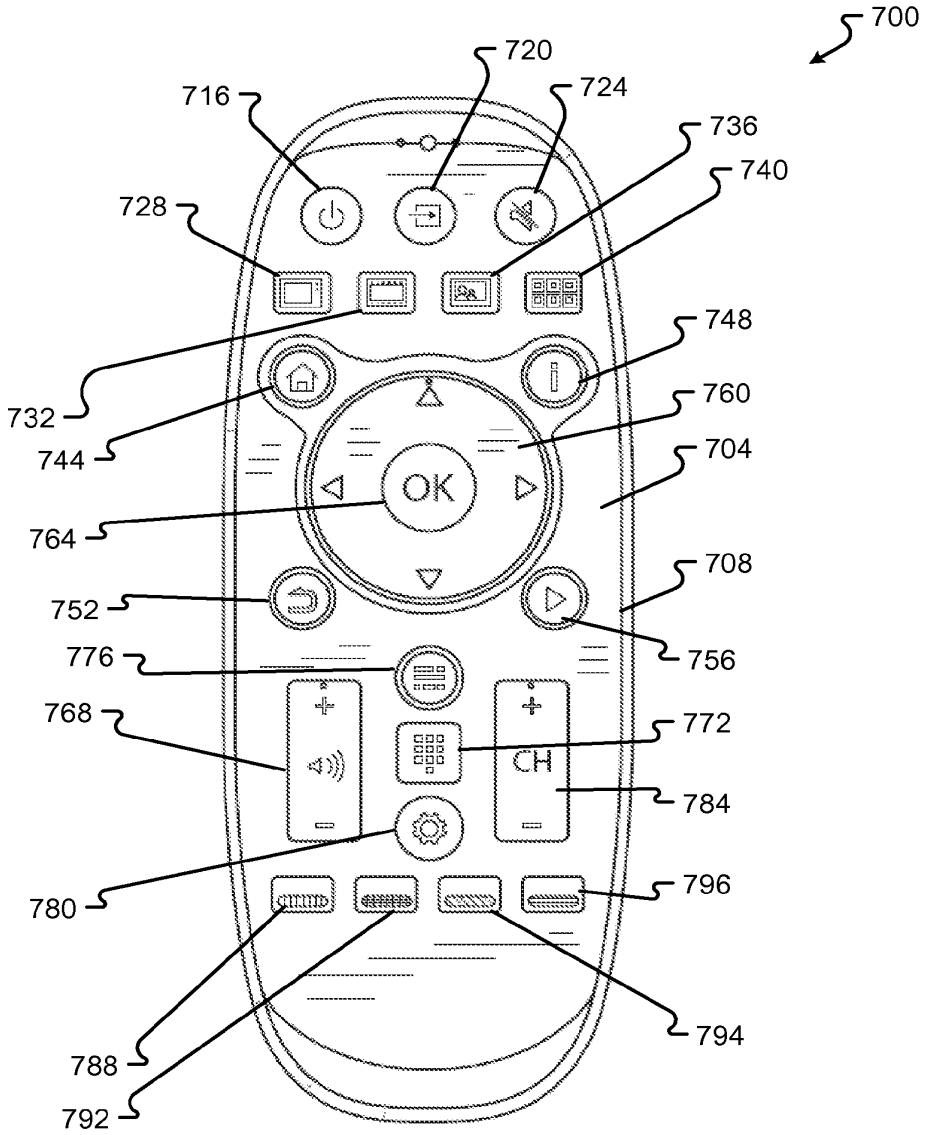

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CH
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796
794
788
792

Fig. 7

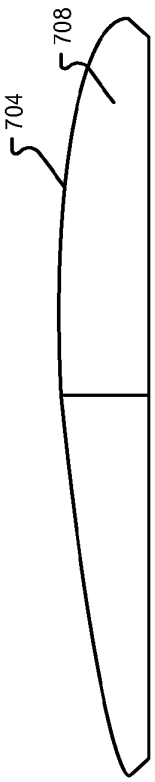


Fig. 8

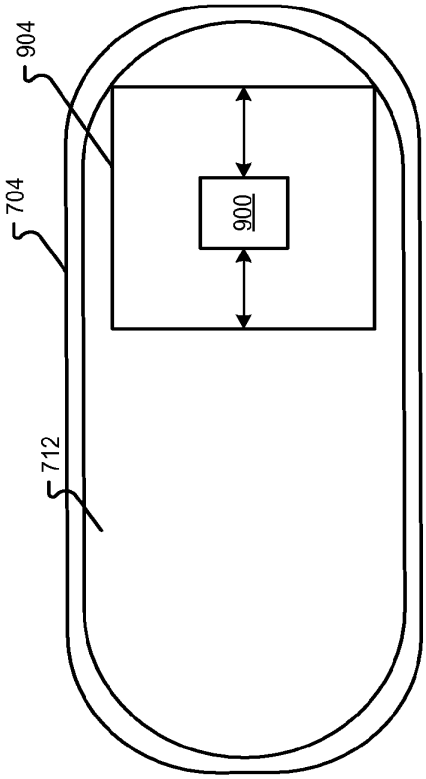


Fig. 9A

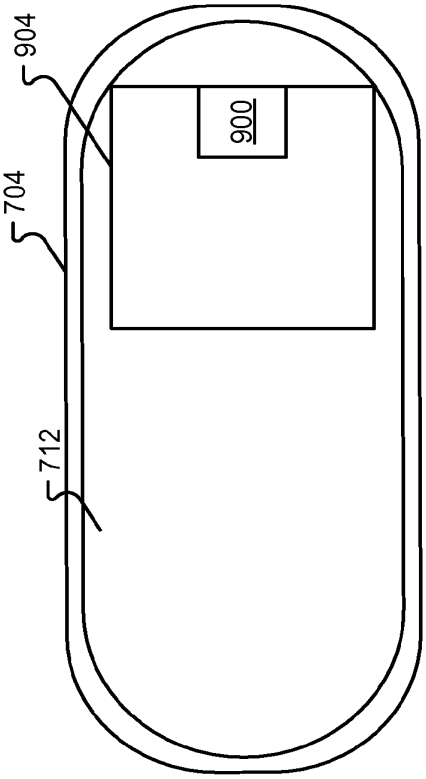


Fig. 9B

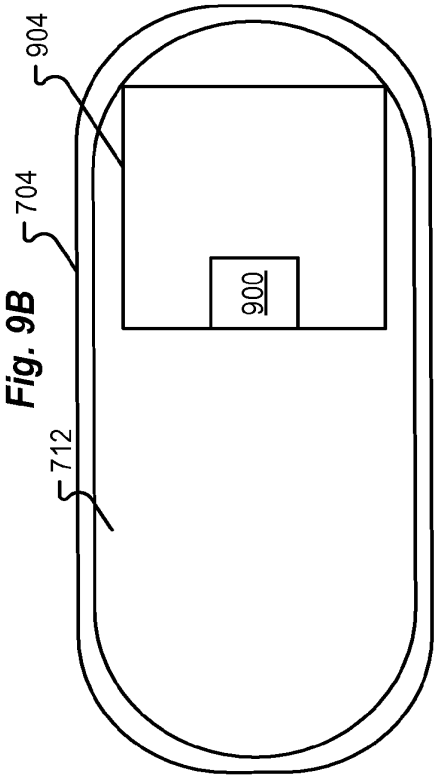


Fig. 9C

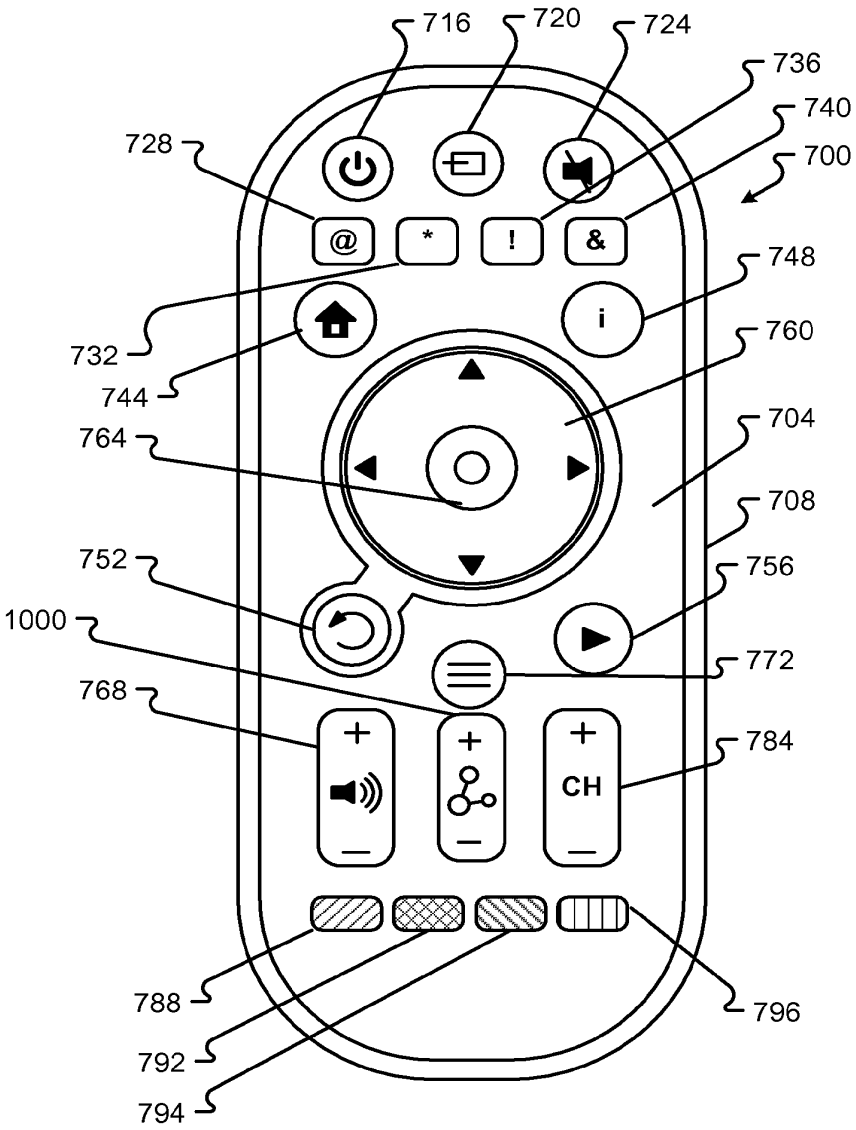

716
720
724
736
740
700
728
@
*
!
&
748
i
732
744
760
764
704
708
752
756
1000
772
768
784
CH
788
792
794
796

Fig. 10

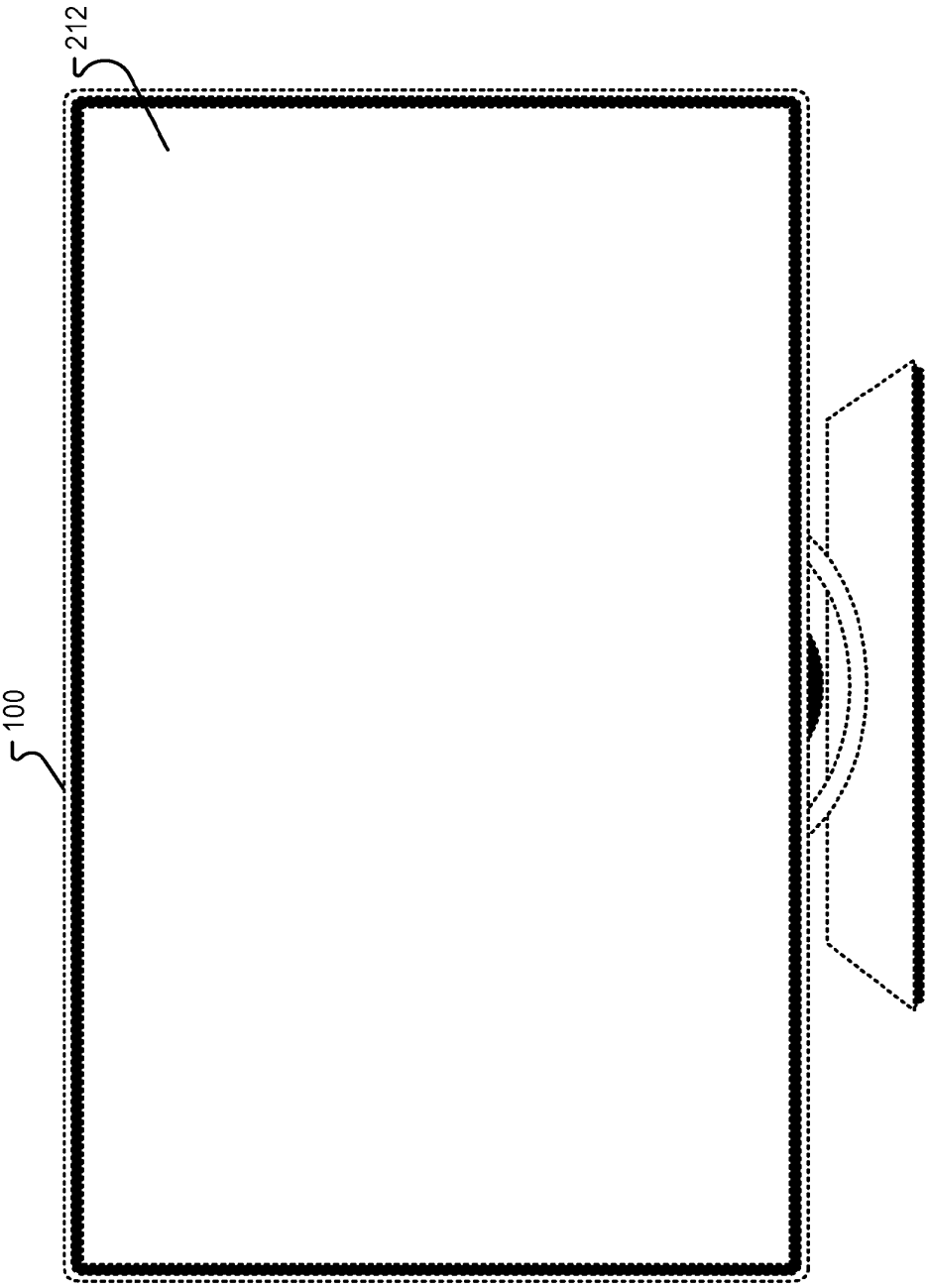


Fig. 11A

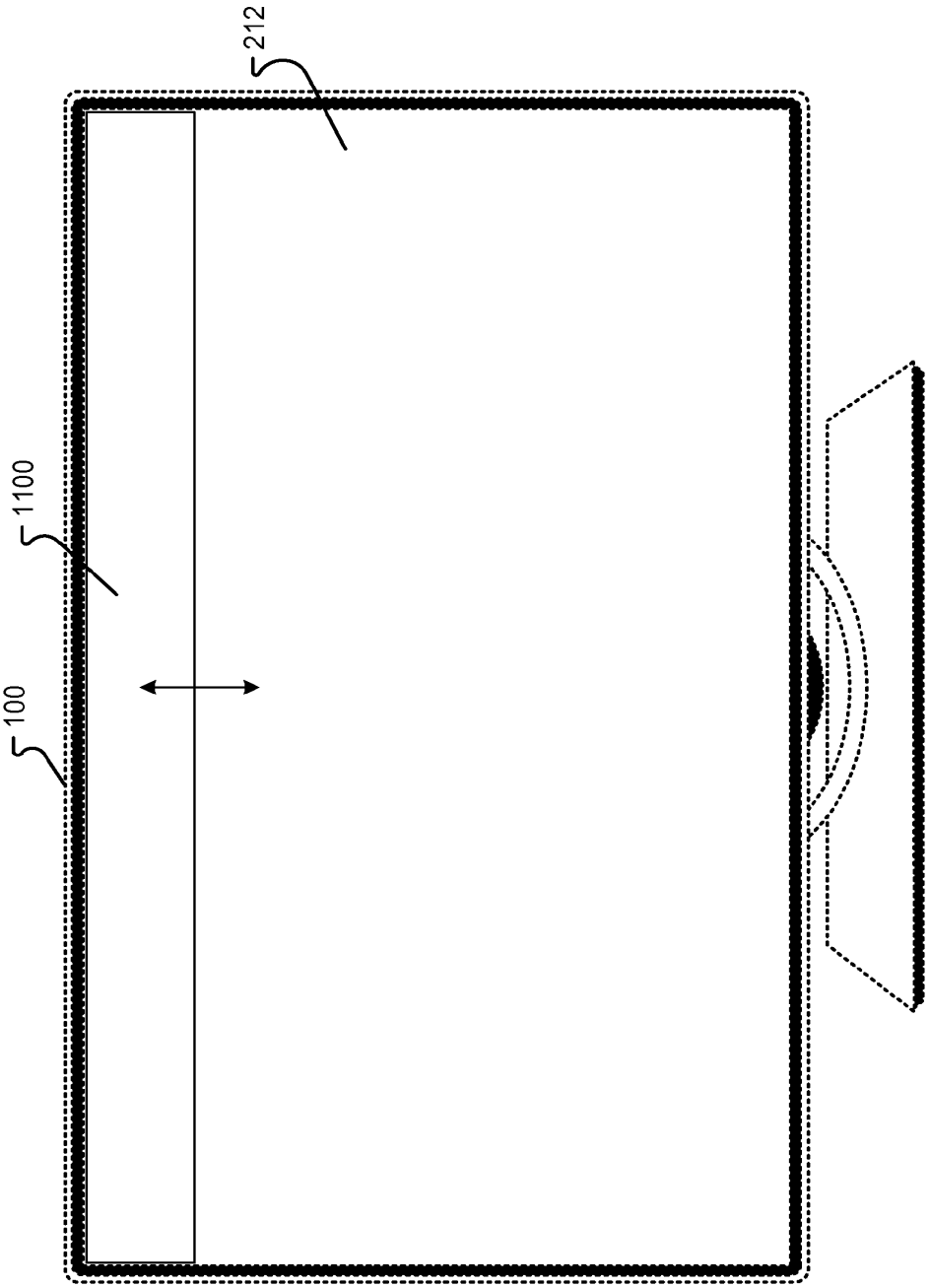


Fig. 11B

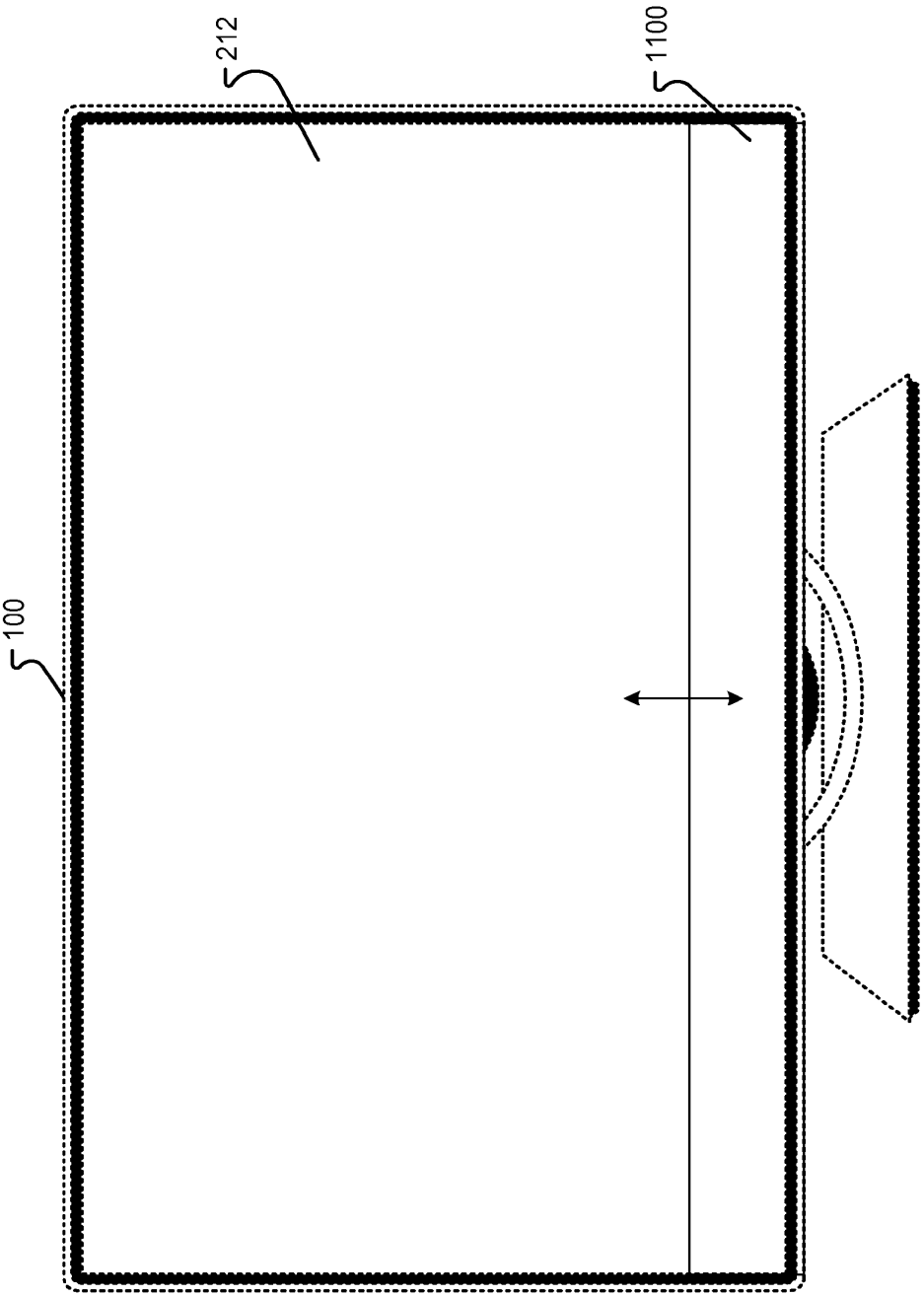


Fig. 11C

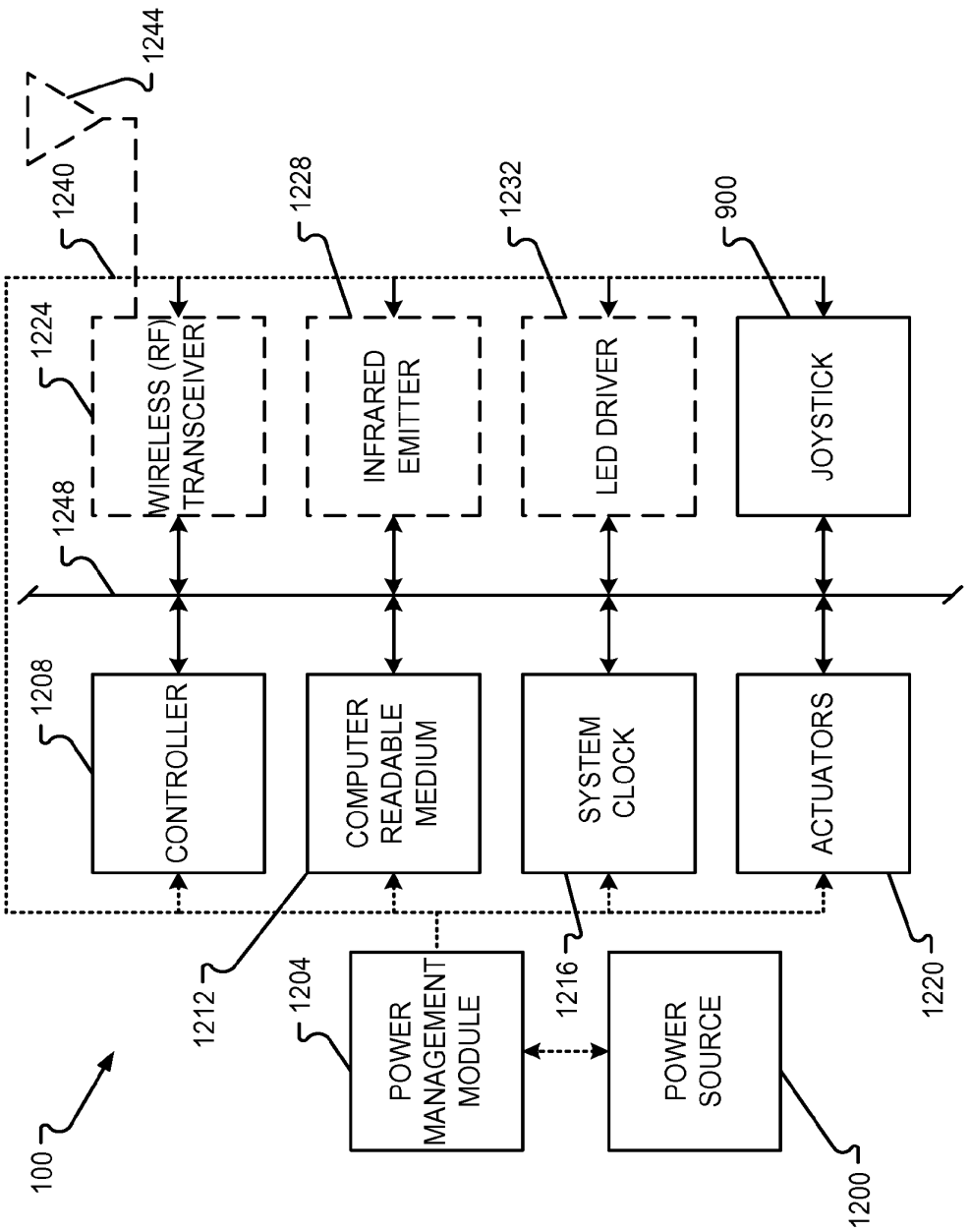

100
1200
1204
POWER MANAGEMENT MODULE
1208
CONTROLLER
1212
COMPUTER READABLE MEDIUM
1216
SYSTEM CLOCK
1220
ACTUATORS
1224
WIRELESS (RF) TRANSCEIVER
1228
INFRARED EMITTER
1232
LED DRIVER
1240
1244
1248
900
JOYSTICK
POWER SOURCE

Fig. 12

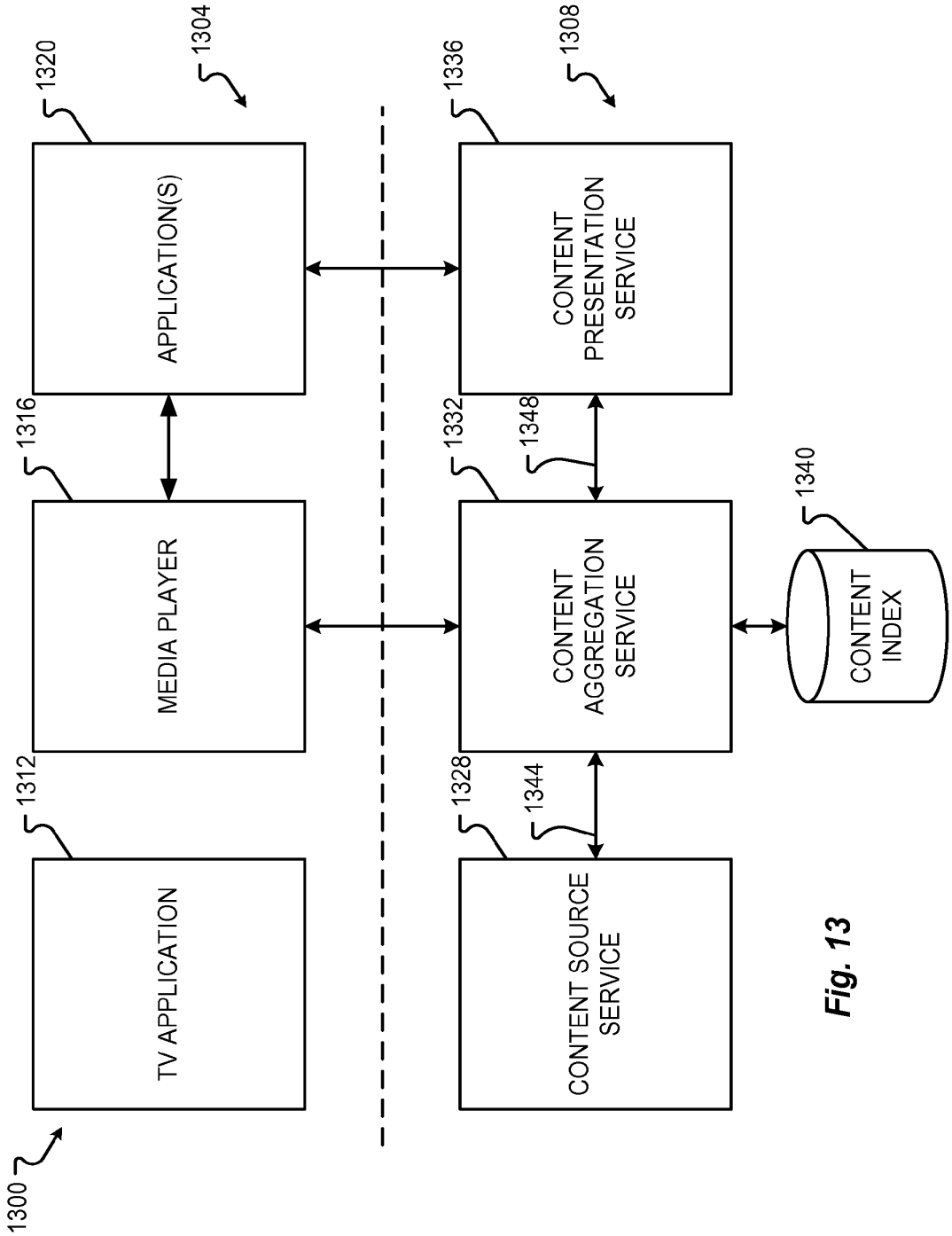

1300
1304
1308
1312
1316
1320
1328
1332
1336
1340
1344
1348
APPLICATION(S)
MEDIA PLAYER
TV APPLICATION
CONTENT PRESENTATION SERVICE
CONTENT AGGREGATION SERVICE
CONTENT SOURCE SERVICE
CONTENT INDEX

Fig. 13

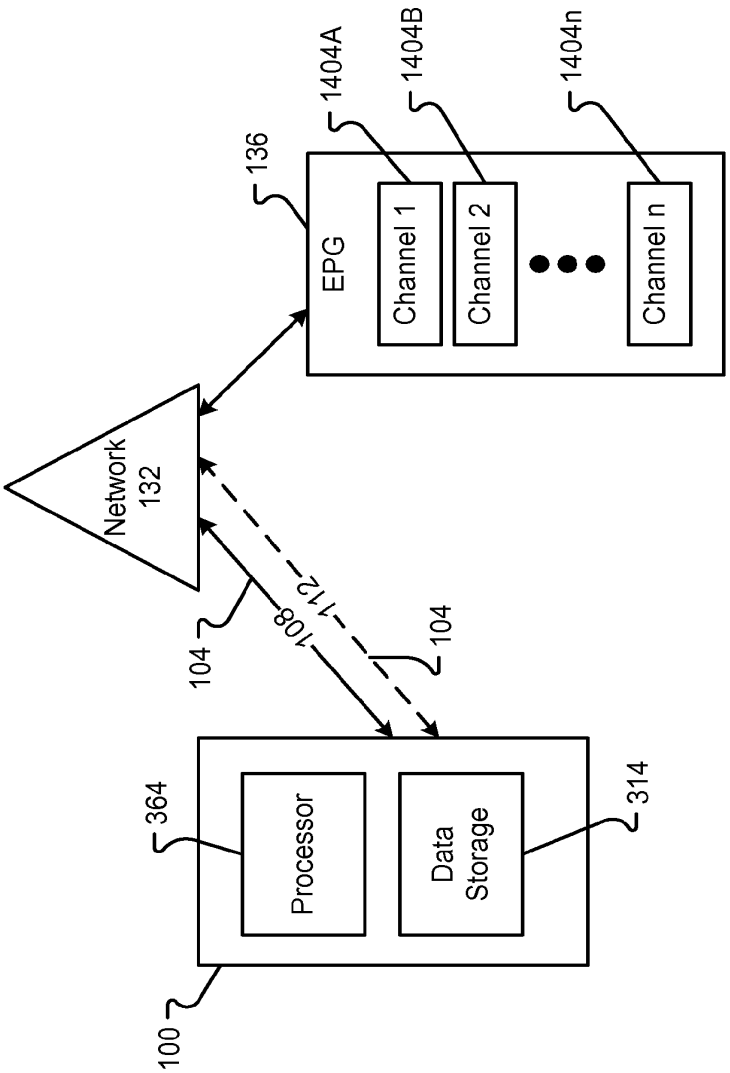

1404A
1404B
1404n
136
EPG
Channel 1
Channel 2
Channel n
Network
132
104
108
112
104
364
Processor
Data
Storage
314
100

Fig. 14

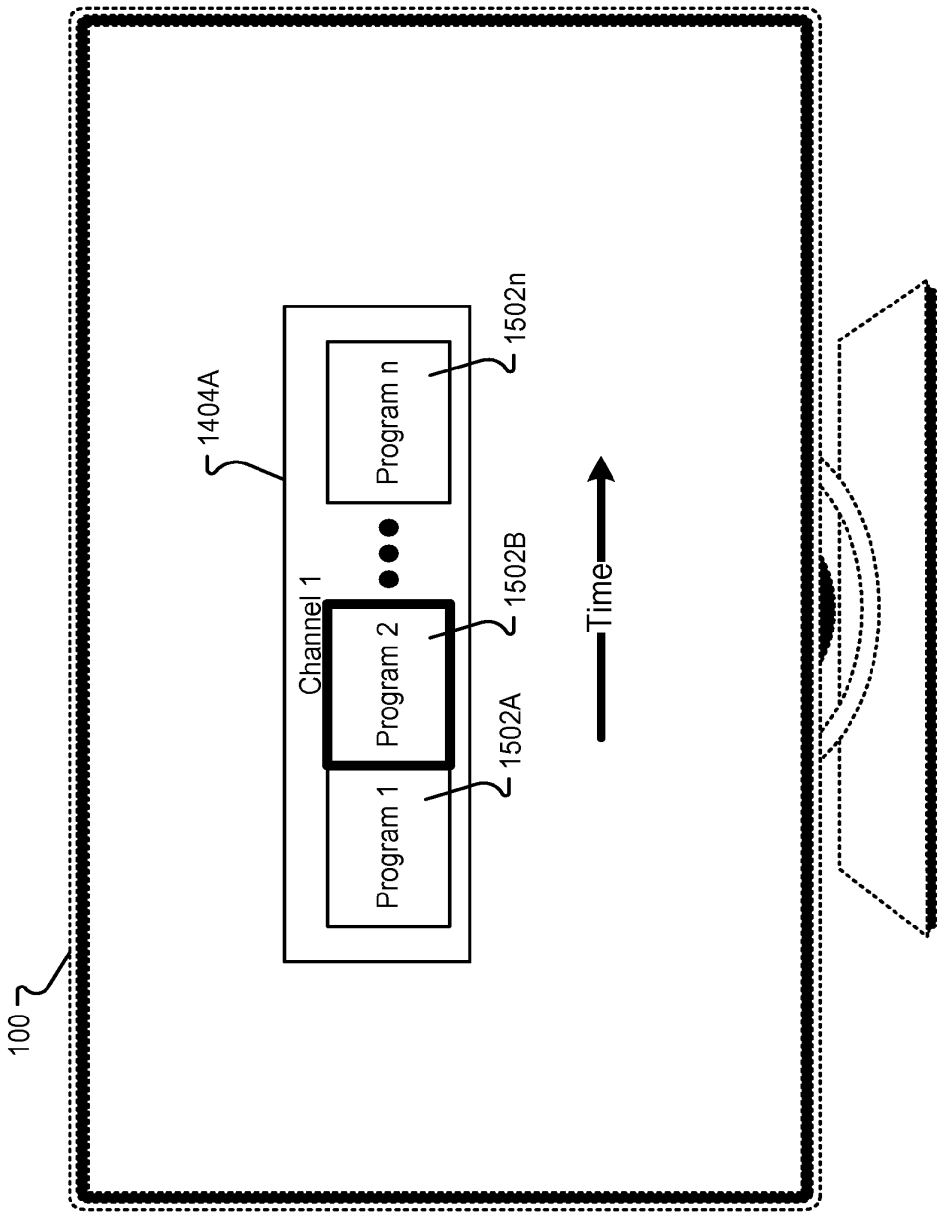

100
1404A
Channel 1
Program 1
Program 2
Program n
1502A
1502B
1502n
Time

Fig. 15

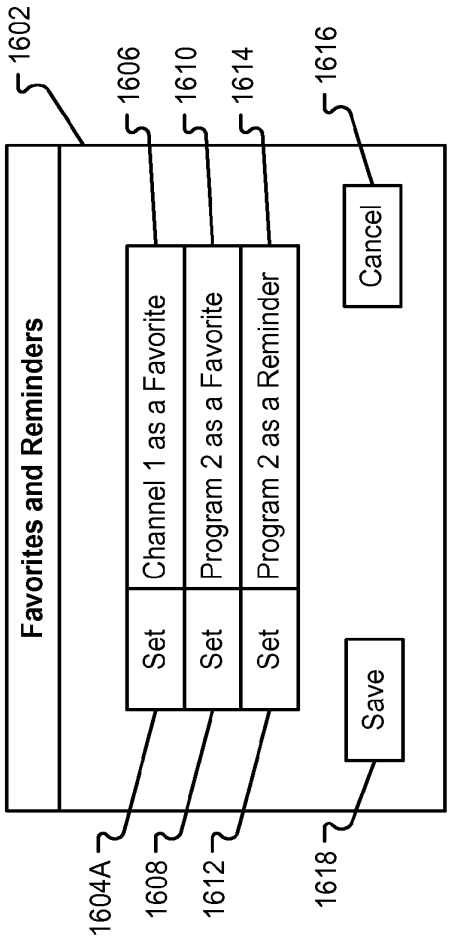


Fig. 16A

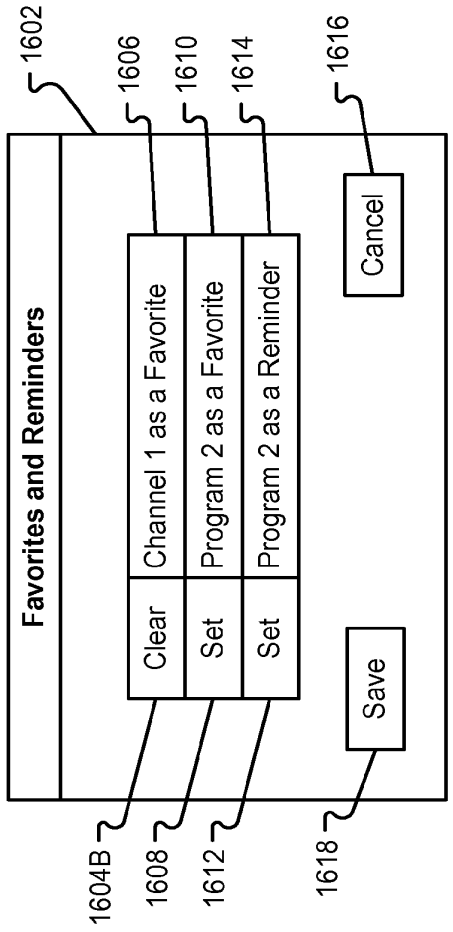


Fig. 16B

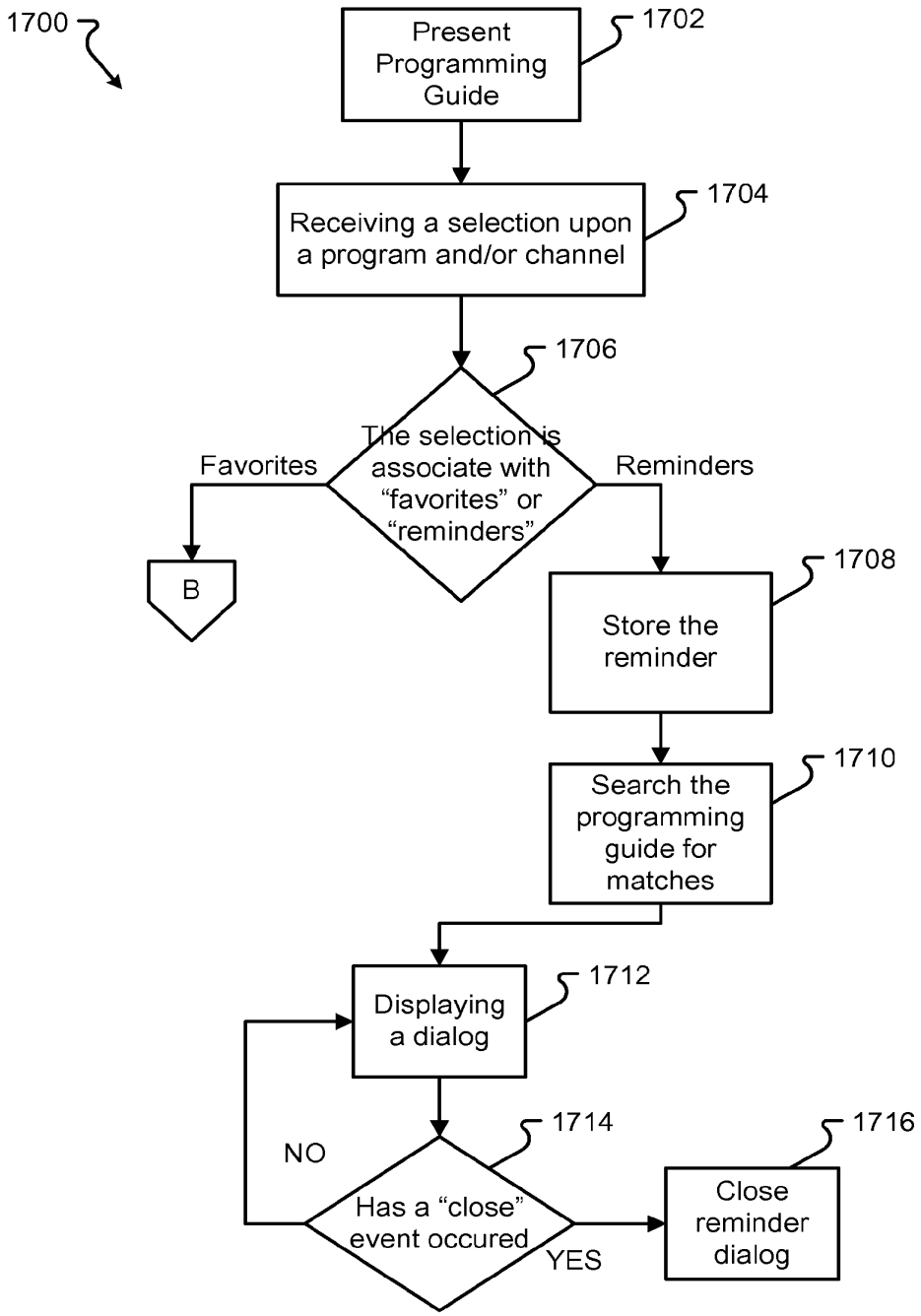

1700
Present Programming Guide
1702
Receiving a selection upon a program and/or channel
1704
1706
The selection is associate with "favorites" or "reminders"
Favorites
Reminders
B
1708
Store the reminder
1710
Search the programming guide for matches
1712
Displaying a dialog
1714
NO
Has a "close" event occured
YES
1716
Close reminder dialog

Fig. 17A

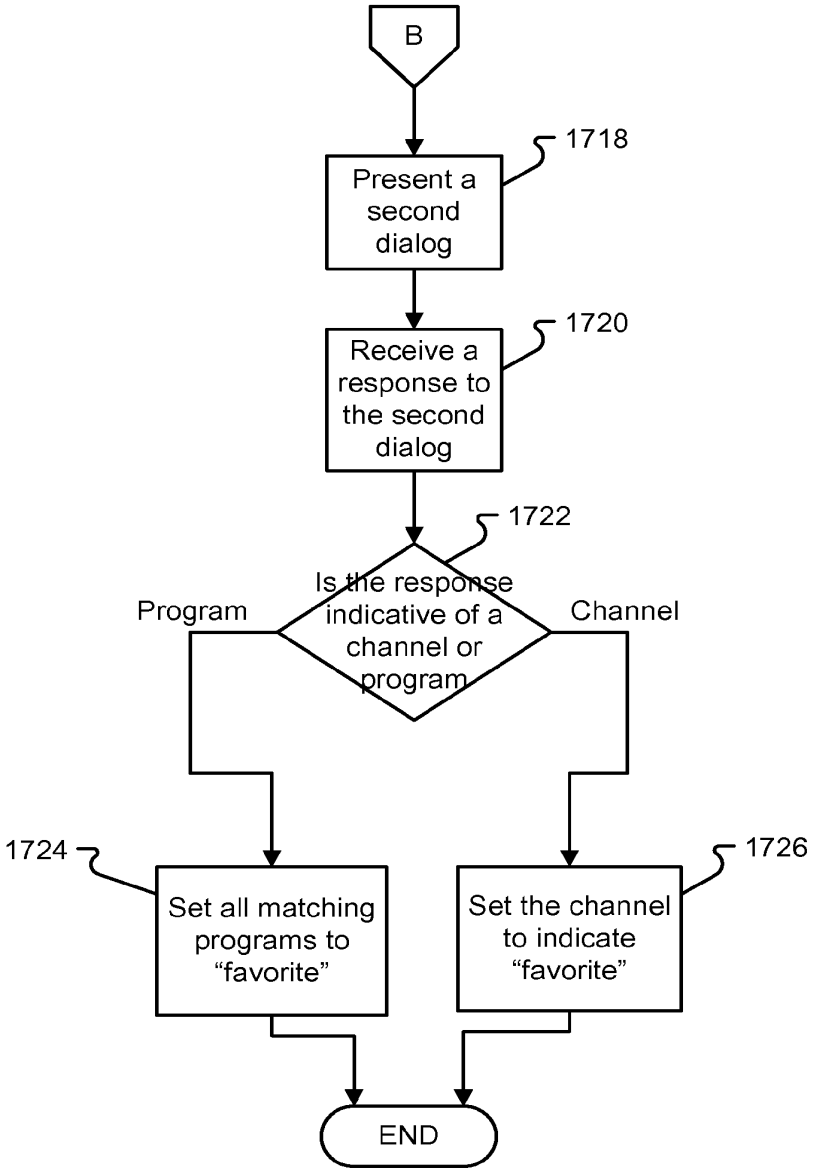

B
1718
Present a second dialog
1720
Receive a response to the second dialog
1722
Is the response indicative of a channel or program
Program
Channel
1724
Set all matching programs to "favorite"
1726
Set the channel to indicate "favorite"
END

Fig. 17B

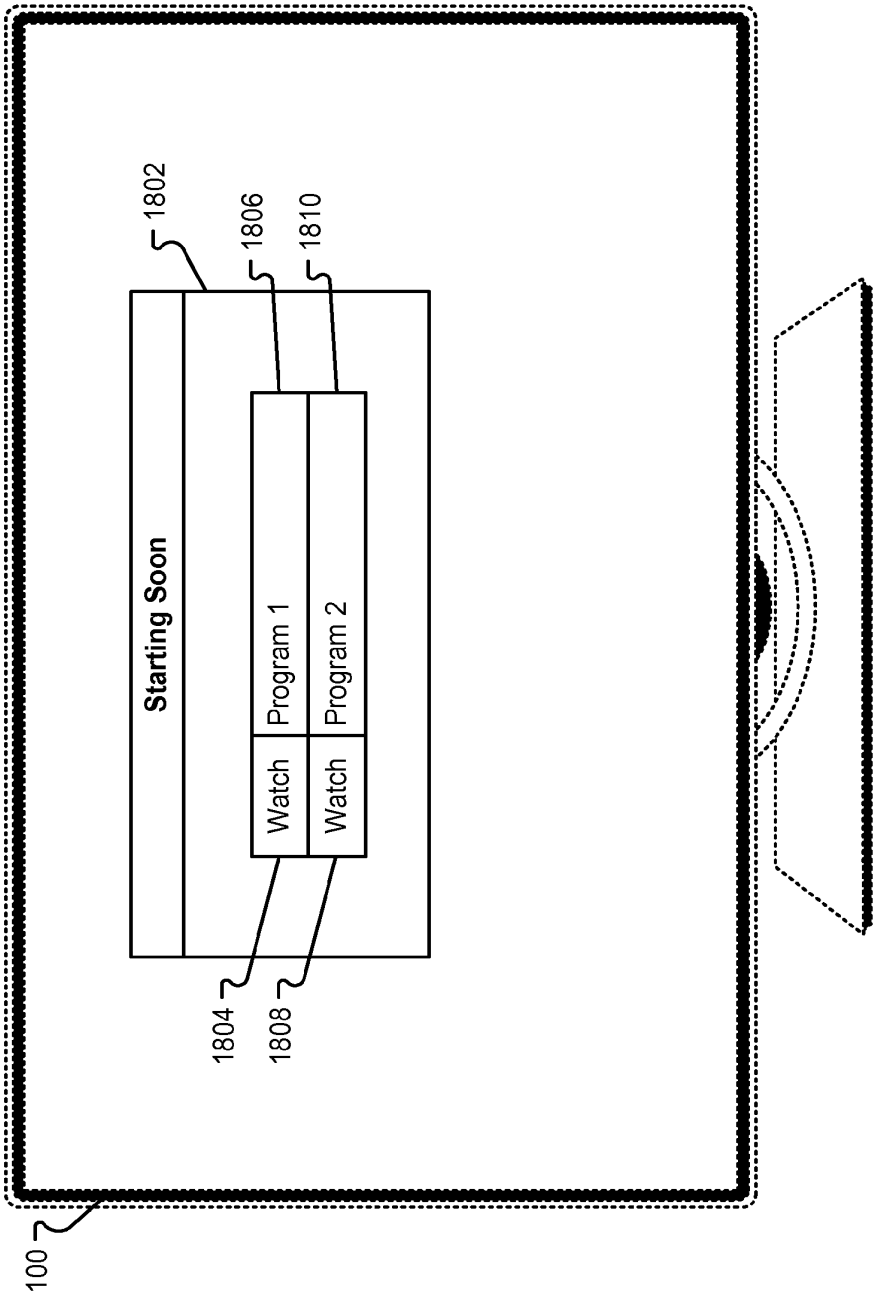

100
1802
1806
1810
Starting Soon
Program 1
Program 2
Watch
Watch
1804
1808

Fig. 18

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2013/081630

A. CLASSIFICATION OF SUBJECT MATTER

See the extra sheet

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, H04H

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)

CNPAT, CNKI, EPODOC, WPI, IEEE:

EPG, program????, guide, favorite, reminder, list, channel, add, new, delete, remove, clear, user?

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 101472102 A (KONKA GROUP CO., LTD.) 01 July 2009(01.07.2009) description, page 1, last three paragraphs, page 2, paragraphs 8-9, page 4, paragraphs 19-21 figure 2	1,6-9,14-16,19-20
Y		2-5,10-13,17-18
Y	CN 1832534 A (SHENZHEN DIWEITE DIGITAL VIDEO TECHNOLOG CORP.) 13 September 2006(13.09.2006) abstract	2-5,10-13,17-18
A	US 2001/0010097 A1 (LEE, Kyuheon) 26 July 2001(26.07.2001) the whole document	1-20
A	US 2003/0225777 A1 (MARSH, David J.) 04 December 2003(04.12.2003) 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
02 November 2013	**21 Nov. 2013 (21.11.2013)**
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 KANG, Kai Telephone No. (86-10)62413998

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

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/CN2013/081630

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 101472102 A	01.07.2009	None	
CN 1832534 A	13.09.2006	None	
US 2001/0010097 A1	26.07.2001	KR 2001-0073903 A	03.08.2001
US 2003/0225777 A1	04.12.2003	None	

Form PCT/ISA /210 (patent family annex) (July 2009)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/CN2013/081630

A. CLASSIFICATION OF SUBJECT MATTER

H04H 60/72 (2008.01) i

H04N 5/445 (2011.01) i

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

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International Bureau

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WIPO | PCT

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(21) International Application Number:
PCT/CN2013/081639

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16 August 2013 (16.08.2013)

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(30) Priority Data:

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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
61/804,942	25 March 2013 (25.03.2013)	US
61/804,998	25 March 2013 (25.03.2013)	US
61/804,971	25 March 2013 (25.03.2013)	US
61/804,990	25 March 2013 (25.03.2013)	US
61/805,003	25 March 2013 (25.03.2013)	US
61/805,053	25 March 2013 (25.03.2013)	US
61/805,030	25 March 2013 (25.03.2013)	US
61/805,027	25 March 2013 (25.03.2013)	US
61/805,042	25 March 2013 (25.03.2013)	US
61/805,038	25 March 2013 (25.03.2013)	US

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

(72) Inventor; and
(71) Applicant *(for US only)*: **HU, Xuan** [CN/CN]; No. 11 Jiangxi Road, Qingdao, Shandong 266071 (CN).

(72) Inventors: **SIRPAL, Sanjiv**; 3264 Stocksbridge Avenue, Oakville, Ontario L6M 0E3 (CA). **SELIM, Mohammed**; 2488 Oakhaven Drive, Oakville, Ontario L6M4B9 (CA). **VISOSKY, John S.**; 11 Lady Diana Court, Gormley, Ontario L0H 1G0 (CA). **SHOYKHER, Mikhail**; 32 Bentoak Crescent, Thornhill, Ontario L4J8S5 (CA). **MILANO, Eduardo Diego Torres**; 629 Marley Road, Burlington, Ontario L7T 3R8 (CA). **CAO, Zhe**; Hisense Key Lab,

[Continued on next page]

(54) Title: REMINDER DIALOG PRESENTATION AND BEHAVIOR

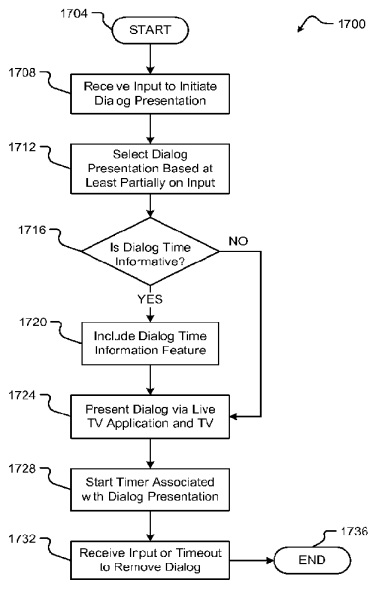


Fig. 17

(57) Abstract: An intelligent television and methods for user interaction between the intelligent television and the user are provided. In general, a user is provided with navigation, notification, and setup options which enable one or more functions associated with the intelligent television. The presentation of options is based on input received by the intelligent television. As a user provides input to the intelligent television via a remote control or other input device, the intelligent television is configured to interpret the input and provide interactive functionality in the form of content presented to the display of the intelligent television.

WO 2014/026640 A1

Jamdeo, No. 11 Jiangxi Road, Qingdao, Shandong 266071 (CN).

(74) **Agent**: **LIU, SHEN & ASSOCIATES**; A0601, Huibin Building, No.8 Beichen Dong Street, Chaoyang District, Beijing 100101 (CN).

(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, 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, SA, 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, 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, KM, ML, MR, NE, SN, TD, TG).

Published:

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

REMINDER DIALOG PRESENTATION AND BEHAVIOR

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. 61/684,672 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"; and 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 is provided, comprising: presenting, via a display of an intelligent television (TV), TV content presented to a first portion of the display; receiving a reminder presentation input at the intelligent TV; selecting, via a processor associated with the intelligent TV and based at least partially on the reminder presentation input received, a layout of a reminder presentation dialog; and presenting the reminder presentation dialog in the selected layout to a second portion of the display, wherein the second portion of the display at least partially overlaps the first portion, and wherein the reminder presentation dialog includes information relative to a specific program.

[0007] In another embodiment, a tangible, non-transitory computer readable medium is provided having instructions stored thereon that, when executed by a processor, perform the method comprising: presenting, via a display of an intelligent television (TV), TV content presented to a first portion of the display; receiving a reminder presentation input at the intelligent TV; selecting, via a processor associated with the intelligent TV and based at least partially on the reminder presentation input received, a layout of a reminder presentation dialog; and presenting the reminder presentation dialog in the selected layout to a second portion of the display, wherein the second portion of the display at least partially overlaps the first portion, and wherein the reminder presentation dialog includes information relative to a specific program.

[0008] In yet another embodiment, a system is provided, 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; an input device associated

with the intelligent TV; a memory; and a microprocessor operable to: present, via the display of the intelligent TV, TV content presented to a first portion of the display; receive a reminder presentation input at the intelligent TV; select, based at least partially on the reminder presentation input received, a layout of a reminder presentation dialog; and present the reminder presentation dialog in the selected layout to a second portion of the display, wherein the second portion of the display at least partially overlaps the first portion, and wherein the reminder presentation dialog includes information relative to a specific program.

[0009] The present disclosure can provide a number of advantages depending on the particular aspect, embodiment, and/or configuration. Among other things, embodiments of the present disclosure allow a user to interface with live television content via a live TV application of an intelligent TV. More specifically, a user may be provided with navigation, notification, and/or setup options which are associated with or enable one or more functions of the intelligent TV.

[0010] These and other advantages will be apparent from the disclosure.

[0011] 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.

[0012] 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.

[0013] 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."

[0014] 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.

[0015] A "blogging service" is a blog-publishing service that allows private or multi-user blogs with time-stamped entries.

[0016] 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.

[0017] 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.).

[0018] 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.

[0019] The term "enhanced television" (ETV) 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.

[0020] 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.

[0021] 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; and iWanTV! in the Philippines.

[0022] 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.

[0023] 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.

[0024] 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.

[0025] 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.

[0026] 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.

[0027] The term "Intelligent TV," as used herein, refers to a television configured to provide one or more intuitive user interfaces and interactions based on a unique application platform and architecture. The Intelligent TV utilizes processing resources associated with the television to integrate Internet connectivity with parallel application functionality. This integration allows a user the ability to intuitively access various sources of media and content (e.g., Internet, over-the-top content, on-demand streaming media, over-the-air broadcast media, and/or other forms of information) via the Intelligent TV in a quick and efficient manner. Although the Intelligent TV disclosed herein may comprise one or more components of a "smart TV," it is an aspect of the Intelligent TV to provide expanded intuitive user interaction capability for navigating and executing the various features of the television. A "smart TV," sometimes referred to as a 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 smart TV 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. As can be appreciated, the Intelligent TV encompasses a broader range of technology than that of the smart TV defined above.

[0028] 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.

[0029] The term "Live TV," as used herein, refers to a television production broadcast in real-time, as events happen, in the present.

[0030] 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.

[0031] 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.

[0032] 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).

[0033] 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 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.

[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 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.

[0041] 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.

[0042] 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.

[0043] 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.

[0044] The term "satellite TV" refers to television programming delivered by the means of communications satellites 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.

[0045] 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.

[0046] The term "social network" refers to a web-based social network.

[0047] 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.

[0048] 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.

[0049] 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.

[0050] 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(f). 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.

[0051] 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

[0052] Fig. 1A includes a first view of an embodiment of an environment of an intelligent television;

[0053] Fig. 1B includes a second view of an embodiment of an environment of an intelligent television;

[0054] Fig. 2A includes a first view of an embodiment of an intelligent television;

[0055] Fig. 2B includes a second view of an embodiment of an intelligent television;

[0056] Fig. 2C includes a third view of an embodiment of an intelligent television;

[0057] Fig. 2D includes a fourth view of an embodiment of an intelligent television;

[0058] Fig. 3 is a block diagram of an embodiment of the hardware of an intelligent television;

[0059] Fig. 4 is a block diagram of an embodiment of the intelligent television software and/or firmware;

[0060] Fig. 5 is a second block diagram of an embodiment of the intelligent television software and/or firmware;

[0061] Fig. 6 is a third block diagram of an embodiment of the intelligent television software and/or firmware;

[0062] Fig. 7 is a plan view of an embodiment of a handheld remote control;

[0063] Fig. 8 is a side view of an embodiment of a remote control;

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

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

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

[0067] Fig. 10 is a plan view of another embodiment of a handheld remote control;

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

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

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

[0071] Fig. 12 is a block diagram of an embodiment of a handheld remote control of either Fig. 7 or 10;

[0072] Fig. 13 is a block diagram of an embodiment of a content data service;

[0073] Fig. 14 is a visual representation of a user interface that is presented to an Intelligent TV when a live TV application is in a first time experience state in accordance with embodiments of the present disclosure;

[0074] Fig. 15 is a flow diagram depicting a first time experience setup method in accordance with embodiments of the present disclosure;

[0075] Fig. 16A is a block diagram of a first embodiment of an Intelligent TV dialog presentation;

[0076] Fig. 16B is a block diagram of a second embodiment of an Intelligent TV dialog presentation;

[0077] Fig. 16C is a block diagram of a third embodiment of an Intelligent TV dialog presentation;

[0078] Fig. 16D is a block diagram of a fourth embodiment of an Intelligent TV dialog presentation;

[0079] Fig. 16E is a block diagram of a dialog presented to the display of an Intelligent TV in accordance with embodiments of the present disclosure;

[0080] Fig. 17 is a flow diagram depicting a dialog presentation method in accordance with embodiments of the present disclosure;

[0081] Fig. 18 is a block diagram of a first panel view of an Intelligent TV in accordance with embodiments of the present disclosure;

[0082] Fig. 19 is a block diagram of a second panel view of an Intelligent TV in accordance with embodiments of the disclosure;

[0083] Fig. 20 depicts a first embodiment of an information panel presented via an application panel of an Intelligent TV;

[0084] Fig. 21 depicts a second embodiment of an information panel presented via an application panel of an Intelligent TV;

[0085] Fig. 22 is a flow diagram depicting an information panel presentation method in accordance with embodiments of the present disclosure;

[0086] Fig. 23A depicts a first embodiment of an electronic programming guide presented via an application panel of an Intelligent TV;

[0087] Fig. 23B depicts a second embodiment of an electronic programming guide presented via an application panel of an Intelligent TV;

[0088] Fig. 24A depicts a first embodiment of an electronic programming guide and preview window presented via an application panel of an Intelligent TV;

[0089] Fig. 24B depicts a second embodiment of an electronic programming guide and preview window presented via an application panel of an Intelligent TV;

[0090] Fig. 25 is a flow diagram depicting an electronic program guide presentation method in accordance with embodiments of the present disclosure;

[0091] Fig. 26 is a flow diagram depicting an electronic program guide and preview window presentation method in accordance with embodiments of the present disclosure;

[0092] Fig. 27 depicts an embodiment of a compact electronic programming guide presented via an application panel of an Intelligent TV;

[0093] Fig. 28A depicts a first embodiment of a reminder dialog presentation in accordance with embodiments of the present disclosure;

[0094] Fig. 28B depicts a second embodiment of a reminder dialog presentation in accordance with embodiments of the present disclosure;

[0095] Fig. 29A depicts a first embodiment of a reminder dialog notification in accordance with embodiments of the present disclosure;

[0096] Fig. 29B depicts a second embodiment of a reminder dialog notification in accordance with embodiments of the present disclosure;

[0097] Fig. 29C depicts a third embodiment of a reminder dialog notification in accordance with embodiments of the present disclosure;

[0098] Fig. 29D depicts a fourth embodiment of a reminder dialog notification in accordance with embodiments of the present disclosure;

[0099] Fig. 30 depicts a grouped content panel presented via an application panel of an Intelligent TV;

[0100] Fig. 31A depicts a first embodiment of a preferred content dialog presentation in accordance with embodiments of the present disclosure;

[0101] Fig. 31B depicts a second embodiment of a preferred content dialog presentation in accordance with embodiments of the present disclosure;

[0102] Fig. 32 is a flow diagram depicting a reminder presentation method in accordance with embodiments of the present disclosure;

[0103] Fig. 33 is a flow diagram depicting a preferred content reminder presentation method in accordance with embodiments of the present disclosure;

[0104] Fig. 34 is a flow diagram depicting an input-based user tracking method in accordance with embodiments of the present disclosure;

[0105] Fig. 35 is a fourth block diagram of an embodiment of the intelligent television software and/or firmware; and

[0106] Fig. 36 is a flow diagram depicting a live TV presentation method in accordance with embodiments of the present disclosure.

[0107] 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

[0108] Presented herein are embodiments of a device. The device can be a network-enabled 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.

[0109] Intelligent Television (TV) Environment:

[0110] 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 100 can be used to enhance the user interactive experience whether at home or at work.

[0111] 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.

[0112] 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.

[0113] 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).

[0114] 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 to connect via cellular base antenna 142 to telephone networks operated by telephone company 146, and by using a telephone line 120 to connect to telephone networks operated by telephone company 146. These connections 104 enable the Intelligent TV 100 to access one or more communication networks 132. The communication networks 132 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 a 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.

[0115] 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.

[0116] 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 132 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 an online community (e.g., Facebook™, Twitter™, LinkedIn™, Pinterest™, Google+™, 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.

[0117] 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™, or 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.

[0118] Intelligent TV:

[0119] 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.

[0120] 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.

[0121] 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.

[0122] 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.

[0123] 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.

[0124] 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.

[0125] 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.

[0126] 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.

[0127] 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.

[0128] 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.

[0129] Hardware Features:

[0130] 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.

[0131] 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.

[0132] 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.

[0133] 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.

[0134] 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.

[0135] 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.

[0136] 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.

[0137] 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 368 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.

[0138] 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.

[0139] 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.

[0140] 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.

[0141] 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).

[0142] 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 314 may be provided. Like the memory 308, the data storage 314 may comprise a solid state memory device or devices. Alternatively or in addition, the data storage 314 may comprise a hard disk drive or other random access memory.

[0143] 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.

[0144] 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.

[0145] 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.

[0146] Communication between components of the Intelligent TV 100 is provided by bus 322. Bus 322 may comprise one or more physical buses for control, addressing, and/or data transmission. Bus 322 may be parallel, serial, a hybrid thereof, or other technology.

[0147] Firmware and Software:

[0148] 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.

[0149] 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.

[0150] 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 hardware abstraction layer (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.

[0151] The TV services hardware abstraction layer library 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 hardware abstraction layer.

[0152] 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.

[0153] The application framework 412 can include a general abstraction for providing functionality that can be selected by one or more applications 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 components 448.

[0154] 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 444 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.

[0155] 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.

[0156] 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.

[0157] 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.

[0158] The media center application 460 can provide applications 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.

[0159] 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.

[0160] 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 event 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 event dispatcher 508 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.

[0161] The applications layer 416 can include a user interface application 468 and/or a silo application 512. The applications layer 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 468 can include a silo manager 532, a panel manager 536, and one or more types of panels 516-528. 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.

[0162] 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.

[0163] 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.

[0164] 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.

[0165] 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 subservices 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 660 may obtain thumbnail information from one of the data subservices 620, 624, 628 and store that information in the thumbnails database 668. Further the thumbnail cache manager 660 may extract or retrieve that information from the thumbnails database 668 to provide to one of the data subservices 620, 624, 628.

[0166] An exemplary content aggregation architecture 1300 is shown in Fig. 13. The architecture can include a user interface layer 1304 and a content aggregation layer 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.

[0167] 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).

[0168] 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 1340, such as an Android application interface and digital device interfaces.

[0169] 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.

[0170] 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 by an action associated with 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.

[0171] Remote Control:

[0172] 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 visual indicia 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.

[0173] 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.

[0174] 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).

[0175] 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.

[0176] 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).

[0177] 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).

[0178] 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.

[0179] 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.

[0180] 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.

[0181] 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.

[0182] The window 1100 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 process can be done in a nonintrusive 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.

[0183] 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™, Google+™, 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.

[0184] 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.*).

[0185] 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).

[0186] 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).

[0187] Live TV and Interface:

[0188] Fig. 14 depicts a first-time experience user interface 1408 for the live TV application of an Intelligent TV 100. Before the functionality associated with the live TV application may be enabled, one or more channel sets may need to be scanned. As such, if the live TV application is started and no channel sets have been scanned, the user may be prompted to scan for channels. Channel sets may be associated with at least one signal source. For instance, one signal source may correspond to analog television channels while another may correspond to digital television channels. In some embodiments, the at least one signal source may include one or more of an over-the-air broadcast medium, a digital TV channel source, an analog TV channel source, a cable provider, a satellite provider, the Internet, a multiple-system operator (MSO), and combinations thereof. In this example, two buttons 1412 and 1416 are presented to the user. The button 1412, when selected by the user, requires the TV 100 to scan digital TV signals to determine which channels or content sources are available for the live TV application. Similarly, if the user selects button 1416, the television 100 scans analog TV signals to determine the channels that may be available for the live TV application. The buttons 1412, 1416 may be selected via a remote control or other input device.

[0189] In some embodiments, a scan may have been previously conducted for either the analog or the digital TV signals or channel sets. In this case, a user may be presented with a "switch to" button in lieu of a "scan for" button as one of the options displayed to the

intelligent television 100. The "switch to" button, if selected, may allow a user to access an available channel set and even the functionality associated with the live TV application. For example, if a user has previously conducted a scan of analog channels (ATV), but has not scanned for digital channels (DTV), button 1412 may read "Scan DTV" while button 1416 may read "Switch to ATV." As can be appreciated, the same may apply for a previously conducted scan of digital channels where analog channels have not been previously scanned. The option to switch to a previously scanned channel set may be provided in the event that at least one channel has been found in a previous scan. However, when both channel sets have been scanned, the functionality associated with live TV may be enabled.

[0190] Fig. 15 is a flow diagram depicting a first time experience setup method 1500 in accordance with embodiments of the present disclosure. The method 1500 begins at step 1504 when a user attempts to access the live TV application of the Intelligent TV 100. Next, the method 1500 may determine whether the live TV application is accessed for the first time (step 1508). In some cases, this determination may be made by the Intelligent TV 100 recognizing that the live TV application has not been previously configured.

[0191] If it is determined that the Intelligent TV 100 should present a first-time experience to a user, the method 1500 may continue by presenting one or more channel set scan options via the Intelligent TV 100. In some embodiments, the channel sets may be grouped by various signal sources. For example, the scan options may include analog television, digital television, combinations thereof, and the like as provided herein. It is anticipated that the scan options may be presented as interactive dialog boxes displayed to the Intelligent TV 100.

[0192] In response to the presented scan options, a user may provide a scan input or a cancel input (step 1516). As can be appreciated, the scan or cancel input may be provided via a remote control or other input device. In one embodiment, one of the scan options may be highlighted by default. As such, a user may only need to provide an enter input rather than provide a navigation selection and an enter input.

[0193] In the event that a user provides a scan input, the method 1500 continues by automatically scanning the selected channel set (step 1520). Next, the method 1500 continues by determining whether any channels are found as part of the automatic scan (step 1524). If no channels are found the method 1500 may return to step 1512. However, if one or more channels are found as part of the automatic scan the method 1500 may continue by enabling live TV application functionality (step 1528). In one embodiment, if one or more channels are found on a first channel set the method 1500 may return to step 1512 to provide

the user with the option to scan a second channel set. Once the live TV application functionality has been enabled, the method 1500 ends at step 1532.

[0194] If it is determined at step 1508 that a first-time experience will not be presented to a user, the method 1500 may continue by determining whether one or more channel sets have been previously scanned (step 1536). When it is determined that no channel sets have been scanned, the method 1500 may continue at step 1512. However, if it is determined that at least one channel set has been previously scanned, the method 1500 may proceed to step 1540.

[0195] In some embodiments, the Intelligent TV 100 may require that a particular channel set be scanned to enable live TV application functionality. In other words, a user may be prevented from accessing certain functionality associated with the live TV application if a particular channel set is not scanned. The method 1500 may optionally continue by determining whether a required channel set has been scanned (step 1540). If the required channel set has been scanned, the method 1500 may proceed to enable live TV application functionality (step 1528). On the other hand, if the required channel set has not been scanned, or if there is no requirement to scan a particular channel set, the method 1500 may continue at step 1544.

[0196] At step 1544, a user may be presented with an option via an interactive dialog box to scan a particular channel set and to switch to another particular channel set. As provided above, a user may have conducted a previous channel scan. This previous channel scan may allow the user to switch to the previously scanned channel set and enable live TV functionality via the interactive dialog box presented to the Intelligent TV 100 (step 1548). The user may provide a switch input via a remote control or other input device. If no switch input is received, method 1500 may continue by detecting a scan input or a cancel input (step 1516).

[0197] Figs. 16A-16E depict various dialog, or notification, presentations in accordance with embodiments of the present disclosure. In some instances, it may be necessary for one or more components of the Intelligent TV 100 to communicate to a user via a dialog box. These dialog boxes may include interactive features and/or informational content that may be viewed by a user. Among other things, the dialog box may allow a user to review information and/or select content while watching the live TV application. As such, the dialog box may be configured to be discreet and un-obstructive. For example, the dialog box may be one or more of, transparent, justified to a particular section of the Intelligent TV 100 display, constructed from a single color, utilize a clear font type (e.g., sans serif, regular font

style, etc.), include minimal features, and even be configured to disappear after a certain time. It is an aspect of the present disclosure, that the dialog boxes may incorporate standard operating system dialogs that are used to convey information to, and/or require input from, a user.

[0198] A dialog box presented to a user via the Intelligent TV 100 may be configured to disappear after a given period of time. Alternatively, and in some cases, a dialog box may be configured to remain displayed to the Intelligent TV 100 depending on the content associated with the dialog box. In some cases, a dialog box may incorporate a default selection or action. In this instance, if a user fails to provide a selection, the selection may be made automatically in response to a passage of time.

[0199] Fig. 16A is a block diagram of a first embodiment of an Intelligent TV 100 dialog presentation. The dialog box 1616 depicted in Fig. 16A may comprise a header 1604, a body 1608, and a footer 1612 section. Although these separate sections 1604, 1608, 1612, may be combined to form a dialog box 1616, it should be appreciated that any one of the sections 1604, 1608, 1612, individually, may comprise the dialog box. In some embodiments, the various sections 1604, 1608, 1612, may include one more features. These features may further comprise informational portions and/or interactive portions. For example, the header 1604 may include the title of a channel or notification. The body 1608 may include content associated with the dialog box, such as, a description of a program or reminder, a selectable option, a timeout feature, or the like. The footer 1612 may include similar content as the header 1604 or the body 1608. It should be appreciated, that any of the sections 1604, 1608, 1612, described herein and in Figs. 16A-E, can include graphics, dividers, markers, delineations, text, checkboxes, radio buttons, selectable content, hyperlinks, and/or the like.

[0200] Fig. 16B is a block diagram of a second embodiment of an Intelligent TV 100 dialog presentation. Specifically, a compact dialog box 1620 is shown comprising a header 1604 and a body 1608. As described herein, the header 1604 may contain titles, prompts, information, and the like. In some embodiments, the header 1604 may be separated from the body 1608 by a visual and/or content divider. For example, the header 1604 may include a question, or prompt, asking the user for input via a selection mechanism contained in the body 1608. Such prompts may correspond to programming information, personal preferences, Intelligent TV 100 settings, application settings, and the like. In some cases, the body 1608 may include a yes/no, on/off, or option list, from which a user may select.

[0201] Fig. 16C is a block diagram of a third embodiment of an Intelligent TV 100 dialog presentation. In particular, Fig. 16C shows a variation of a dialog box 1624 that includes a

body 1608 and a footer 1612. The footer 1612, like the header 1604 and the body 1608, may include a timing feature associated with the presentation of the dialog box 1616, 1624. The timing feature may be configured to show a visual progress of the elapsed time associated with dialog box 1616, 1624. In some cases, the timing feature may be configured to show a time remaining with the presentation of the dialog box 1616, 1624. For example, the time remaining may be expressed as one or more numbers, progress bars, countdown timers, reverse progress bars, etc. Once the timer has expired, whether counting up or counting down, the dialog box 1608, 1616, 1620, 1624, may disappear from the display of the Intelligent TV 100.

[0202] Fig. 16D is a block diagram of a fourth embodiment of an Intelligent TV 100 dialog presentation. In an exemplary embodiment, the dialog box may comprise the body 1608 only. Although the body 1608 may contain timing features, titles, selectable options, descriptions, and other content, is anticipated that the dialog box will remain at a reduced size in comparison to the size of the display of the Intelligent TV 100. For instance, the dialog box 1608 may be presented to a section of the Intelligent TV 100 display, such that, it only takes up a small portion of the viewing content area. A dialog box configured as a body 1608 may be used as a simple reminder, or notification, of content associated with the live TV application.

[0203] Fig. 16E is a block diagram of a dialog presented to the display of an Intelligent TV 100 in accordance with embodiments of the present disclosure. As shown, the dialog box 1620 includes a header 1604 and a body 1608. The header 1604 displays the title of the program that is available via the live TV application. In Fig. 16E, the title of the program shown via the dialog box 1620 is "CXNX News." The body 1608 can include prompts 1608A, 1608B, 1608C, along with one or more selectable inputs 1628, such that a user may select an input that is associated with the prompts 1608A, 1608B, 1608C. In the present example, the first prompt 1608A is associated with a reminder setting, the second prompt 1608B is associated with a program favorite setting, and the third prompt 1608C is associated with a channel favorite setting. As can be appreciated, a user may navigate among these prompts 1608A, 1608B, 1608C, to select a corresponding action that may be performed by the live TV application. In the present example, the reminder setting prompt 1608A is highlighted by default. A user may move the position of the highlight via a remote control or other input device.

[0204] Referring to Fig. 17 a flow diagram depicting a dialog presentation method 1700 is shown in accordance with embodiments of the present disclosure. The method 1700 begins

at step 1704 and continues when the live TV application receives an input to initiate a dialog presentation (step 1708). The initiation input may be provided by one or more of, a user, the live TV application, other applications associated with the Intelligent TV 100, and/or one or more components of the Intelligent TV 100. For instance, a reminder may have been set, or programmed, for a specific program or show that is scheduled to play on live TV. The reminder may be associated with an initiation condition, including but not limited to, a timer, an input from an electronic programming guide, in response to another condition, some other input, or combinations thereof. Continuing the example, when the initiation condition is satisfied for the reminder, the reminder may display to the Intelligent TV 100. In some cases, the reminder may be displayed within a specific timeframe of a scheduled program or show.

[0205] The method 1700 continues by selecting a dialog presentation based at least partially on the received input (step 1712). Selection of the dialog presentation may include determining whether the presentation should include a header 1604, a body 1608, a footer 1612, and/or combinations thereof. Additionally or alternatively, selection of the dialog presentation may include determining content and/or features contained within a dialog. For instance, a typical informative dialog presentation may include a body 1608 only. However, a dialog presentation that includes a title and descriptive information coupled with selectable inputs and even a timeout feature may require a header 1604, a body 1608, and a footer 1612. By way of example, a reminder dialog presentation may include the title of the reminder in a header 1604 and at least one selectable option in the body 1608 that allows a user to change channels to the program associated with the reminder.

[0206] Next, the method 1700 may determine whether or not the dialog presentation is time informative (step 1716). In some embodiments, the dialog presentation may provide a visual representation of a time associated with certain dialog content. As can be appreciated, a user may be provided with a countdown timer, a progress bar, or other time feature associated with the dialog box. The time feature may be informative of a program start time, a current time, and/or a time associated with the dialog box presentation. Determining whether or not a dialog is time informative may include referring to a memory having stored preferences, or rules, associated with one or more of TV content, dialog boxes, time informative features, etc. For example, a reminder presented to a user via a dialog box may inform the user of a start time of a TV show. Because the start time of the TV show is time sensitive, the reminder dialog box may provide at least one of, a start time of the show, a time until the start time, a countdown time until the start time, and a time feature relating to the presentation of the dialog box. Among other things, the time feature disclosed in this example can allow a user

to make a selection decision while a dialog box is presented via the Intelligent TV 100. If the dialog is not determined to be time informative, the method 1700 continues at step 1724.

[0207] If the dialog is determined to be time informative, the method 1700 continues by including at least one time information feature as part of the dialog presentation (step 1720). In one example, a time feature may include a progress bar displayed as part of the dialog box. The progress bar may represent an amount of time associated with the presentation of the dialog box. For instance, a progress bar may show how long a dialog has been presented to the display of an Intelligent TV 100. As such, the progress bar may include a time start point and a time endpoint. In another example, a reverse progress bar may be configured to countdown, and/or display a graphical change, representing a time remaining for the presentation of the dialog. Upon an expiration of the time shown via the reverse progress bar, the dialog may be configured to disappear. The progress bar, reverse progress bar, or other time feature, may relate to live TV content or the presentation of a dialog.

[0208] As previously stated, the dialog box may incorporate a default selection, or action, that may be automatically selected in response to a passage of time. Among other things, providing a user with a visual representation of time associated with the dialog box can allow a user to make a selection other than the default selection associated with the dialog box.

[0209] The method 1700 continues by presenting the dialog via the live TV application and the Intelligent TV 100 (step 1724). Presentation of the dialog may include, but is not limited to, a display justification point (e.g., left-justified, right-justified, center-justified, bottom-justified, top-justified, and combinations thereof), a transparency level, a font type or style, an overall size, an action, a size in relation to the display of the Intelligent TV 100, and more.

[0210] When the dialog is presented to the display of the Intelligent TV 100, a timer may be initiated that defines the amount of time the dialog will be presented (step 1728). As can be appreciated, the timer may be a "count-up" timer or a "countdown" timer. The live TV application may be configured to provide an action upon the expiration of the dialog presentation timer. One example of an action associated with the expiration of the timer may include causing the dialog to disappear from the display of the Intelligent TV 100. Another example of an action associated with the expiration of the timer may include an automatic selection of an available option via the Intelligent TV 100.

[0211] Next, the method 1700 receives an input from a user, or the expiration of the timer, to remove the dialog presentation (step 1732). A user input may correspond to a selection associated with the dialog presentation, a cancellation, or some other input associated with the Intelligent TV 100. For example, a user may select an option associated with the dialog

box, in which case the dialog box may disappear. In some embodiments, a user may not enter an input and an automatic selection may be made by the expiration of the timer. In any event, when the timer has reached the end of its scheduled time the dialog box may be configured to disappear from display. In an alternative embodiment, the dialog box may be configured to fade out, move to the application (or other) panel, minimize, or otherwise dismiss from the content view area of the Intelligent TV 100. The method ends at step 1736.

[0212] Referring now to Fig. 18, 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 effect 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 application 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.

[0213] As illustrated in Fig. 18, the Intelligent TV 100 may display a global panel 1804, an active content view area 1808, and an application panel 1812. The global panel 1804 may be the same or similar to global panel 516. The global panel 1804 may include information that is associated with the home screen or top level hierarchical information for the user. For instance, global panel 1804 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 1804 may be displayed in such a manner as to not disrupt the content view area 1808; that is, the global panel 1804 may be displayed in such a manner as to provide a user the ability to view content displayed in the content view area 1808 over or adjacent to live TV content. For example, the global panel 1804 may be translucent in nature such that the content displayed in the content view area 1808 is displayed (i.e., still viewable to a user), behind the global panel 1804. The global panel 1804 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 1812. Moreover, and as previously discussed, global panel 1804 may be displayed by the Intelligent TV 100 such that the active content in the content view area 1808 is always in view. In some embodiments, the global panel 1804 and the contents of the global panel 1804 may depend on the user; that is, the global panel 1804 may be specific to one or more users. Therefore, the global panel 1804 may also be thought of as a home panel.

[0214] As further illustrated in Fig. 18, the Intelligent TV 100 may display an application panel 1812. The application panel 1812 may be the same or similar as application panel 544. The application panel 1812 may provide access to contextually relevant functionality based on the currently viewing/recently viewed material. Similar to the global panel 1804, the application panel 1812 may provide such access without disrupting the content view area 1808. That is, the application panel 1812 may be displayed in such a manner as to provide a user the ability to view content displayed in the content view area 1808 over or adjacent to live TV content. For example, the application panel 1812 may be translucent in nature such that the content displayed in the content view area 1808 is displayed (i.e., still viewable to a user), behind the application panel 1812. The application panel 1812 may provide quick access to core functionality of the Intelligent TV 100 such that the active content in the content view area 1808 is always in view. Moreover, the application panel 1812 may provide a consistent user experience across all applications and may include focused contextual content.

[0215] The Intelligent TV 100 may include an application panel 1812 as shown in Fig. 19. The content displayed in the application panel 1812 depends on the content displayed in the content view area 1808. Stated another way, the application panel 1812 is contextually dependent upon the source of content and the content itself in the content view area 1808. This is significantly different from the global panel 1804, in which the content displayed in the global panel 1804 contains functionality that exists at a system level and is completely independent of the currently viewed content in the content view area 1808. The application panel 1812 also provides customized information for each application. The application panel 1812 may comprise application panel elements comprising an application panel navigation bar 1904, a content area 1908, and a hotkey legend 1912. The application panel navigation bar 1904 is presented such that the navigation pattern and content remain consistent across all applications. That is, the navigation bar 1904 may include the same or similar elements such that an easy navigation is maintained no matter which application and/or sources are selected and displayed. For example, the navigation panel bar 1904 may include fixed regions 1920A-1920E corresponding to live TV navigable menus and further comprising Info, EPG, Categories, Favorites, and Search. Although, Info, EPG, Categories, Favorites, and Search are illustrated in Fig. 19, additional or fewer tab regions may be displayed.

[0216] The content area in 1908 is panel view specific. For example, depending on the panel view focus, the content area 1908 may update, as further described below. Moreover, the application panel 1812 may include a hotkey legend 1912 corresponding to one or more

hotkeys. The hotkey legend 1912 is positioned at the bottom of the panel 1812 across all applications. The function of the hotkeys is context sensitive and may vary depending on the application selected and/or displayed in the content view area 1808. However, generally speaking, some hotkeys are generally navigation based while others may be action based. For example, the hotkeys may correspond to shortcuts such as marking a series, program, show, or channel as a favorite. In another example, at least one of the hotkeys may correspond to a reminder such that a series, program, or show can be marked for a reminder.

[0217] Fig. 20 depicts a first embodiment of an information (Info) panel presented via an application panel of an Intelligent TV. The sample live TV application panel 1812 shown in Fig. 20 includes an application panel navigation bar 1904, a content area 1908, and a hotkey legend 1912. In this example, Info tab 1920A is highlighted to display live TV informational content via the application panel 1812. In particular, Fig. 20 depicts an example where the Info fixed region 1920A has a focus in accordance with some embodiments of the present disclosure. When the Info fixed tab region 1920A has a focus, or is highlighted, an Info panel type, such as panel type 1812 may be presented. Panel type 1812 may be presented when the content displayed in the active content area 1808 is associated with content having series information.

[0218] The application panel 1812 may include a section that identifies a program type. Program types may include, but are not limited to, TV episodes, TV specials, movies, sports events, radio stations, and undefined or general programs. TV episodes can include, but are in no way limited to, drama series, situation comedies (sitcoms), animated series, reality shows, mini-series, talk shows, game shows, newscasts, combinations thereof and the like. Sports events may include, but are not limited to, baseball season, hockey playoffs, boxing matches, Superbowl, football championships, etc. Specials may include holiday or seasonal specials, election coverage, special news reports, and more. In the event that a program type is not recognized, or does not have program information, the application panel 1812 may display undefined content in the content area 1908. An unrecognized program type may include any program playing on live TV that does not include metadata. In one embodiment, a program may not be classified into one of the program types disclosed above in which case, the application panel 1812 may provide general informational content. In one example, live TV informational content may be determined by referring to rules stored in a memory. Continuing this example, informational content fields may be mapped to a particular live TV broadcast content, or program, types. For instance, an event program type may include similar informational content to a TV series program type. The event may be configured to

include fields such as, a thumbnail graphic, a description, and a channel identifier. The TV series may also be configured to include fields such as, a thumbnail graphic, a description, and a channel identifier. In some embodiments, the program type of a particular program (e.g., one presented to the active content area 1808, etc.) may be compared to one or more mapped content fields stored in rules. Once the informational content field, or fields, have been determined, the Intelligent TV100 may include the content fields in the presentation layout of the informational content. When retrieved, the informational content may use the fields to populate the informational content presented to an application panel 1812.

[0219] As part of the program identification, the application panel 1812 may include a program name, season, episode number, description, and the like, in a program identification section 2004A. Additionally or alternatively, a program may be identified by a series or episode number in a second program identification section 2004B. A third program identification section 2008C may include program format, ratings, preferences, and/or other settings. The program identification section in the contact content area 1908 may include a thumbnail graphic 2008. The thumbnail graphic 2008 may be used to identify a program visually, and may even include a channel identification number or symbol. In some embodiments, the content area 1908 may include preference information such as a favorites button 2016. A favorites button 2016 may be used to add a program, or channel, to a favorites list. Additionally or alternatively, the favorites button 2016 may be used to remove a program, or channel, from a favorites list. The favorites list may be stored in a memory as disclosed herein.

[0220] As previously stated, the application panel 1812 and the panel type may dynamically change depending on the information associated with the live TV content playing in the content view area 1808. For instance, in the event that a TV series is playing in the active content area 1808, the application panel 1812 may display TV series information in the content area 1908. In some embodiments, the live TV broadcast content playing in the content view area 1808 can continue to play even while an application panel 1812, EPG, information content, and more are displayed in an overlapped condition over at least a portion of the content view area 1808. In one embodiment, the application panel 1812 and content in the application panel 1812 are at least partially transparent. As such, live TV content is visible beneath an overlapped application panel 1812, whether the application panel is showing an EPG, information, favorites, or other content. TV series information may include one or more of a channel number, thumbnail graphic, season, episode, description, start time, and time, and other TV series-specific information.

[0221] A thumbnail graphic 2008 may be displayed for a program, movie, show, episode, special, sports event, as a default, or for some other undefined content. It is anticipated, that the thumbnail graphic 2008 be related to the content associated with the program. As such, thumbnail graphic 2008 content may be retrieved from a memory, or an electronic programming guide, for display in the application panel 1812. In some embodiments, a thumbnail graphic 2008 may be provided by the metadata that accompanies a broadcast channel signal. In some cases, however, a thumbnail image, or graphic, may not be available for a particular program. In this instance, the live TV application may retrieve a thumbnail image from a memory associated with the Intelligent TV 100. Default images may be used to define specific program types, or undefined program types. For instance, a radio station program may not be associated with a particular thumbnail image or graphic and as such a default image of a radio station can be provided via the thumbnail graphic 2008.

[0222] In some embodiments, a content area 1908 of the application panel 1812 may provide an "On Next" information 2020 section. The "On Next" information 2020 may comprise information relating to one or more programs, shows, specials, events, movies that are playing on live TV after the program shown in the content area 1908 has finished playing. As such, the "On Next" information 2020 may include a thumbnail graphic 2008 of the next program and/or additional information related to the program (e.g., a description, etc.). In one embodiment, the "On next" information 2020 may include a start time, and an identification of the program. In another embodiment, the "On Next" information 2020 may provide "recommended" viewing content, subsequent episodes playing on different channels, and even "favorite" viewing content. "On Next" information 2020 sections may be associated with one or more info panels displaying movies, TV specials, sports events, and/or TV series episodes.

[0223] As can be appreciated, various information panels may include more or less information depending on the content associated with the live TV broadcast. For example, an unrecognized or undefined program may not include "On Next" information 2020. In another example, a movie program may not include episode information. In yet another example, a radio station channel, or music channel, may not include episode information, "On Next" information 2020, or season information. In many cases, however, the various programs may include a description of what is playing on live TV. Additionally, the various programs may include a channel identifier in the application panel 1812.

[0224] In accordance with some embodiments of the present disclosure, and as previously described, a user may select a fixed tab region 2140 corresponding to Info, as illustrated in

Fig. 21. An indicator, such as indicator 2140 may display which fixed tab region is selected or has the current select-focus. Application panel 1812 may then display context specific information corresponding to the active content area 1808. For example, the application panel 1812 may include information specific to live TV. For instance, channel 801 may correspond to the network "CXNX." Additionally, a thumbnail graphic 2104 corresponding to the channel 801, or program 2112 playing on the channel, may be displayed in the application panel 1812. Moreover, the application panel 1812 may utilize one or more panel content types discussed herein. For example, a mini-electronic program guide, or "On Next" information 2020 section displaying program scheduling pertaining to the active content area 1808 may be displayed in the application panel 1812. Moreover, additional information pertaining to the active content area 1808 may be presented to a user. Information such as the title of the program 2112, the scheduling of the program 2116, a description of the program 2120, and characteristics of the program (e.g., visual quality, High Definition (HD), signal quality, sound quality, Dolby®, category, genre, etc.) 2124 may also be displayed. Moreover, upon the display of the application panel 1812, other linked areas or functions may also be displayed.

[0225] Fig. 22 shows a flow diagram depicting an information panel presentation method 2200 in accordance with embodiments of the present disclosure. The method 2200 begins at step 2204 and proceeds by recognizing a select-focus and/or selected content via the application panel 1812 (step 2208). In some embodiments, the select-focus may correspond to a position of a user's cursor, or indicator 2140, on the application panel 1812. A select-focus may include a default focus associated with one or more of the fixed tab regions 1904. The select-focus may be moved via a user input from a remote control or other input device. One example of moving or shifting the select-focus may include providing a directional input via a remote control. Selected content may be recognized via an input provided in association with a selection-focus. Additionally or alternatively, selected content may be recognized by detecting an input that is independent of a selection-focus. For example, although an indicator 2140 may be associated with a portion of the application panel 1812, a user may provide an input corresponding to a different portion of the application panel 1812. In this example, a user may select a program hotkey, provide a directional input (e.g., up, down, left, right, angles, and combinations thereof), a swipe input, and/or a hold input to select content.

[0226] If the select-focus is associated with an Info tab region 1920A, the method 2200 continues by receiving an input to initiate the information presentation via the application

panel 1812 (step 2212). The input may be provided by a user via a remote control or other input device. In some embodiments, the user-provided input may be a selection input based on a corresponding position of a select-focus associated with the navigation bar 1904. In other embodiments, an informational input may be provided via an information button associated with a remote control or other input device. In this case, a select-focus may not be required to display informational content via the live TV application panel 1812. Additionally or alternatively, the input may be provided via the Intelligent TV 100 in response to a condition. For example, a timer may be configured to change live TV channels on the Intelligent TV 100 at a given time. Once the channel is changed, the Info tab 1920A may be automatically selected and information may be shown via the application panel 1812. This automatic selection and presentation may be provided by one or more of the components associated with the Intelligent TV 100. As can be appreciated, rules and/or preferences may be used to determine the automatic selection and/or presentation of information via the Info tab 1920A and the application panel 1812.

[0227] Upon receiving an input to initiate the information presentation via the application panel 1812, the method 2200 continues by determining the presentation of information based at least partially on the selection (step 2216). The presentation of information may include, but is not limited to, a layout, a graphical representation, selected fields, descriptions, and the like. As such, certain presentations of information may be governed by the content related to the selection input. In one example, a selection input may be provided to show information relating to broadcast content playing via live TV in the active content area 1808. Continuing this example, if a movie is playing in the active content area 1808, the information presentation selected for the application panel 1812 may include a movie name, a description, a cast list, a movie rating, a start and end time, and more. On the other hand, if a radio station program is playing in the active content area 1808, the information presentation selected for display in the application panel 1812 may include the radio station program channel number, a default image, a description of any music playing etc. In some embodiments, a size of the active content area 1808 may include the total viewable area of the Intelligent TV 100 display.

[0228] The method 2200 continues by retrieving the information presentation content from at least one source (step 2220). For instance, if the information presentation content includes a description of the content playing on live TV, the Intelligent TV 100 may retrieve this information from at least one broadcast signal. Typically, such programming information may be included in the data accompanying a broadcast signal. Additionally or alternatively, if the information presentation content includes "recommended" or "favorite" content, the

Intelligent TV 100 may refer to a memory where such content may be stored. In one embodiment, the memory may be associated with the hardware of the Intelligent TV 100. In some cases, this content may be stored in a memory remote from the Intelligent TV 100, in which case, the Intelligent TV 100 and its various components may be caused to communicate across a network to retrieve the content. Among other things, the content retrieved across the network may include, but is in no way limited to, programming information, thumbnail graphics, EPGs, etc. One example of the network may include, but is not limited to, the Internet.

[0229] Next, the Intelligent TV 100 may present the information presentation content via the live TV application and panel 1812 (step 2224). As disclosed herein, the presentation may include a visual, audible, and/or combination presentation via the live TV application. In some embodiments, the presentation of information may be associated within the application panel 1812 alone. The presentation of information may include, but is not limited to, a layout, a graphical representation, selected fields, descriptions, and the like. In any event, the presentation layout is displayed to the Intelligent TV 100 as determined in step 2216. This presentation of information may include any of the layouts shown in the application panels 1812 of the appended figures. Additionally or alternatively, the presentation of information, and even the application panel 1812, may be at least partially transparent. In some embodiments, the content presented to the active content area may be at least partially visible beneath, or through, the live TV application panel 1812 and even the information presentation content that is presented via the application panel 1812. In one embodiment, the size of the active content area is maintained upon presenting the information presentation content via the application panel 1812. For example, the application panel 1812 in some instances does not affect the size of the displayed active content. The method 2200 ends at step 2228.

[0230] Fig. 23A shows a first embodiment of an EPG 2304 presented via an application panel 1812 of an Intelligent TV 100. As shown, the application panel 1812 can overlap or move at least a portion of the active content area 1808. The EPG region 1920B of the panel navigation bar 1904 is shown as selected. The selection may be provided via a user input and/or automatically via the Intelligent TV 100 (e.g., in response to condition or other selection made). In some cases the selection of the EPG region 1920B may be indicated via a select-focus in the form of a highlight, an underline, a specific font style, an action (e.g., movement of the EPG region indicator 1920B, brightness adjustment, etc.), combinations thereof, and the like. This select-focus indication may be associated with the EPG region

1920B. The application panel 1812 may also include a hotkey legend 1912 similar to other application panels 1812 displayed via the Intelligent TV 100. As previously discussed, the hotkeys provided in the hotkey legend 1912 may be customized to facilitate shortcut navigation and/or special features associated with the Intelligent TV 100 and/or the application panel 1812. For instance, the hotkeys may be context sensitive to a particular application panel 1812 displayed. As shown in Fig. 23A, the hotkey legend 1912 may include Page Up, Page Down, Remind, Favorite, and other features.

[0231] In some embodiments, the EPG 2304 may be displayed via an application panel 1812 in a particular layout or format that presents scheduled programming to a viewer of the Intelligent TV 100. This particular layout or format may be customized and/or changed by a user via at least one input provided via a remote control or other input device. For example, a first format of the EPG 2304 may present the scheduled programming in a table, or list, in a channel number order. As can be appreciated, the channels may be selected from one or more particular groups of channels (e.g., favorites, available channels, premium channels, etc.) and ordered from low-to-high channel number or from high-to-low channel number. Each channel may include program information that can include start, end, duration, and other times associated with the channel's programming.

[0232] Additionally or alternatively, the application panel 1812 may include a program preview pane 2308 that may include a program thumbnail graphic 2008, an identifier, description, times, and other information that is associated with the channel and/or the program. The program preview pane 2308 may change to display new information as time passes or as a user navigates through selected channels. In some embodiments, the Intelligent TV 100 may select a particular channel to display information via the program preview pane 2308. This selection may be based on stored rules. In some cases, the program preview pane 2308 may be configured to display information associated with the first channel on the EPG 2304 list, as a default.

[0233] The EPG 2304 may be configured to present one or more programs for each channel in a list, or tabular, format that is accompanied by an EPG time scale 2312. For instance, and as shown in Fig. 23A, the first channel in the list has a first program that runs until 9:00 PM and a second program that begins at 9:00 PM. The program may include a text, graphic, and/or combination thereof identifier. The identifier may be used to identify the program to a user of the Intelligent TV 100. Although shown with a finite number of channels displayed via the list of the EPG 2304, it is anticipated that other channels may be caused to display to the EPG 2304 list given a user provided input. For instance, a user may scroll to another line,

or page, on the list, by using the Page Down hotkey of a remote control or other input device as designated by the hotkey legend 1912. As another example, a user may navigate through channels in the EPG 2304 by providing a directional input (e.g., via arrow keys, channel up/down buttons, etc.) from a remote control or other input device.

[0234] In some embodiments, the EPG time scale 2312 may include a current time indicator. The current time indicator may be represented by a graphic that is associated with the EPG time scale 2312 and that is capable of moving relative to the EPG time scale 2312. Fig. 23A shows a small arrow, or caret symbol, positioned between the 8:30 PM and 9:00 PM on the EPG time scale 2312 that acts as a current time indicator. The position of the caret symbol along the scale in the present example indicates that the time is approximately 8:40 PM. Although shown as a caret symbol, it is anticipated that any graphic may be used to provide an indication of the current time to a user or viewer of the Intelligent TV 100. Moreover, while a moveable time indicator is disclosed above, it is anticipated that some embodiments may employ a fixed current time indicator while the EPG time scale 2312 itself moves relative to the fixed current time indicator.

[0235] Referring now to Fig. 23B, a second embodiment of an EPG 2304' presented via an application panel 1812 of an Intelligent TV 100 is shown. In some embodiments, the EPG 2304' may present programming information by time. In other words, the list of programs contained in the EPG 2304' can be ordered by a time associated with the program. The time may indicate a time that a program is scheduled to start. Additionally or alternatively, the program list may be compiled in the EPG 2304' via the Intelligent TV 100 from one or more groups of channels (e.g., favorites, available channels, premium channels, etc.). The times associated with each program can be ordered from earliest-to-latest start time or latest-to-earliest start time. Each program in the list may include program information, a description, start, end, duration, and other times associated with the programming and the like. In some cases, each program identifier may be accompanied by an alert feature. For example, the first three programs shown in the EPG 2304' of Fig. 23B indicate via an alert feature that the program is "ON NOW." In this example, the alert feature may be used to indicate that select programs are playing now on a channel associated with the program information displayed in the EPG 2304'. Additionally or alternatively, the alert features may be configured to indicate that a show is new, a favorite, recommended, scheduled for a reminder, scheduled for recording, and more.

[0236] As previously stated, the application panel 1812 may include a program preview pane 2308 that may include a program thumbnail graphic 2008, an identifier, description,

times, and other information that is associated with the channel and/or the program. The program preview pane 2308 may change to display new information as time passes or as a user navigates through selected channels, programs, or start times. In some embodiments, the Intelligent TV 100 may select a particular start time, channel, or program, to display information via the program preview pane 2308. This selection may be based on stored rules. In some cases, the program preview pane 2308 may be configured to display information associated with the first channel on the EPG 2304' list, as a default.

[0237] In any of the EPG embodiments disclosed herein, a user may select an item (e.g., program, channel, etc.) from the EPG list and the Intelligent TV 100 may change the currently tuned channel to the program and/or channel selected. In some embodiments, the selection of one of the items in the EPG list may result in the live TV application closing and the live feed being changed to the selected channel. Among other things, the user selection may be provided by an input according to any manner of input disclosed herein.

[0238] Fig. 24A depicts a first embodiment of an EPG 2304 and EPG preview window 2408 presented via an application panel 1812 of an Intelligent TV 100. The EPG 2304 shown includes scheduled programming listed by channel number (e.g., from channel number 1 to channel number 12). The application panel 1812 also shows the application panel navigation bar, an EPG time scale, and a hotkey legend, in accordance with embodiments of the present disclosure. In some embodiments, select content from the EPG 2304 may provide an EPG preview window 2408 via the Intelligent TV 100. The EPG preview window 2408 may include a thumbnail graphic, a title, description, time, channel identifier, combinations thereof, and the like. Among other things, the EPG preview window 2408 may include expanded information of program information that is displayed in the EPG 2304.

[0239] In some embodiments, an EPG preview window 2408 may be visually associated with a particular channel and/or program. For instance, the EPG preview window 2408 may include a preview indicator 2412. Among other things, the preview indicator 2412 may point to a particular row (e.g., program, channel, time segment, etc.) in the EPG 2304.

[0240] The EPG preview window 2408 may be displayed by navigating to a particular row, program, or time slot, within the EPG 2304. In one embodiment, the EPG preview window 2408 may display after a given period of time has passed since a row, program, or slot is selected (whether the selection is provided by a user input or in response to a default condition of the Intelligent TV 100). In another embodiment, a user may select to display the EPG preview window 2408 by providing an input via a remote control or other input device. For example, a selection of the first row, or Channel 1 in Fig. 24A, may cause an EPG

preview window 2408 to appear within at least a portion of the active content area 1808. The EPG preview window 2408 may be translucent or at least partially transparent to allow content playing in the active content area 1808 to show through the EPG preview window 2408. In essence, this translucent appearance of the EPG preview window 2408 can allow information to be displayed to a viewer, or user, without totally obstructing content that is playing on the Intelligent TV 100. Continuing the example above, the EPG preview window 2408 is presenting expanded information associated with the program "Newsroom."

[0241] Fig. 24B shows an EPG preview window 2408' associated with programming content playing on Channel 12. In this example, a user may have provided an input to navigate to the first program in the Channel 12 row on the EPG 2304. For example, a user may have provided a navigational input (e.g., up, down, left, right, etc.) via a remote control or other input device associated with the Intelligent TV 100. As such, the EPG preview window 2408 may move closer to the selected channel and the preview indicator 2412' may shift to point to the row associated with the selected channel. In this example, the EPG preview window 2408' is now presenting expanded information associated with the program "Home." In any embodiment, the behavior of the EPG preview window 2408 and the preview indicator 2412 may depend on rules stored in memory. Such rules may govern when the EPG preview window 2408 moves relative to the EPG 2304. Additionally or alternatively, the rules stored in memory may govern how the preview indicator 2412 moves relative to the EPG preview window 2408 and/or the EPG 2304.

[0242] Fig. 25 shows a flow diagram depicting an EPG presentation method 2500 in accordance with embodiments of the present disclosure. The method 2500 begins at step 2504 and proceeds when the Intelligent TV 100 receives input to initiate the EPG presentation (step 2508). In some embodiments, the EPG may be initiated by a user providing an input via a remote control or other input device. In one example, a user may activate the application panel 1812 by providing an input via the remote control or other device. Once the application panel is presented to the Intelligent TV 100, the user may navigate along the application panel navigation bar 1904 and shift the select-focus to the EPG region 1920B. In another example, a user can provide an input via a hotkey, or other button, associated with a remote control or other device that may cause the application panel 1812 to display the EPG directly. In other words, the user would not be required to navigate through regions on the application panel navigation bar 1904 to display the EPG. In yet another example, the EPG may be automatically displayed by the Intelligent TV 100 in response to detecting a condition stored in rules.

[0243] Next, the EPG presentation layout is determined by the Intelligent TV 100 (step 2512). This determination may be based at least partially on the input that initiated the EPG presentation. For example, if an input is provided to display a channel-based EPG, the Intelligent TV 100 would determine a channel-based EPG to present via the application panel 1812. On the other hand, if an input is provided to display a time-based EPG, the Intelligent TV 100 would determine to present a time-based EPG via the application panel 1812. Rules stored in a memory associated with the Intelligent TV 100 may dictate the presentation layout. In some embodiments, the rules stored in a memory may include one or more EPG information layout templates. The one or more EPG information layout templates may correspond to a layout template that arranges content that makes up the EPG information. As can be appreciated, the EPG information layout template may be associated with a specific EPG presentation input and/or live TV content playing in the content view area 1808 as an EPG presentation input is received. In one embodiment, an EPG presentation input may be matched to stored EPG inputs to determine a select EPG information layout template for the presentation of the EPG information.

[0244] In some embodiments, the EPG presentation layout may include at least one position associated with content that makes up the EPG information. The at least one position may correspond to a position of the content within a live TV application panel 1812. In some embodiments, the EPG presentation layout may include specific content that makes up the EPG information. For example, an EPG presentation layout may be determined to include a thumbnail graphic, a preview window, and a time scale. In another example, the EPG presentation layout may be determined to present the EPG information in a particular arrangement, position, location, space, size, and/or combinations thereof relative to the application panel 1812.

[0245] The method 2500 continues by retrieving EPG information from at least one source (step 2516). In some cases, the Intelligent TV 100 may retrieve program information from over-the-air channel signals. Typically, the program information provided in such signals is limited to simple text-based descriptions. However, the Intelligent TV 100 may be connected to a network (e.g., the Internet) and as such, may retrieve detailed program information, graphics, additional content, multi-media, and the like. Accordingly, the Intelligent TV 100 may compare, select, and/or aggregate information retrieved from at least one source.

[0246] At step 2520, the Intelligent TV 100 presents the EPG information retrieved in step 2516 via the live TV application and panel 1812. The EPG information may be presented in the predetermined EPG presentation layout. Additionally or alternatively, the arrangement of

the presented EPG information may be altered via user input. The method 2500 ends at step 2524.

[0247] Fig. 26 shows a flow diagram depicting an EPG and preview window 2408 presentation method 2600 in accordance with embodiments of the present disclosure. Similar to the other methods presented herein, the method 2600 may be performed by at least one processor executing instructions stored in a non-transitory computer readable medium associated with the Intelligent TV 100. The method 2600 begins at step 2604 and proceeds by determining a select-focus associated with displayed EPG content (step 2608). Among other things, displayed EPG content may correspond to a row, a program, a time, or combinations thereof that are associated with an EPG list. As previously described above, the select-focus may correspond to a visual representation of the position of a user's cursor, or indicator, on the application panel 1812. Examples of select-focus visual representations may include, but are not limited to, highlights, underlines, font style emphasis/change, shadows, glows, color change, associated icons, actions, combinations thereof, and the like. The select-focus may indicate that a specific program and/or EPG entry in the displayed EPG information is selected.

[0248] Once a select-focus that is associated with EPG content is determined, the Intelligent TV 100 may initiate a timer for the determined EPG content (step 2612). The timer may be configured to count up or count down, depending on the configuration. In any event, the timer can include a goal time. Upon reaching the goal time, the method may continue. In some embodiments, the timer may be configured to reset if the select-focus is shifted to other EPG content. Additionally or alternatively, the timer may be preconfigured with an expiration time, a limit, or an overall duration.

[0249] The method 2600 continues by determining whether the timer has expired or reached its preset limit, or goal time (step 2616). If the timer has not completed its timing function, the method 2600 may proceed to determine whether user input is received by the Intelligent TV 100 (step 2632). Where no user input is received, the method 2600 may return to step 2616 and continue to run the timing function associated with the initiated timer.

[0250] If the timer has completed its timing function, the method continues by presenting an EPG preview window 2408, or "bubble" preview (step 2620). In some embodiments, the EPG preview window 2408 may be presented adjacent to the application panel 1812 in the active content area 1808 of the Intelligent TV 100. It is anticipated that the EPG preview window 2408 may be separate and apart from the application panel 1812. The EPG preview window 2408 may include a preview indicator 2412. In some cases the preview indicator

2412 may be configured to overlap at least a portion of the application panel 1812. Additionally or alternatively, the preview indicator 2412 may be linked to an EPG entry that is associated with the EPG preview window and the EPG information presented to the display of the Intelligent TV 100. In one embodiment, the link of the preview indicator 2412 to the EPG entry may be indicated by an arrow. For example, the preview indicator 2412 may point to a specific EPG entry in the EPG information presented via the application panel 1812.

[0251] Next, the method 2600 continues by determining whether user input is received (step 2624). If no user input is received, via a remote control or other input device, the method 2600 ends at step 2628. On the other hand, if user input is received, at step 2624 or at step 2632, the method 2600 continues by determining whether the user input is a navigate-type input (step 2636). In some embodiments, the navigate-type input may be provided by a remote control or other input device. Examples of navigate-type inputs may include, but are not limited to, directional inputs (e.g., via arrow keys, swipes, touch-screens, etc.), channel up inputs, channel down inputs, hotkey inputs associated with navigation, combinations thereof, and the like. As disclosed herein, the navigate-type input may correspond to movement within EPG content that is available via the application panel 1812. In some cases, the EPG content may not be displayed to the application panel 1812, but a navigate-type input may display the EPG content to the application panel 1812. Upon receiving a navigate-type input, the method 2600 may proceed to navigate to the EPG content associated with a direction or destination of the navigate-type input (step 2648). After navigating to the EPG content, based on the provided navigate-type input, the method 2600 may repeat from step 2608.

[0252] If a user-input is received via the Intelligent TV 100, but it is determined to be an input other than a navigate-type input associated with EPG content, the method 2600 continues by determining a function associated with the input received (step 2640). Next, the method continues by providing the function determined in step 2640 (step 2644). For example, a user may provide an "exit" input via a remote control device. Based on this input, the Intelligent TV 100 determines that the input is not a navigate-type input as disclosed herein. Continuing the example, the method 2600 provides the "exit" input functionality, which in this case may correspond to closing the application panel 1812. In another example, a user may provide an "enter" input while the select-focus is associated with a program in the EPG content. In this case, the "enter" input may be associated with tuning the Intelligent TV 100 to the signal source associated with the program in the select-focus. The Intelligent TV 100 may provide the functionality associated with the "enter" input and tune to the signal source. The method ends at step 2628.

[0253] Fig. 27 depicts an embodiment of a compact EPG 2708 presented via an application panel 1812 of an Intelligent TV 100. As shown, the select-focus associated with the application panel navigation bar 1904 is set to the Categories tab 1920C. In some cases the selection of the Categories tab 1920C may be indicated via a select-focus in the form of a highlight, an underline, a specific font style, an action (e.g., movement of the Categories tab 1920C indicator, brightness adjustment, etc.), combinations thereof, and the like. This select-focus indication may be associated with the Categories tab 1920C. The application panel 1812 may also include a hotkey legend 1912 similar to other application panels 1812 displayed via the Intelligent TV 100. As previously discussed, the hotkeys provided in the hotkey legend 1912 may be customized to facilitate shortcut navigation and/or special features associated with the Intelligent TV 100 and/or the application panel 1812. For instance, the hotkeys may be context sensitive to a particular application panel 1812 displayed. As shown in Fig. 27, the hotkey legend 1912 may include Remind, Favorite, and other actions associated with one or more hotkeys. The hotkeys may be associated, or mapped, to one or more inputs of a remote control or other input device.

[0254] The application panel 1812 includes an EPG layout header 2704. The EPG layout header 2704 may be used to alter the format of a displayed compact EPG 2708. For instance, the EPG layout header 2704 shows "Category List" in Fig. 27 with a caret pointing left, while the compact EPG 2708 is presenting the compact, or "mini," EPG in a chosen category format. A user may select the EPG layout header 2704 to change, remove, create, or select categories that the compact EPG 2708 will display. Categories available via the "Category List" may include, but are not limited to, time-based, genre, title, program type (e.g., movie, TV special, sport, radio, undefined, etc.), channel-based, reminders, combinations thereof, and even user-created categories. In this example, the chosen category EPG list is shown by channel number on the left-hand side of the compact EPG 2708. In some embodiments, a user may select the EPG layout header 2704 to modify the presentation of the compact EPG 2708 in the application panel 1812. Upon selecting the EPG layout header 2704, the user may be presented with a number of compact EPG 2708 layout options. One example of such a presentation layout option may include displaying the compact EPG 2708 as any one of the categories disclosed above that can be chosen via a selection from within the Category tab 1920C of application panel 1812. In a "Time-Based" category presentation, the compact EPG 2708 may be arranged by time (as opposed to channel number, as previously discussed above). In another embodiment, a user may select a "Movie" category from the "Category List," in which case the compact EPG 2708 displays a list of movies that are available for

viewing via the Intelligent TV 100. Other variations and presentation layouts regarding categories, as disclosed above, may be made to the compact EPG 2708.

[0255] Additionally or alternatively, the application panel 1812 may include a program preview pane 2308 that may include a program thumbnail graphic 2008, an identifier, description, times, and other information that is associated with the channel and/or the program. The program preview pane 2308 may change to display new information as time passes or as a user navigates through selected channels, programs, or rows in the compact EPG 2708. In some embodiments, the Intelligent TV 100 may select EPG content information to display via the program preview pane 2308. This selection may be based on stored rules. In some cases, the program preview pane 2308 may be configured to display information associated with the first channel on the compact EPG 2708 list, as a default.

[0256] The compact EPG 2708 may be configured to present one or more programs for each channel in a list format that is accompanied by an EPG time scale 2312. Similar to the EPG 2304 disclosed above, a program in the compact EPG 2708 may include a text, graphic, and/or combination thereof identifier. In some embodiments, the compact EPG 2708 may be configured to display a specific number of lines, rows, programs, and/or information. The identifier may be used to identify the program to a user of the Intelligent TV 100. Although shown with a finite number of rows displayed via the list of the compact EPG 2708, it is anticipated that other channels may be caused to display to the compact EPG 2708 list given a user provided input. For instance, a user may scroll to another line, or page, on the list, by using a remote control or other input device. As another example, a user may navigate through channels in the compact EPG 2708 by providing a directional input (e.g., via arrow keys, channel up/down buttons, etc.) from a remote control or other input device.

[0257] In some embodiments, the EPG time scale may include a current time indicator. The current time indicator may be represented by a graphic that is associated with the EPG time scale and that is capable of moving relative to the EPG time scale 2312. Fig. 27 shows a small arrow, or caret symbol, positioned between the 8:30 PM and 9:00 PM on the EPG time scale 2312. The position of the caret symbol along the scale in the present example indicates that the current time is approximately 8:40 PM. Although shown as a caret symbol, it is anticipated that any graphic may be used to provide an indication to a user. Moreover, while a moveable time indicator is disclosed above, it is anticipated that some embodiments may employ a fixed current time indicator while the EPG time scale 2312 itself moves relative to the fixed current time indicator.

[0258] Fig. 28A depicts a first embodiment of a reminder dialog presentation 2800 in accordance with embodiments of the present disclosure. A reminder may be set for a program, show, channel, time, and combinations thereof. The reminder may be associated with an initiation condition, including but not limited to, a timer, an input from an EPG, in response to another condition, some other input, or combinations thereof. Continuing the example, when the initiation condition is satisfied for the reminder, the reminder may display to the Intelligent TV 100. In some cases, the reminder may be displayed within a specific timeframe of a scheduled program or show. The reminder dialog presentation may utilize one or more of the dialog presentations disclosed above.

[0259] The reminder dialog presentation 2800 includes a reminder header 2804 and a reminder body comprising one or more reminder prompts 2808A-C. The reminder header 2804 may include an identifier associated with a show, channel, series, content, reminder, program, time, etc. For example, the reminder header 2804 may display the title of a program that is available via the live TV application. The reminder body can include prompts 2808A, 2808B, 2808C, along with one or more selectable inputs 2828, such that a user may select an input that is associated with the prompts 2808A, 2808B, 2808C. As can be appreciated, a user may navigate among these prompts 2808A, 2808B, 2808C, to select a corresponding action that may be performed by the live TV application. In the present example, the reminder setting prompt 2808A is highlighted by default. A user may move the position of the highlight via a remote control or other input device.

[0260] In some embodiments, the reminder dialog presentation 2800 may be initiated in response to a user input. A user may desire to add a reminder for a specific program, show, channel, etc. As such, a user may utilize a "remind" input associated with a remote control or other input device. In one example, a "remind" input may be provided via a hotkey associated with the remote control or other input device. For instance, a user may be viewing an EPG via the application panel 1812 of an Intelligent TV 100 and notice that an interesting program is scheduled to start in an hour. Desiring to be reminded of the program, the user may select the program, activate the reminder input (e.g., via the "remind" hotkey, or other input) to initiate the reminder dialog presentation 2800. Then, the user may select the first prompt 2808A to set a reminder for the program.

[0261] The second prompt 2808B allows a user to add the live TV content (e.g., show, series, program, etc.) to a "Favorites" compilation, or group. In a similar fashion, the third prompt 2808C listed on the reminder dialog presentation 2800 may be configured to provide

an option for a user to add a selected channel to the "Favorites" compilation, or group. As can be appreciated, the "Favorites" group may be arranged at least by channel and content.

[0262] Referring to Fig. 28B a second embodiment of a reminder dialog presentation 2800' is depicted in accordance with embodiments of the present disclosure. In the event that a reminder is previously set for live TV content, a user may initiate the second reminder dialog presentation 2800' shown in Fig. 28B. Among other things, the user may modify settings associated with the previously set reminder via the second reminder dialog presentation 2800'. The second reminder dialog presentation 2800' can be initiated in a similar manner as the reminder dialog presentation 2800. Additionally or alternatively, the second reminder dialog presentation 2800' may be initiated by a user selecting a previously set reminder, or a program that is associated with a previously set reminder. Upon providing the selection input, the user may view the second reminder dialog presentation 2800'.

[0263] The second reminder dialog presentation 2800' includes a reminder header 2804 and a reminder body comprising one or more reminder prompts 2808A'-C'. As shown in Fig. 28B, the reminder prompts 2808A'-C' have changed from setting a reminder and adding a channel or content as a favorite to removing a reminder and channel or content from a "Favorites" group. In the event that a user wishes to remove the reminder from particular content, the user may initiate the second reminder dialog presentation 2800' (as disclosed above) and select the "remove reminder" prompt from the appropriate reminder prompt 2808A'. Although Figs. 28A-B show exemplary reminder dialog presentations 2800, 2800', it should be appreciated that the presentation of user prompts 2808A-C, 2808A'-C' can vary in the number of prompts presented as well as the order in which they are presented.

[0264] Figs. 29A-D depict embodiments of reminder dialog notifications in accordance with embodiments of the present disclosure. In particular, Figs. 29A-D show various reminder dialogs that are presented to the display of the Intelligent TV 100 upon receiving a reminder initiation input. The reminder initiation input may be provided by one or more of, a user, the live TV application, other applications associated with the Intelligent TV 100, and/or one or more components of the Intelligent TV 100. For instance, a reminder may have been set, or programmed, for a specific program or show that is scheduled to play on live TV.

[0265] In some embodiments, a reminder may be set for a specific program. The reminder may notify a user when the specific program is about to start, regardless of where the user is in the Intelligent TV 100 system (e.g., on another channel, silo, etc.). In one embodiment, a reminder may be set and created for a specific instance of a complete series. For example, if a program is on every Friday night at 8:00 PM on channel 3, then setting a reminder for the

program may create a reminder that is provided every Friday at 7:58 PM. Additionally or alternatively, if a program is a single airing event (such as a movie or TV special), then a reminder may only be provided for that singular instance. In some embodiments, if a user changes a channel from a reminder the

[0266] Reminders may be created for one or more parameters including, but not limited to, program names at program times on a program channel. The reminder may be stored in a memory and whenever a program is on that matches the one or more parameters the reminder may be set. The program logic used to create and/or set reminders does not require consideration of the day of the week associated with the one or more parameters. As such, all of the logical configurations may be covered. For example, reminders may be set for weekdays only (e.g., a soap opera, talk show, etc.), every day (e.g., news), twice a week (e.g., variety shows, competition shows having a competition day and a voting results day, etc.), once a week (e.g., a situation comedy (sitcom), drama show, etc.), and even once only (e.g., movie, TV special, etc.). This configuration may cover scenarios where shows go off the air for some time period between seasons.

[0267] In any event, a reminder may be associated with an initiation condition, including but not limited to, a timer, an input from an EPG, in response to another condition, some other input, or combinations thereof. Continuing the example, when the initiation condition is satisfied for the reminder, the reminder may display to the Intelligent TV 100 in the form of at least one of the reminder dialog presentations shown in Figs. 29A-D. In some cases, the reminder may be displayed within a specific timeframe of a scheduled program or show. The notifications may be displayed to the active content area 1808 of the Intelligent TV 100. Additionally or alternatively, the notifications may be translucent, or semi-transparent, to allow content from the active content area 1808 to show through the notifications.

[0268] The reminder time bar 2912 may be similar in form and function to the timing feature disclosed in reference to Figs. 16A-E of the detailed description. Among other things, the reminder time bar 2912 may be configured to display an amount of time that is associated with the visual presentation of the reminder dialog notification. In other words, the reminder time bar 2912, may indicate how long a reminder is expected to be displayed before the reminder notification disappears. By way of example, the reminder time bar 2912 may be configured as a progress bar that increases in dimension (e.g., length, width, height, combinations thereof, etc.) until the dimension reaches a specific size, at which point the reminder notification disappears. In another embodiment, the reminder time bar 2912 may be arranged as a timed progress bar that decreases in dimension (e.g., length, width, height,

combinations thereof, etc.) until the progress bar disappears with the notification. The reminder time bar 2912 that decreases in size may be called a reverse progress bar. In any event, at the end of a specific period of time set, or upon reaching a time goal, for a reminder notification, the notification may be configured to disappear.

[0269] A user may interact with a reminder dialog notification. For instance, a reminder dialog notification 2904A-D may be configured with a user interface button 2916. In some cases, the user interface button 2916 may include a text or graphic that indicates an associated function with the button 2916. Additionally or alternatively, it is anticipated that a user may interact with a content identification bar 2908 and even a preview pane 2308. In one example, a user may select the content identification bar 2908 associated with a notification. In some cases, this selection may tune the Intelligent TV 100 to the signal source associated with the bar 2908. Depending on one or more of the style of reminder dialog notification 2904A-D, the content associated with the reminder, user preferences, and Intelligent TV 100 settings, any of the various reminder dialog notifications may be presented to a user via the display of the Intelligent TV 100.

[0270] The live TV application may be configured to receive multiple reminder notifications at the same time. When multiple reminder notifications are received at the same time, the reminders may be queued. In some embodiments, requests to the user interface of the Intelligent TV 100 are sent one at a time to display the notification to the user. If the user chooses not to change the channel associated with the notification, the live TV application may proceed to process the next reminder notification in queue.

[0271] Fig. 29A depicts a first reminder dialog notification 2904A configured with a program preview pane 2308, a content identification bar 2908, a reminder time bar 2912, and a user interface button 2916. The reminder dialog notification may be accompanied by one or more of a time and reminder title in the header of the notification 2904A. The content identification bar 2908 may include a channel number, identifier, graphic, description, and the like associated with live TV content. This configuration of reminder dialog notification allows for a great amount of information to be included in the reminder. As can be appreciated, the size of the first reminder dialog notification 2904A may occupy a substantial portion of the viewing area of the active content area 1808. It should be appreciated, however, that the dialog notification may be justified (bottom, left, right, top, middle, combinations thereof, etc.) to occupy a specific portion of the Intelligent TV 100 active content area 1808. In some embodiments, the first reminder dialog notification 2904A may

be presented only at a first time to a user, while subsequent reminders for the same content may utilize another dialog notification as disclosed herein.

[0272] Fig. 29B depicts a compact reminder dialog notification 2904B configured with a content identification bar 2908, a reminder time bar 2912, and a user interface button 2916. Although shown with a combination of features, the compact reminder dialog notification 2904B may include more or less features than shown. For example, an unobtrusive compact reminder dialog notification may only include the content identification bar 2908 and possibly a reminder time bar 2912 to use a limited amount of space on the Intelligent TV 100 display, especially when compared to the first reminder dialog notification 2904A. As such, the compact notification 2904B may be displayed to the active content area 1808 of the Intelligent TV 100 to appear smaller than the first reminder dialog notification 2904A. This compact reminder dialog notification 2904B may be useful in subsequent reminders or in reminders for content already observed/acknowledged by a user.

[0273] Fig. 29C depicts a multiple reminder dialog notification 2904C configured with a first content identification bar 2908A, a second content identification bar 2908B, a reminder time bar 2912, and a user interface button 2916. Among other things, the multiple reminder dialog notification 2904C can alert a user of multiple reminders that were previously set. From the multiple reminder dialog notification 2904C, a user may navigate between the various interactive features. For example, a user may at least navigate between the first content identification bar 2908A and the second content identification bar 2908B. Continuing this example, a user may select the first content identification bar 2908A associated with the multiple reminder dialog notification 2904C. In some cases, this selection may tune the Intelligent TV 100 to the signal source associated with the bar 2908. Conversely, the user may select the second content identification bar 2908B associated with the multiple reminder dialog notification 2904C. In this case, this selection may tune the Intelligent TV 100 to the signal source associated with the second bar 2908B.

[0274] It is anticipated that the multiple reminder dialog notification 2904C may be used in instances where two or more reminders are set for live TV content. In one embodiment, the maximum number of displayed reminders, or content identification bars, may be limited to a specific number. For instance, even if thirty reminders are set for live TV content on the Intelligent TV 100, and all are about to initiate a reminder dialog, only two would be presented via the embodiment above. In another embodiment, however, the number of displayed reminders, or content identification bars may not be so limited. As such, the

notification 2904C may increase in size to fit the number of reminders set and configured to alert at the same time.

[0275] Fig. 29D depicts a scrollable multiple reminder dialog notification 2904D configured with a first content identification bar 2908A, a second content identification bar 2908B, a third content notification bar 2908C, a dialog scroll bar 2920, a reminder time bar 2912, and a user interface button 2916. Among other things, the scrollable multiple reminder dialog notification 2904C can alert a user of multiple reminders that have been previously set. From the multiple reminder dialog notification 2904C, a user may navigate between the various interactive features. For example, a user may at least navigate between the first content identification bar 2908A, the second content identification bar 2908B, the third content identification bar 2908C, and more via the dialog scroll bar 2920. Similar to the previous dialog notifications 2904A-C, a user may select any one of the content identification bars 2908A-C, even those not presently visible without movement of the dialog scroll bar 2920, that are associated with the scrollable multiple reminder dialog notification 2904D.

[0276] Fig. 30 depicts a grouped content panel presented via an application panel 1812 of the Intelligent TV 100. In particular, Fig. 30 shows content that has been marked as a favorite by a user or Intelligent TV 100. In other words, the content grouped in the Favorites tab 1920D is preferred over ungrouped content by at least one user. As shown, the select-focus associated with the application panel navigation bar 1904 is set to the Favorites tab 1920D. In some cases the selection of the Favorites tab 1920D may be indicated via a select-focus in the form of a highlight, an underline, a specific font style, an action (e.g., movement of the Favorites tab 1920D indicator, brightness adjustment, etc.), combinations thereof, and the like. This select-focus indication may be associated with the Favorites tab 1920D. The application panel 1812 may also include a hotkey legend 1912 similar to other application panels 1812 displayed via the Intelligent TV 100. As previously discussed, the hotkeys provided in the hotkey legend 1912 may be customized to facilitate shortcut navigation and/or special features associated with the Intelligent TV 100 and/or the application panel 1812. For instance, the hotkeys may be context sensitive to a particular application panel 1812 displayed. As shown in Fig. 30, the hotkey legend 1912 may include Remind, Favorite, and other actions associated with one or more hotkeys. The hotkeys may be associated, or mapped, to one or more inputs of a remote control or other input device.

[0277] In some embodiments, the content in favorites may be displayed as an EPG list. For example, an EPG list may display programs that are currently airing on channels marked as favorite. As such each row of the list may correspond to a favorite channel, and show current

program that is airing on that channel at the moment the EPG list is displayed. In the event that the EPG list is too large to display to the application panel 1812, a scroll bar 3020 may be included to allow a user to adjust the visibly displayed content.

[0278] In other embodiments, the content in favorites may comprise an EPG list that identifies programs currently airing that have been identified as preferred, or favorite. The view of the EPG list can be configured as dynamic and based on time. As time progresses, programs currently listed in the application panel 1812 that end may be removed from the EPG list automatically. Additionally or alternatively, favorite programs that begin can be added to the EPG list automatically. In the event that the EPG list is too large to display to the application panel 1812, a scroll bar 3020 may be included to allow a user to adjust the visibly displayed content. In any case a user may select one of the items in the EPG list to close the live TV application and tune the Intelligent TV 100 to the signal source associated with the selected item.

[0279] When the Favorites tab 1920D is selected, the application panel 1812 may include content that has been determined as a favorite. This determination of whether content is a favorite may be made by a user. For example, a user may be watching content on the Intelligent TV 100 and provide an input via the remote control or other input device to identify the content as a favorite. In some cases, this input may include marking a show as a favorite by toggling a favorite button or identifier. In some embodiments, the determination of favorite content may be made via the Intelligent TV 100. Among other things, the Intelligent TV 100 may store viewing habits and behavior and mark content as favorites based on the stored habits and behavior. Additionally or alternatively, the presentation of favorite content shown in the application panel 1812 may be ordered via the Intelligent TV 100. The order may be associated with a rank that is determined from stored viewing habits and behavior. For example, if a user watches a specific show more often than others, the specific show may be ordered higher in rank than the others. In the application panel 1812 a high rank may correspond to a high position in the list. Accordingly, the highest ranked show may be placed at the top position on the list displayed to the application panel 1812.

[0280] Among other things, the application panel 1812 shown in Fig. 30 may include a program preview pane 2308A-N, and a favorite identifier 3004, or toggle button for one or more live TV program, show, or content. The favorite identifier 3004 may indicate that a particular program is included in the favorites list. Additionally or alternatively, the favorite identifier 3004 may be configured as a user-interactive feature. For example, the favorite identifier 3004 may be used to remove a program from the favorites list. Continuing the

example, a user may select the favorite identifier 3004 via an input from a remote control or other input device. Once selected, the user may be presented with an option to remove the content from the favorite list. The user may then select the appropriate option to remove or keep the content on the favorite list. The favorites list may be stored in a memory as disclosed herein, and may be accessed at least via the Favorites tab 1920D of the application panel navigation bar 1904. In some embodiments, content identified as favorites may be displayed in the application panel 1812 without at least one of a thumbnail graphic, description, time, and other features.

[0281] Figs. 31A-B depict preferred reminder dialog presentations 3100A-B in accordance with embodiments of the present disclosure. Similar to other reminders disclosed herein, a reminder may be set for preferred content. When a program is selected as preferred, or as a favorite, and the selected program is playing (or airing) on more than one channel at a time, then the preferred reminder dialog presentation 3100 may be displayed to the Intelligent TV 100.

[0282] Referring now to Fig. 31A, a first preferred reminder dialog presentation 3100A is shown in accordance with embodiments of the present disclosure. The presentation 3100A includes a first preferred notification dialog 3104A, a program preview pane 2308, a favorite identifier 3004, a first episode selection bar 3108A, a second episode selection bar 3108B, and a selectable input 2828. Fig. 31B shows a compact version of the dialog presentation 3100B without the program preview pane 2308. In either presentation, a user may be presented with selecting from two episodes of the same program playing on different channels.

[0283] By way of example, a user may identify a program called "Home Involvement" as a favorite. Moreover, the user may have set a reminder for favorite content. Occasionally, the program "Home Involvement" may be playing on two channels at the exact same time. In this case, when the "Home Involvement" reminder appears, it may present the user with a choice of episode to select from via the first and second episode selection bars 3108A, 3108B. The first and second selection bars 3108A, 3108B may highlight differences between the two episodes, if any, via an identifier or description associated with the selection bar. In some cases an episode name and/or number associated with each selection bar 3108A, 3108B may differentiate the episodes. In other embodiments, a season number and/or description may be included to assist a user in selecting an episode of the program. When a user makes a selection between the first and second episodes the selection may tune the Intelligent TV 100 to the signal source associated with the selection.

[0284] As can be appreciated, if more than two episodes of the same program are playing on different channels at the exact same time, the reminder notification may be altered to accommodate the additional episode(s). Additionally or alternatively, the Intelligent TV 100 may determine that there are no differences between the episodes and present a reminder dialog notification without providing the choice between the two. In another embodiment, the Intelligent TV 100 may determine that the episodes are identical, but the channels airing the episodes are not. In this embodiment, the Intelligent TV 100 may use stored preferences, user behavior, habits and the like to present or select an option for the user. For example, a program may be airing in high definition (HD) on one of the channels, while the same program may be airing in standard definition (SD) on another channel. In this instance, the Intelligent TV 100 may present the choice to the user, or select the preferred viewing quality (e.g., HD or SD) on behalf of the user.

[0285] Fig. 32 is a flow diagram depicting a reminder presentation method in accordance with embodiments of the present disclosure. The method 3200 begins at step 3204 and continues when input is received to initiate a reminder presentation (step 3208). In some embodiments, the input may be provided by one or more of, a user, the live TV application, other applications associated with the Intelligent TV 100, and/or one or more components associated with the Intelligent TV 100. For instance, a reminder may have been set, or programmed, for a specific program or show that is scheduled to play on live TV. The reminder may be associated with an initiation condition, including but not limited to, a timer, an input from an EPG, in response to another condition, some other input, or combinations thereof.

[0286] The method 3200 continues by selecting a reminder presentation based at least partially on the initiation input (step 3212). Selection of the reminder presentation may include determining whether the presentation should include a header, a body, one or more selectable prompts, a user interface button, and/or combinations thereof. Additionally or alternatively, selection of the reminder presentation may include determining content and/or features contained within the presentation. For instance, a reminder presentation may include a title and descriptive information coupled with selectable inputs and even a timeout feature. Among other things, the selectable option may allow a user to change channels to a program associated with the reminder presentation.

[0287] As part of the reminder presentation, the method 3200 may continue by determining whether the reminder is time informative (step 3216). Various embodiments may utilize one or more time informative feature. For example, where a reminder is determined to be

associated with a scheduled program, or time-specific event, the reminder may provide the time until the program, or event, will begin. As another example, a reminder notification may be configured to appear for a limited amount of time. In this case, the reminder notification may provide an amount of time associated with the reminder notification availability, in some representation (e.g., visual, countdown, audible, etc.). In other words, the method 3200 may determine to provide a user with a visual representation of time remaining before a reminder notification disappears from view. In some embodiments, the reminder presentation may provide a visual representation of a time associated with the notification. As can be appreciated, a user may be provided with a countdown timer, a progress bar, combinations thereof, or other time feature associated with the notification. Determining whether or not a dialog is time informative may include referring to a memory having stored preferences, or rules, associated with one or more of TV content, dialog boxes, time informative features, etc.

[0288] If the reminder presentation is determined to be time informative, the method 3200 continues by including at least one time information feature as part of the reminder notification presentation (step 3220). In one example, a time feature may include a progress bar displayed as part of the notification. The progress bar may represent an amount of time associated with the visual presentation of the notification. For instance, a progress bar may show how long a reminder dialog notification has been presented to the display of an Intelligent TV 100. As such, the progress bar may include a time start point and a time endpoint. In another example, a reverse progress bar may be configured to countdown, and/or display a graphical change, representing a time remaining for the presentation of the reminder notification. The progress bar, reverse progress bar, or other time feature, may relate to live TV content or the presentation of a notification. The reminder notification may incorporate a default selection, or action, that may be automatically selected in response to a passage of time. Among other things, providing a user with a visual representation of time associated with the notification can allow a user to make a selection other than the default selection associated with the notification. In some embodiments, the default action of the notification may cause the notification to disappear from view.

[0289] The method 3200 continues by presenting the reminder notification via the live TV application and the Intelligent TV 100 (step 3224). Presentation of the reminder may include, but is not limited to, a display justification point (e.g., left-justified, right-justified, center-justified, bottom-justified, top-justified, and combinations thereof), a transparency level, a

font type or style, an overall size, a size in relation to the display of the Intelligent TV, an animation, and more.

[0290] When the reminder is presented to the display of the Intelligent TV 100, a timer may be initiated that defines the amount of time the reminder dialog notification will be presented (step 3228). As can be appreciated, the timer may be a "count-up" timer or a "countdown" timer. The live TV application may be configured to provide an action upon the expiration of the dialog presentation timer. As previously state, one action may cause the reminder notification to disappear from the display of the Intelligent TV 100.

[0291] Next, the method 3200 receives an input from a user, or the expiration of the timer, to remove the reminder notification presentation (step 3232). A user input may correspond to a selection associated with the reminder notification presentation, a cancellation, a user-interface button, or some other input associated with the Intelligent TV 100. For example, a user may select an option associated with the reminder notification presentation, in which case the reminder notification presentation may disappear. In some embodiments, a user may not enter an input and an automatic selection, or action, may be made by the expiration of the timer. In any event, when the timer has reached the end of its scheduled time the reminder notification presentation may be configured to disappear from display. In an alternative embodiment, the reminder notification presentation may be configured to fade out, move to the application (or other) panel, minimize, or otherwise dismiss from the active content view area 1808 of the Intelligent TV 100. The method ends at step 3236.

[0292] Fig. 33 is a flow diagram depicting a preferred content reminder presentation method 3300 in accordance with embodiments of the present disclosure. The method 3300 begins at step 3304 and continues when the Intelligent TV 100 receives input to initiate a reminder presentation (step 3308). In some embodiments, the input may be provided by one or more of, a user, the live TV application, other applications associated with the Intelligent TV 100, and/or one or more components associated with the Intelligent TV 100. For instance, a reminder may have been set, or programmed, for a specific program or show that is scheduled to play on live TV. The reminder may be associated with an initiation condition, including but not limited to, a timer, an input from an EPG, in response to another condition, some other input, or combinations thereof.

[0293] Next, the method 3300 continues by determining whether the reminder is associated with preferred, or favorite, content (step 3312). As previously stated, a user may indicate specific content, such as one or more programs, events, channels, signal sources, combinations thereof, and the like, as preferred over other available content. In some

embodiments, a user may mark content as preferred by adding the content to a preferred, or favorites, group. Content may be added to the favorites group by a user input provided via a remote control or other input device. For example, a user may select (or highlight) a program and provide a "favorite" input via a button on a remote control.

[0294] In some embodiments, the Intelligent TV 100 may determine to add content to a favorites list, or group. For instance, the Intelligent TV 100, via one or more applications, may determine at least partially based on viewing habits and recorded data that a user frequently watches a particular program or channel. Referring to rules and/or preferences, the Intelligent TV 100 may add the frequently watched program or channel to the favorites group. As disclosed herein, the favorites group, and its associated content, may be viewed in an application panel 1812 of the Intelligent TV 100. In some cases, the content comprising the favorites group may be displayed in an EPG, a list, grouped lists, tiles, genres, and the like for viewing by one or more users of the Intelligent TV 100.

[0295] Determining that a reminder is associated with favorite content may include the Intelligent TV 100 using at least one application (e.g., the live TV application, etc.) to refer to stored favorite data in memory. In one example, the favorite data may be stored in a data table in the memory. Among other things, the data table may include a content identification field and a favorite data field that can map favorites with specific content. In one embodiment, available content including, but not limited to, programs, events, channels, signal sources, genres, groups, and the like, may include a data field relating to favorite marking. For instance, a data structure associated with a program may include at least one binary digit that identifies whether the program is preferred (i.e., favorite) or not preferred. Continuing this example, a "preferred" bit of the program data structure may be marked with a "1" if the program is a favorite or a "0" if the program is not identified as a favorite. It is anticipated that this bit may be toggled via a user providing a favorite input. In any event, the Intelligent TV 100 may at least review the data structure and/or the data table associated with content to determine whether the reminder is associated with favorite content. By way of example, the Intelligent TV 100 may receive input to initiate a reminder presentation with a specific program. The Intelligent TV 100 can then refer to the data structure and/or the data table that is associated with the specific program and determine whether the specific program includes at least one favorite-identifying bit. In the event that a favorite-identifying bit is found, the reminder would be determined to be associated with favorite content.

[0296] The method 3300 continues by determining whether the reminder applies to duplicate favorite content (step 3316). Duplicate favorite content may correspond to content

that is marked as favorite and is playing on at least two different channels, or signal sources, at the same time. In one embodiment, the signal sources may be differentiated by signal quality, signal definition, costs, and the like. As disclosed above, content may be associated with favorites. In some cases, content may play on at least two different channels at the same time. By way of example, a user, or Intelligent TV 100, may identify a program, such as "Home Involvement," as a favorite. Continuing the example, a user may initiate a reminder for the program so that the user is alerted via a reminder notification presentation when the program is next scheduled to play via the live TV application. In this example, the program "Home Involvement" may be playing on two different channels at the same time, or within a threshold of time as disclosed below. As such, the Intelligent TV 100 may determine that program is a favorite playing on two different channels and provide the user with selectable options and/or default selections. The selectable options may include, but are not limited to, allowing the user to select which episode of the program, quality of the program, or channel, to view.

[0297] In some embodiments, the determination of duplicate favorite content may include comparing a scheduled time that is associated for each favorite content. As such, thresholds may be set for making a positive or negative determination of duplicate favorite content. For instance, where a first program is playing on a first channel at a first time, and a duplicate program is playing on a second channel at a second time, a threshold may be set between the first and second time to make such a duplicate favorite content determination. In this example, a threshold may be set for 15 minutes, where any duplicate favorite content is determined for duplicate favorite content playing on at least two different channels within the threshold (e.g., equal to or less than the 15 minute threshold set).

[0298] If no duplicate favorite content is found, the method may continue by displaying a reminder presentation dialog (step 3336). The reminder presentation dialog displayed to the Intelligent TV 100 may resemble any one or more of the dialogs, notifications, reminder notifications, and other dialog presentations disclosed herein. Upon presenting the reminder presentation dialog, the method 3300 continues at step 3324.

[0299] In the event that duplicate favorite content is determined to apply to the reminder, the method 3300 continues by presenting the duplicate content for user review and/or selection (step 3320). The display of duplicate favorite content to an Intelligent TV may resemble the display of a multiple reminder dialog notification as disclosed along with Figs. 29C-D. Among other things, the presentation may be displayed to an active content area 1808 of an Intelligent TV 100. Additionally or alternatively, the presentation may include

identification bars associated with the duplicate content. For example, a first content identification bar may be associated with a first episode of a favorite program, while a second content identification bar may be associated with a second episode of the favorite program. A user may make a selection from at least these two options via an input provided at a remote control or other input device.

[0300] The method may continue by determining whether any user input is received by the Intelligent TV 100 (step 3324). If no user input is received by the Intelligent TV 100, the method 3300 may continue by timing out or making a default selection based at least partially on stored rules and/or preferences (step 3340). In one embodiment, the presented reminder may disappear after a preset amount of time. In another embodiment, the Intelligent TV 100 may make a default selection from at least one of the available selections provided by the reminder presentation dialog. In any event, the method 3300 ends at step 3332.

[0301] In some embodiments, the method 3300 may determine that user input is received at step 3324, in which case the method 3300 may continue by performing at least one function associated with the received input (step 3328). User input may include, but is not limited to, a selection input that can be configured to select from one or more options provided by the reminder presentation dialog, a cancellation input that may be configured to cause the reminder notification presentation dialog to disappear, an ignore input configured to delay a reminder for another time, navigational input configured to navigate to another signal source or selection, and more. Once the corresponding function is performed via the Intelligent TV 100, the method 3300 ends at step 3332.

[0302] Fig. 34 is a flow diagram depicting an input-based user tracking method 3400 in accordance with embodiments of the present disclosure. The method 3400 begins at step 3404 and continues by detecting a channel, input, or other signal source change (step 3408). In some embodiments, a user may change channels of the Intelligent TV 100 via a remote control or other input device. The user inputs to change a signal source may include, but are not limited to, active selections provided directly by a user, responses to one or more notifications, default selections based on stored preferences and/or rules, and the like.

[0303] Upon detecting a change in the signal source of the Intelligent TV 100, the method 3400 continues by sending a notification to the live TV application of the Intelligent TV 100 (step 3412). The notification may be sent by one or more managers associated with DTV, analog television (ATV), input, and other sources associated with the Intelligent TV 100. In some embodiments, the one or more managers may be configured to identify a user input that changes a signal source of the Intelligent TV 100. One example of this identification may be

provided by the one or more managers "listening" for a signal source change. In other words, a listener for the one or more managers may be configured to register with a source to listen for a particular event, which in this case may be a change of signal source provided by a user. The listeners may be set automatically via the live TV application. Additionally or alternatively, the listeners disclosed herein may behave in a similar manner to Java®-style program event listeners that may register to be notified of one or more events. As can be appreciated, the listeners disclosed herein may be configured to listen for events associated with one or more event source objects.

[0304] The live TV application may collect the notifications received from the one or more managers and store data relating to the change notifications in a memory (step 3416). Such data may include, but is not limited to, media consumption, channel viewing time, signal source tuning time, event viewing time, content viewing time, user identification, time of notification, content playing prior to change, new source content, and more. In some embodiments, the data may be stored in a memory location associated with a particular user or group of users. Additionally or alternatively, the data may be stored according to signal source change time. In one embodiment, the stored data may be associated with at least one time stamp. The time stamp may be useful in comparing data stored at various times that relates to user signal source changes over time.

[0305] Next, the method 3400 continues by analyzing the stored data for user behavior patterns (step 3420). Among other things, the live TV application may refer to the stored data to determine any commonalities between stored data at different times. In other words, the live TV application may review whether any commonalities exist between the user's signal source changes that are made over time. For example, the stored data from a first time may reflect that a user changed signal sources at 9:01 PM on a Tuesday, and the stored data from a second time may reflect that a user changed signal sources at 9:03 PM on the following Tuesday. The live TV application may determine that these signal source changes having occurred within two minutes but a week apart may correspond to a user behavior. In some embodiments, more data points may be obtained before a behavior is determined. As another example, a user may watch a first program every morning for a given period of time and then change signal sources to view another program for another given period of time. This behavior may be analyzed and used by the Intelligent TV 100 to configure prompts, reminders, notifications, and even anticipated signal source changes for a user. In one example, the Intelligent TV 100 may automatically change a signal source for a user based on the analyzed tracked behavior of the user. The Intelligent TV 100 may refer to rules in

determining whether to automatically change a signal source. Among other things, these rules may include, but are in no way limited to, identifying a user, referring to user preferences, referring to at least one EPG, referring to a clock or timer, and the like.

[0306] It is anticipated that the stored data may be sent across a network to at least one other device associated with the Intelligent TV 100 for user behavior analysis. Additionally or alternatively, analyzed data may be sent across a network to at least one other device for use in tracking user behavior. For instance, the stored data or analyzed data may be sent to a multiple-system operator (MSO) in tracking user behavior. It is anticipated that based on the tracked user behavior, an MSO may alter its programming, offerings, presentation, or even interact with a user. In one embodiment, an MSO may interact with a user by querying why the user made the changes to the signal source or if there is anything the MSO could do to make viewing content more enjoyable. The method 3400 ends at step 3424.

[0307] Referring to Fig. 35, a block diagram of the software and/or firmware of the Intelligent TV 100 is shown in accordance with embodiments of the present disclosure. Among other things, embodiments of the present disclosure anticipate using the live TV application 3504 to present views 3516 and dialogs 3520 to a display of the Intelligent TV 100. Views 3516 may include the presentation of information via one or more of a global panel 1804, an active content area 1808, an application panel 1812, combinations thereof and the like. Examples of views 3516 can include, but are not limited to, full screen EPGs, live TV header bars, on-screen channel changer, smart surfing, etc. Dialogs 3520 may include one or more of reminders, notifications, option dialogs, EPG preview windows, EPGs, and other presented information as disclosed herein. In one embodiment, the dialogs 3520 may provide one or more features to mark (e.g., add/remove favorite tagging for a channel and/or program, add/remove reminder tagging for a program, etc.) and select content (e.g., episodes, channels, etc.). Dialogs are disclosed in more detail above. Additionally or alternatively, the dialogs may be substantially similar, or equivalent, to the dialog notifications disclosed above.

[0308] In some embodiments, the live TV application 3504 may be configured to communicate with a system UI application 3508. The system UI application 3508 may provide a framework, upon which, one or more applications are built and subsequently accessed via the live TV application. In one embodiment, the system UI application 3508 may provide specific interface rules used by the live TV application 3504 in the display of content to the Intelligent TV 100. For instance, areas, regions, panels, windows, and other informational content may be set by the interface rules and the system UI application 3508. In one example, the system UI application 3508 may automatically format one or more

applications for use, or display, by the live TV application 3504. Among other things, this formatting may include arranging a presentation of content that makes up the one or more applications.

[0309] The live TV application 3504 may communicate with the operating system framework 3512 and one or more of its components. In some embodiments, the operating system framework may include an ATV manager 3524, a DTV manager 3528, a source manager 3532, an EPG provider 3536, and a thumbnail cache manager 3540 to name a few. One or more of the ATV manager 3524, the DTV manager 3528, and the source manager 3532 may be configured to provide notifications, dialogs, and the like, that are disclosed in conjunction with the first time setup method 1500 and the tracking method 3400 previously disclosed. In one embodiment, the EPG provider 3536 may be substantially similar, or equivalent, to the EPG subservice 624, database 636, and content providers 616 disclosed above in conjunction with Fig. 6. Similarly, it is an aspect of the present disclosure that the thumbnail cache manager 3540 may be substantially similar, or equivalent, to the thumbnail cache manager 660 previously described in conjunction with Fig. 6.

[0310] As provided herein, the live TV application 3504 may be configured to support a user experience for one or more of changing channels, viewing channel information, viewing program information, setting up channel sets, and setting and/or clearing reminders and favorites. The live TV application 3504 may be displayed via the Intelligent TV 100 on top of any live feed. For example, a user may utilize the live TV application 3504 to change a currently displayed ATV and/or DTV channel that is supplied on a live feed. In another example, the live TV application 3504 may be used to retrieve thumbnails from thumbnail cache manager 3540. In yet another example, the live TV application 3504 may query the EPG provider 3536 for EPG listing data to be displayed via the Intelligent TV 100. As can be appreciated, the EPG listing may use thumbnails associated with live TV content that are retrieved via the live TV application 3504. Additionally or alternatively, the live TV application 3504 may receive broadcast intents to request a change of channel.

[0311] Fig. 36 shows a flow diagram of a live TV presentation method 3600 in accordance with embodiments of the present disclosure. The method 3600 begins at step 3604 and proceeds by running a live TV application via the Intelligent TV 100 (step 3608). While the live TV application is running (e.g., via a processor associated with the Intelligent TV 100), the Intelligent TV 100 may simultaneously present live TV broadcast content (step 3612). In one embodiment, the live TV application 3504 may be configured to run on top of live TV content. For instance, the Intelligent TV 100 may be displaying live TV content via a display

of the Intelligent TV 100. The live TV content may be displayed, or presented, to a first portion of the Intelligent TV 100. In some embodiments, the first portion of the Intelligent TV 100 may be equivalent to an area of the display of the Intelligent TV 100 that is greater than 50% of the total area of the display.

[0312] Next, the method 3600 continues by receiving an input that initiates a feature of the live TV application 3504 (step 3616). This live TV application input may be provided by at least one of, a user, an input device, automatically in response to a condition, combinations thereof and the like. In some cases, the input may be provided via a user operating the input device associated with the Intelligent TV 100. A typical input device associated with the Intelligent TV 100 may include a remote control. The remote control may be a dedicated device, a tablet, a smart phone, or other device configured to run a remote control application that is capable of communicating with the Intelligent TV 100.

[0313] A live TV application feature may then be determined based at least partially on the received input (step 3620). In some embodiments, the live TV application feature may be determined based on the input and rules stored in a memory associated with the Intelligent TV 100. Once the live TV application feature is determined, the feature may be presented to the display of the Intelligent TV 100 (step 3624). In one embodiment, the presentation of the live TV application feature may include displaying, or presenting, the feature to a second portion of the display of the Intelligent TV 100. The second portion of the display may be configured to overlap at least a portion of the first portion of the display. Additionally or alternatively, the second portion may include at least a partial transparency or translucency. This partial transparency may allow content from the first portion to be visible through the second portion. For example, while live TV content continues to display to the Intelligent TV, the live TV application may run simultaneously with the displayed live TV content. Among other things, the simultaneous playing of live TV content and live TV application functionality can allow a user access to interactive live TV application functions without interrupting live TV content displayed by the Intelligent TV 100. In some cases the live TV application feature and any associated content may include, but is not limited to, a presentation that is at least partially transparent, at least partially opaque, and combinations thereof. The method 3600 ends at step 3628.

[0314] The exemplary systems and methods of this disclosure have been described in relation to televisions and associated devices. 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.

[0315] 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 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.

[0316] 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.

[0317] 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.

[0318] 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.

[0319] 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.

[0320] 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.

[0321] 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.

[0322] 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.

[0323] 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.

[0324] 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.

[0325] 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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CLAIMS

1. A method, comprising:

presenting, via a display of an intelligent television (TV), TV content presented to a first portion of the display;

receiving a reminder presentation input at the intelligent TV;

selecting, via a processor associated with the intelligent TV and based at least partially on the reminder presentation input received, a layout of a reminder presentation dialog; and

presenting the reminder presentation dialog in the selected layout to a second portion of the display, wherein the second portion of the display at least partially overlaps the first portion, and wherein the reminder presentation dialog includes information relative to a specific program.

2. The method of claim 1, wherein the layout of the reminder presentation dialog includes at least one selectable option, wherein the at least one selectable option is configured to accept a selection input from a user via an input device associated with the intelligent TV.

3. The method of claim 2, wherein the at least one selectable option is associated with setting a reminder, wherein the reminder is based on at least one of the TV content presented and the reminder presentation input received.

4. The method of claim 2, wherein the at least one selectable option is associated with removing a reminder, wherein the reminder is based on at least one of the TV content presented and the reminder presentation input received.

5. The method of claim 2, wherein the at least one selectable option is associated with a live TV program available via the intelligent TV, and wherein the selection input provided by the user is configured to tune the intelligent TV to a signal source associated with the live TV program.

6. The method of claim 5, wherein the layout of the reminder presentation dialog includes a timing feature.

7. The method of claim 6, wherein the timing feature is configured to display a time corresponding to at least one of the live TV program airing and the presentation of the reminder presentation dialog.

8. The method of claim 7, wherein the time displayed changes as time passes, and wherein the timing feature is configured to reach a time goal.

9. The method of claim 8, wherein the reminder presentation dialog is configured to disappear from the display upon reaching the time goal.

10. The method of claim 5, further comprising:

detecting that a reminder is set for the live TV program;

determining, via the processor, that the live TV program is available via two or more signal sources associated with the intelligent TV;

presenting a first selectable option for the live TV program available via a first signal source of the two or more signal sources; and

presenting a second selectable option for the live TV program available via a second signal source of the two or more signal sources.

11. The method of claim 10, wherein the live TV program available via the first signal source is a first episode of the live TV program, wherein the live TV program available via the second signal source is a second episode of the live TV program, and wherein the first episode and the second episode include different at least one of content and quality.

12. The method of claim 11, wherein the first selectable option includes an identifier of the first episode, and wherein the second selectable option includes an identifier of the second episode.

13. A tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, perform the method comprising:

presenting, via a display of an intelligent television (TV), TV content presented to a first portion of the display;

receiving a reminder presentation input at the intelligent TV;

selecting, via a processor associated with the intelligent TV and based at least partially

on the reminder presentation input received, a layout of a reminder presentation dialog; and

presenting the reminder presentation dialog in the selected layout to a second portion of the display, wherein the second portion of the display at least partially overlaps the first portion, and wherein the reminder presentation dialog includes information relative to a specific program.

14. The tangible, non-transitory computer readable medium of claim 13, wherein the layout of the reminder presentation dialog includes at least one selectable option, wherein the at least one selectable option is configured to accept a selection input from a user via an input device associated with the intelligent TV.

15. The tangible, non-transitory computer readable medium of claim 14, wherein the at least one selectable option is associated with a live TV program available via the intelligent TV, and wherein the selection input provided by the user is configured to tune the intelligent TV to a signal source associated with the live TV program.

16. The tangible, non-transitory computer readable medium of claim 15, wherein the layout of the reminder presentation dialog includes a timing feature, wherein the timing feature is configured to display a time corresponding to at least one of the live TV program airing and the presentation of the reminder presentation dialog, and wherein the time displayed changes as time passes, and wherein the timing feature is configured to reach a time goal.

17. The tangible, non-transitory computer readable medium of claim 15, wherein the method further comprises:

detecting that a reminder is set for the live TV program;

determining, via the processor, that the live TV program is available via two or more signal sources associated with the intelligent TV;

presenting a first selectable option for the live TV program available via a first signal source of the two or more signal sources; and

presenting a second selectable option for the live TV program available via a second signal source of the two or more signal sources.

18. The tangible, non-transitory computer readable medium of claim 17, wherein

the live TV program available via the first signal source is a first episode of the live TV program, wherein the live TV program available via the second signal source is a second episode of the live TV program, and wherein the first episode and the second episode include different at least one of content and quality.

19. The tangible, non-transitory computer readable medium of claim 18, wherein the first selectable option includes an identifier of the first episode, and wherein the second selectable option includes an identifier of the second episode.

20. 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;

an input device associated with the intelligent TV;

a memory; and

a microprocessor operable to:

present, via the display of the intelligent TV, TV content presented to a first portion of the display;

receive a reminder presentation input at the intelligent TV;

select, based at least partially on the reminder presentation input received, a layout of a reminder presentation dialog; and

present the reminder presentation dialog in the selected layout to a second portion of the display, wherein the second portion of the display at least partially overlaps the first portion, and wherein the reminder presentation dialog includes information relative to a specific program.

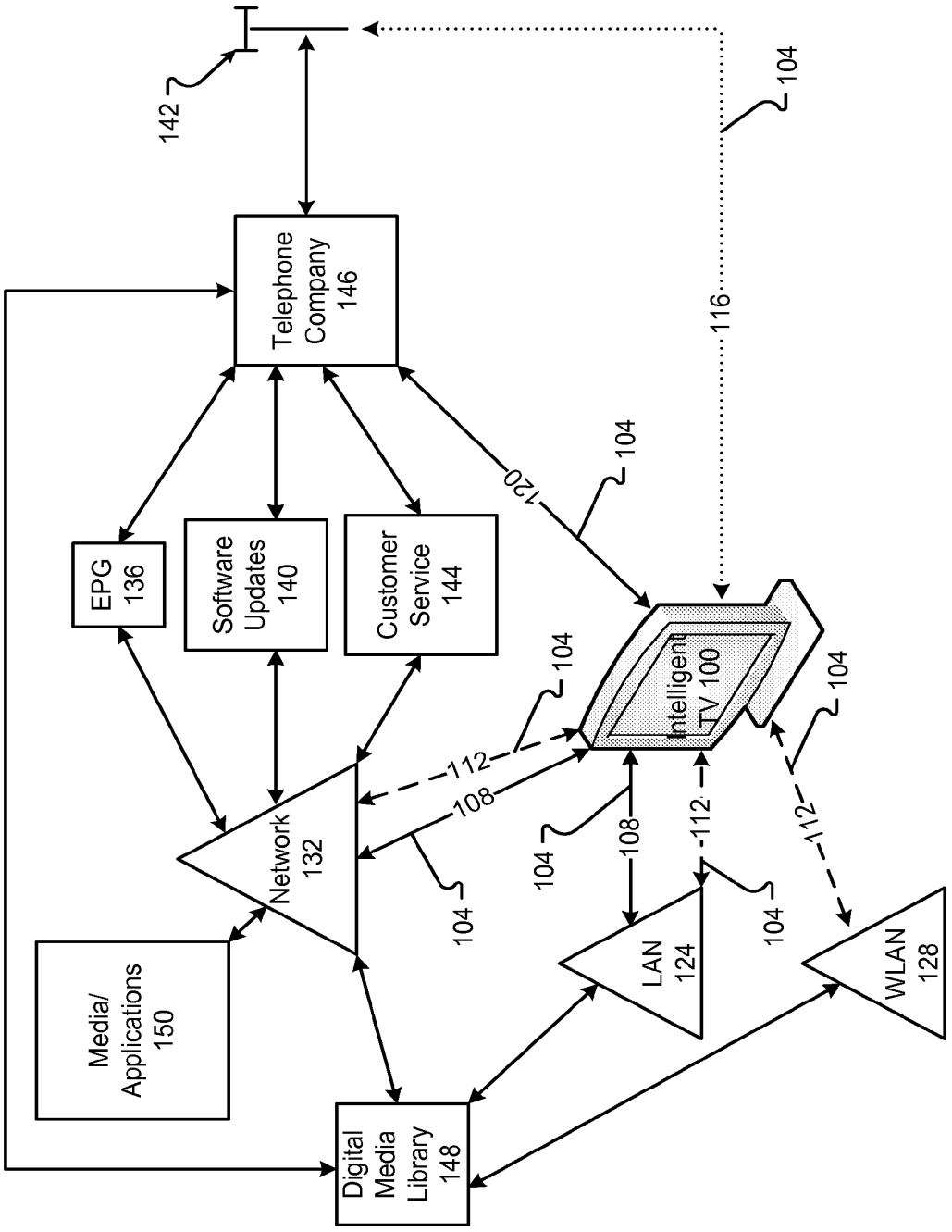

142
104
Telephone Company 146
116
104
120
EPG 136
Software Updates 140
Customer Service 144
104
Intelligent TV 100
104
112
108
Network 132
104
104
108
112
112
104
104
LAN 124
WLAN 128
Media/ Applications 150
Digital Media Library 148

Fig. 1A

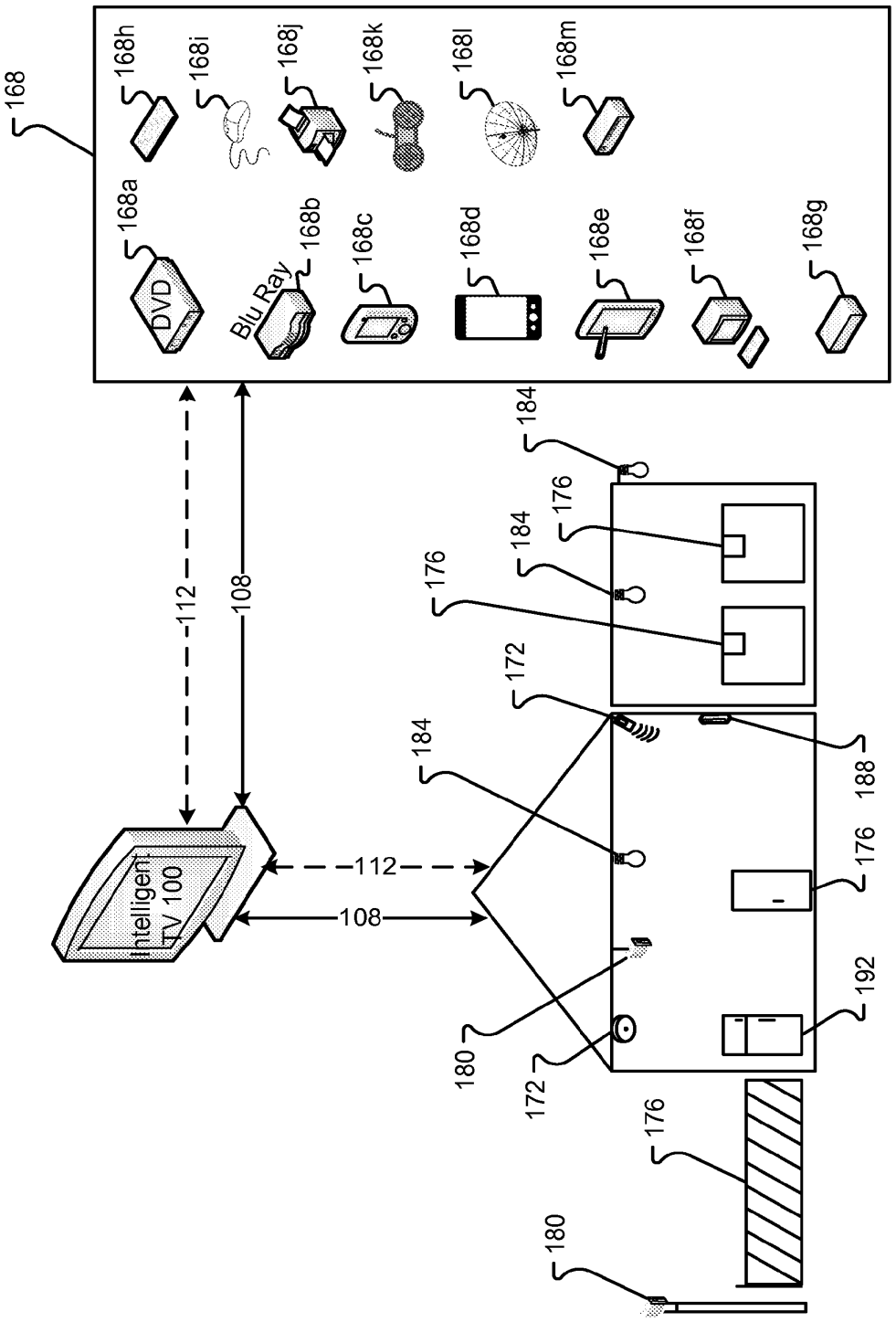

168
168h
168i
168j
168k
168l
168m
168a
DVD
168b
Blu Ray
168c
168d
168e
168f
168g
112
108
Intelligent TV 100
184
176
172
188
180
192

Fig. 1B

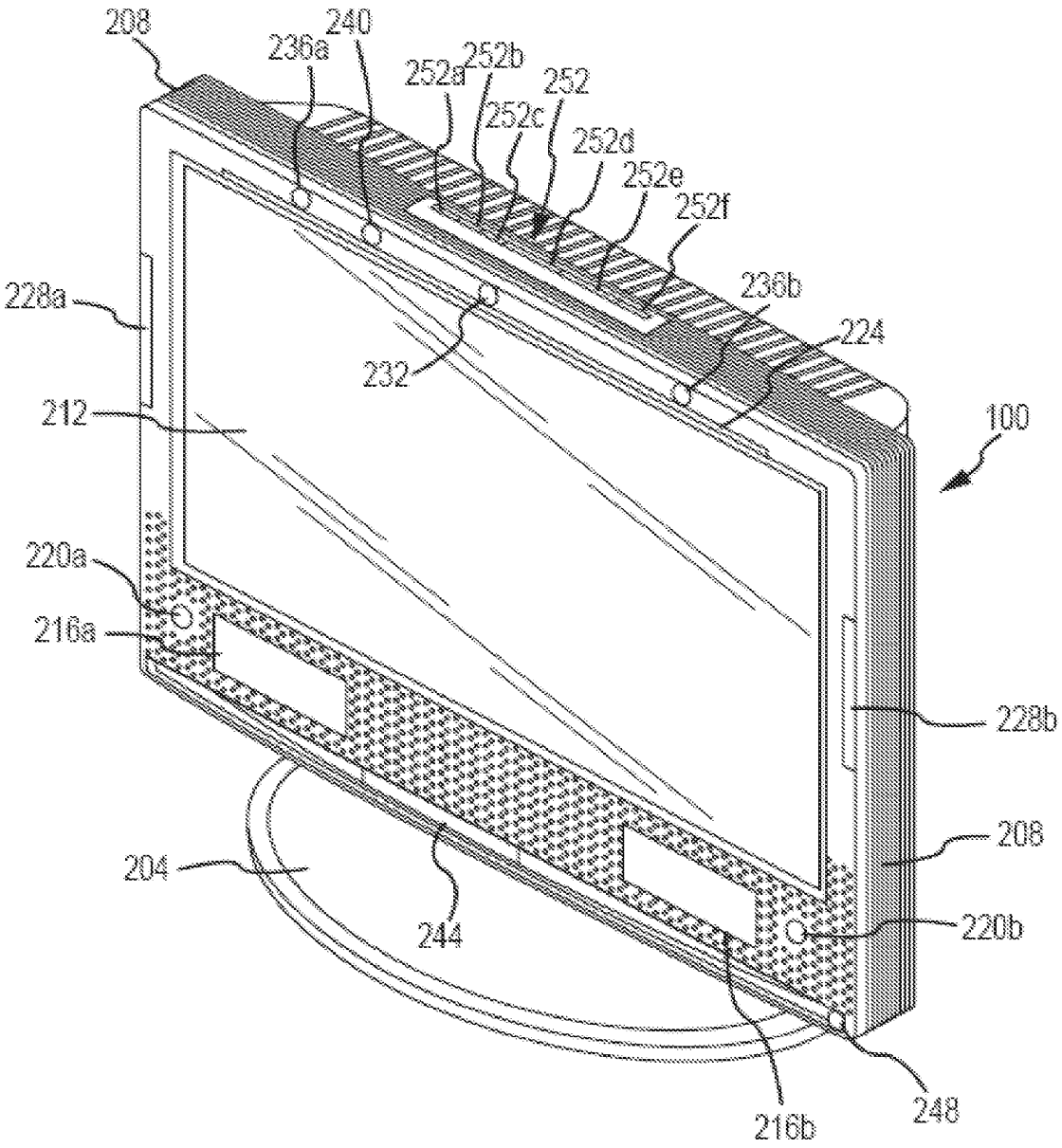

208
240
236a
252a
252b
252
252c
252d
252e
252f
236b
224
228a
232
212
100
220a
216a
228b
208
204
244
220b
216b
248

Fig. 2A

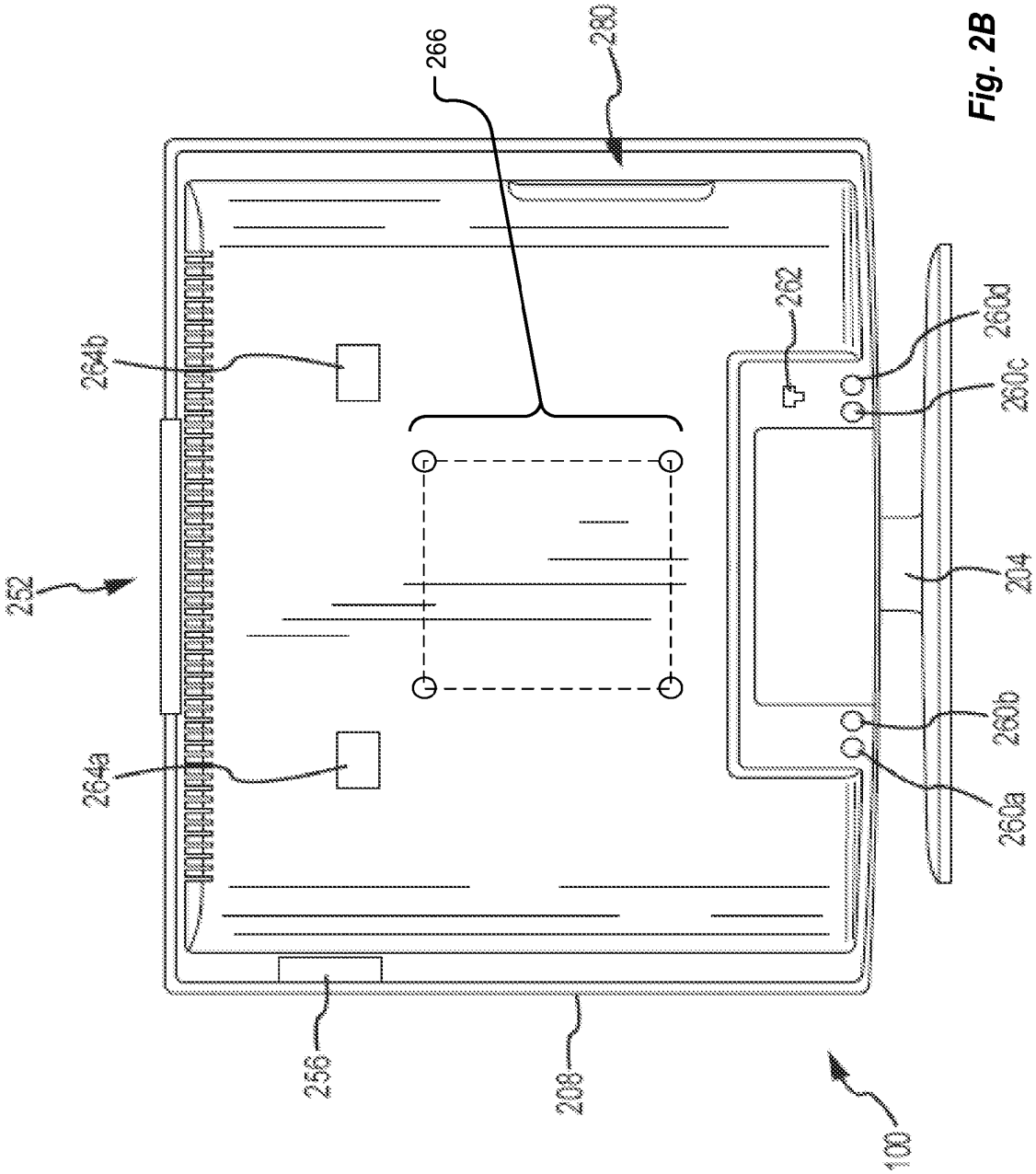


Fig. 2B

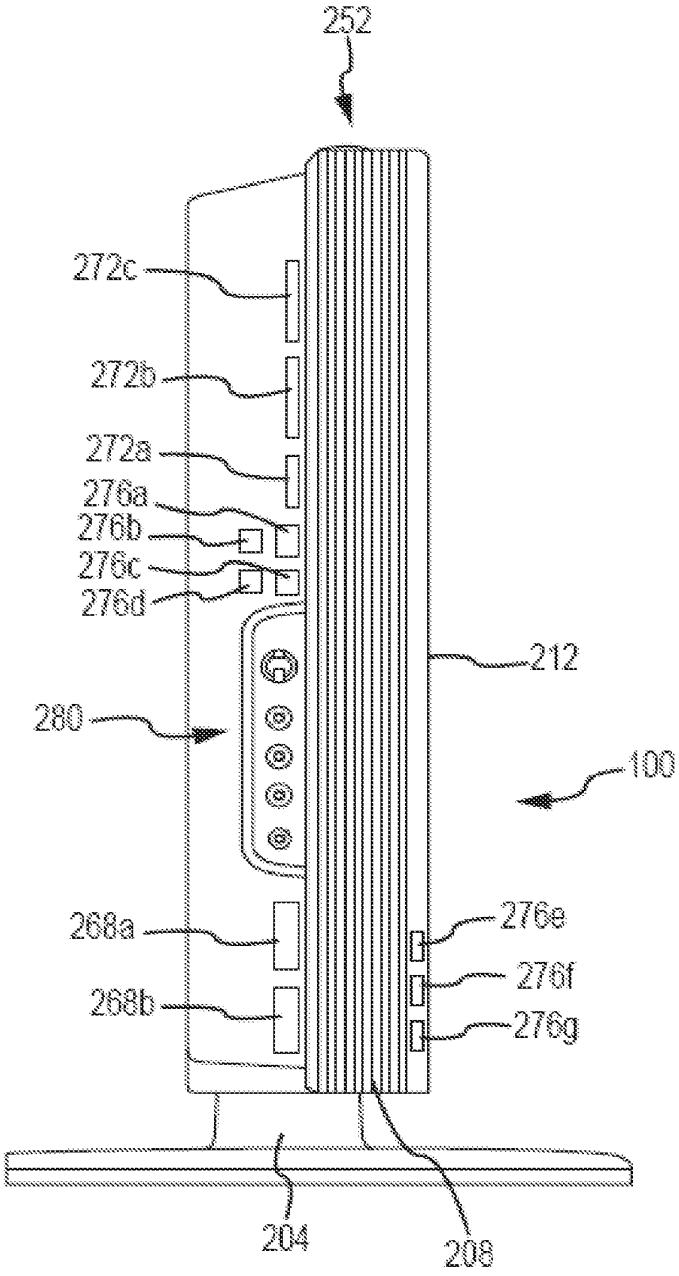

252
272c
272b
272a
276a
276b
276c
276d
212
280
100
276e
276f
276g
268a
268b
204
208

Fig. 2C

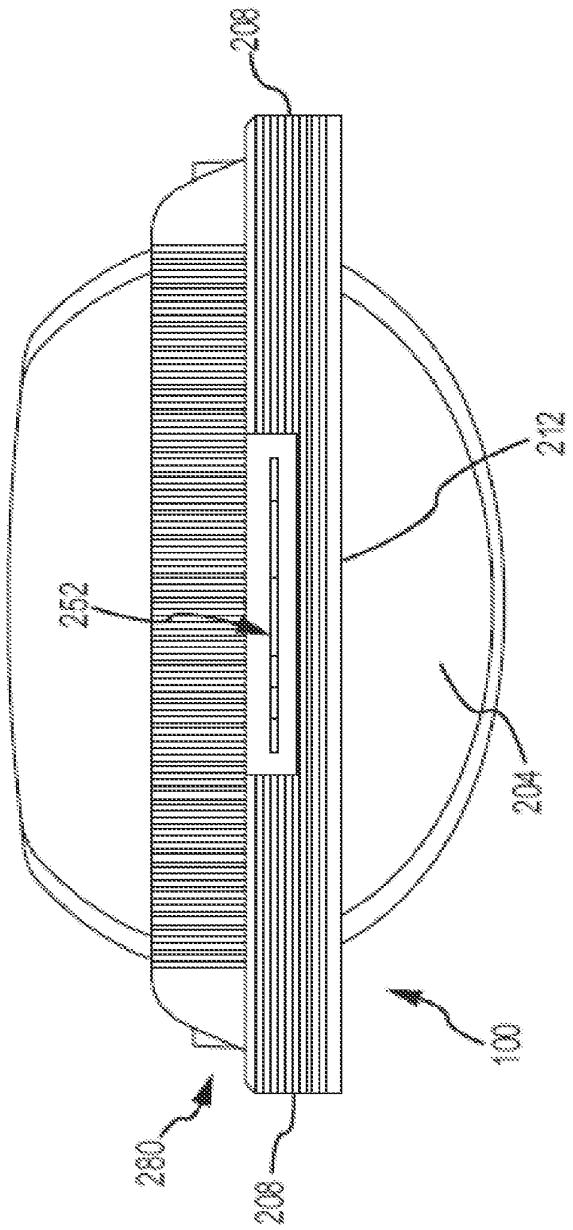


Fig. 2D

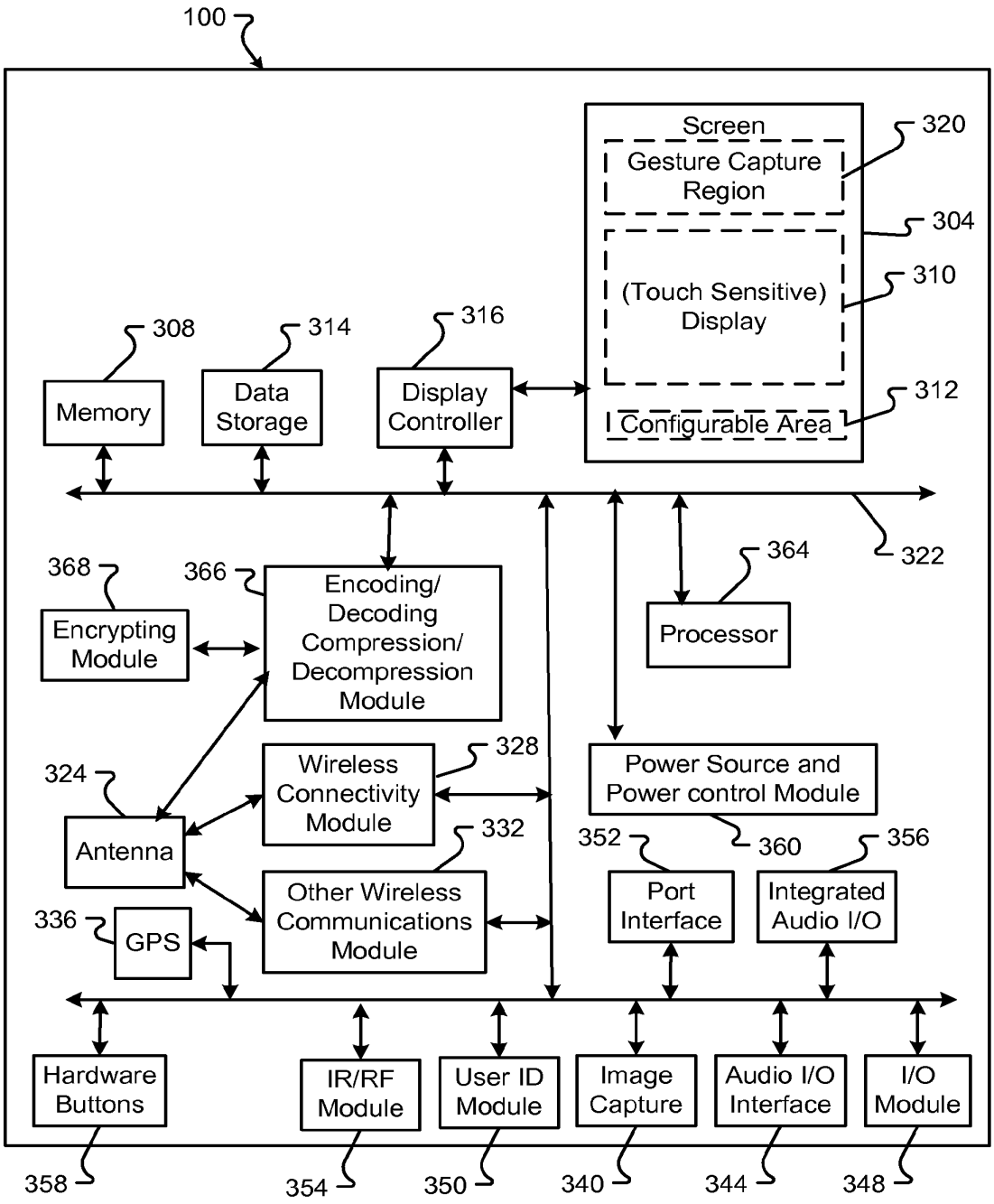

100
Screen
Gesture Capture Region
320
304
(Touch Sensitive) Display
310
312
Configurable Area
308
Memory
314
Data Storage
316
Display Controller
322
364
Processor
368
Encrypting Module
366
Encoding/ Decoding Compression/ Decompression Module
328
Wireless Connectivity Module
324
Antenna
332
Other Wireless Communications Module
336
GPS
Power Source and Power control Module
352
360
356
Port Interface
Integrated Audio I/O
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

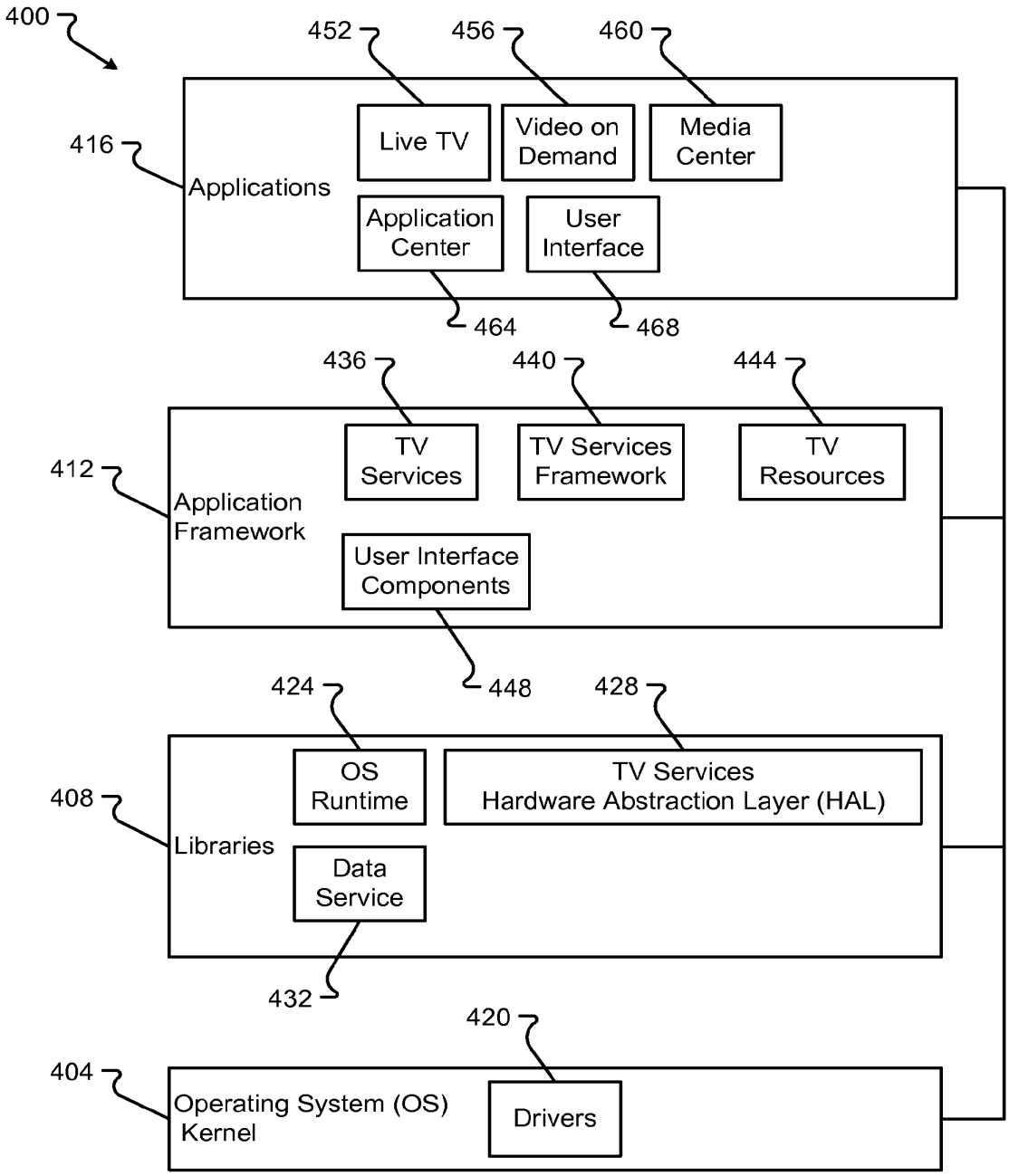

400
452
456
460
416
Applications
Live TV
Video on Demand
Media Center
Application Center
User Interface
464
468
436
440
444
412
Application Framework
TV Services
TV Services Framework
TV Resources
User Interface Components
448
424
428
408
Libraries
OS Runtime
TV Services Hardware Abstraction Layer (HAL)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

FIG. 4

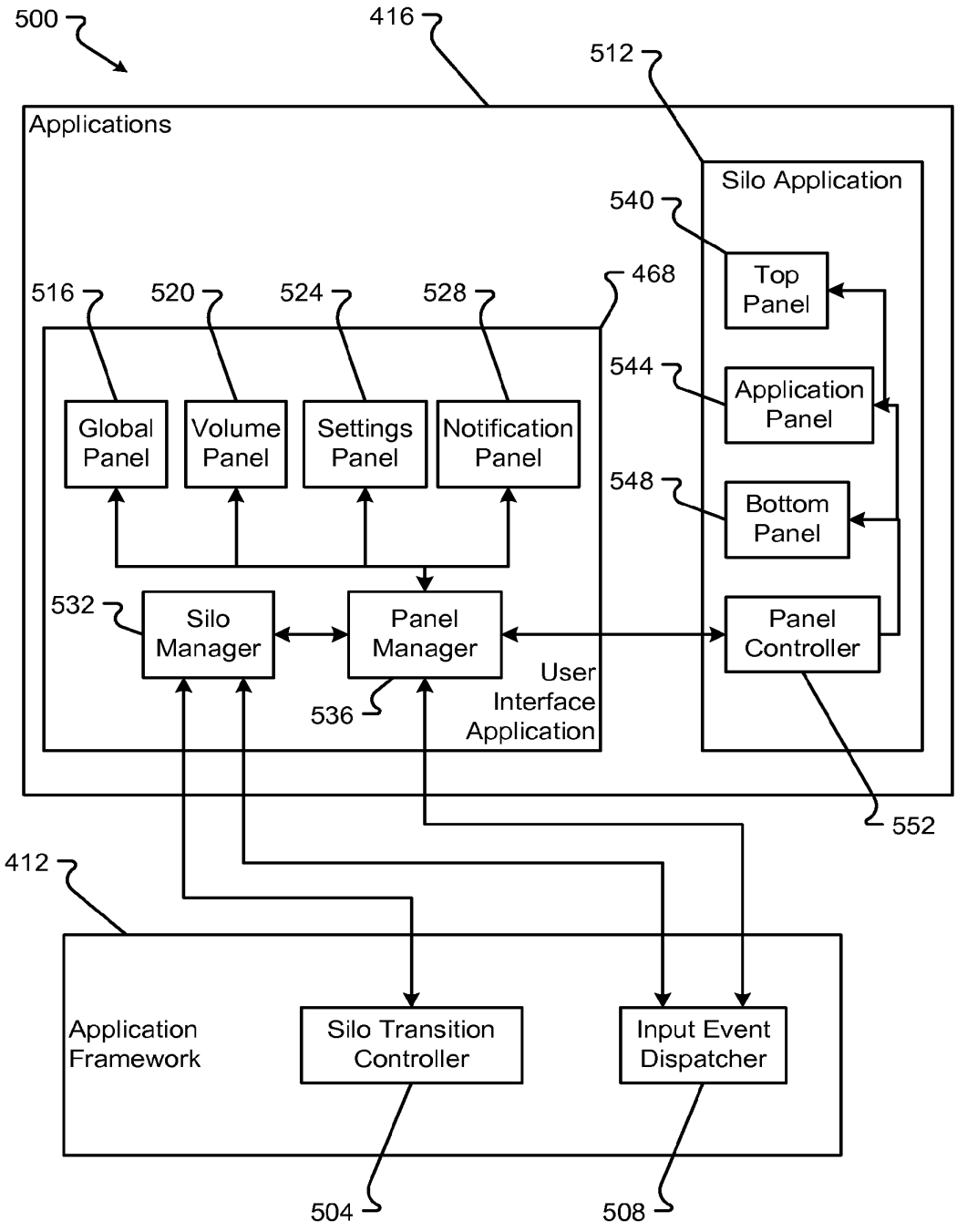

500
416
512
Applications
Silo Application
540
Top Panel
516
520
524
528
468
544
Application Panel
Global Panel
Volume Panel
Settings Panel
Notification Panel
548
Bottom Panel
532
Silo Manager
Panel Manager
Panel Controller
User Interface Application
536
552
412
Application Framework
Silo Transition Controller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

FIG. 5

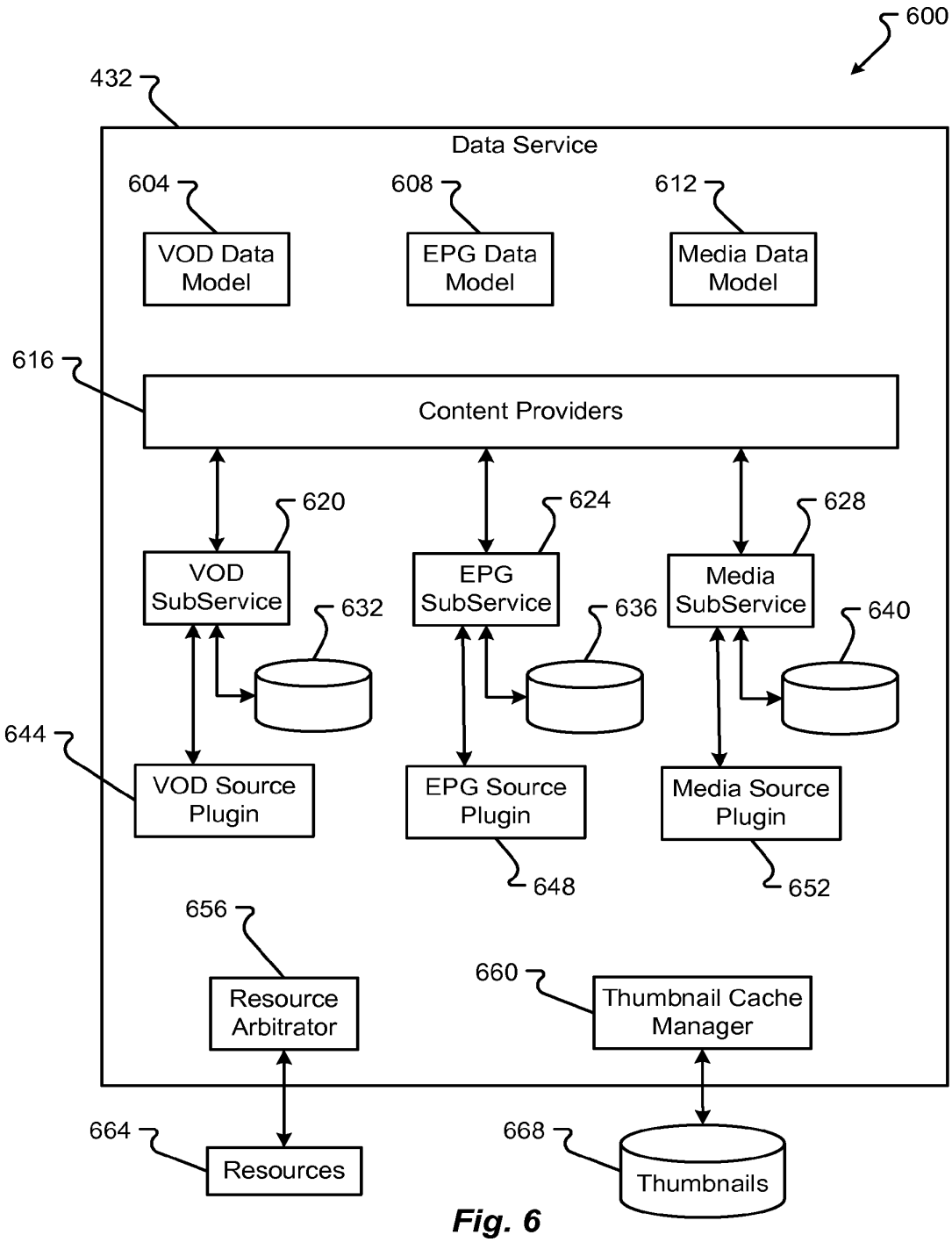

600
432
Data Service
604
VOD Data Model
608
EPG Data Model
612
Media Data Model
616
Content Providers
620
VOD SubService
624
EPG SubService
628
Media SubService
632
636
640
644
VOD Source Plugin
EPG Source Plugin
Media Source Plugin
648
652
656
Resource Arbitrator
660
Thumbnail Cache Manager
664
Resources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

Fig. 6

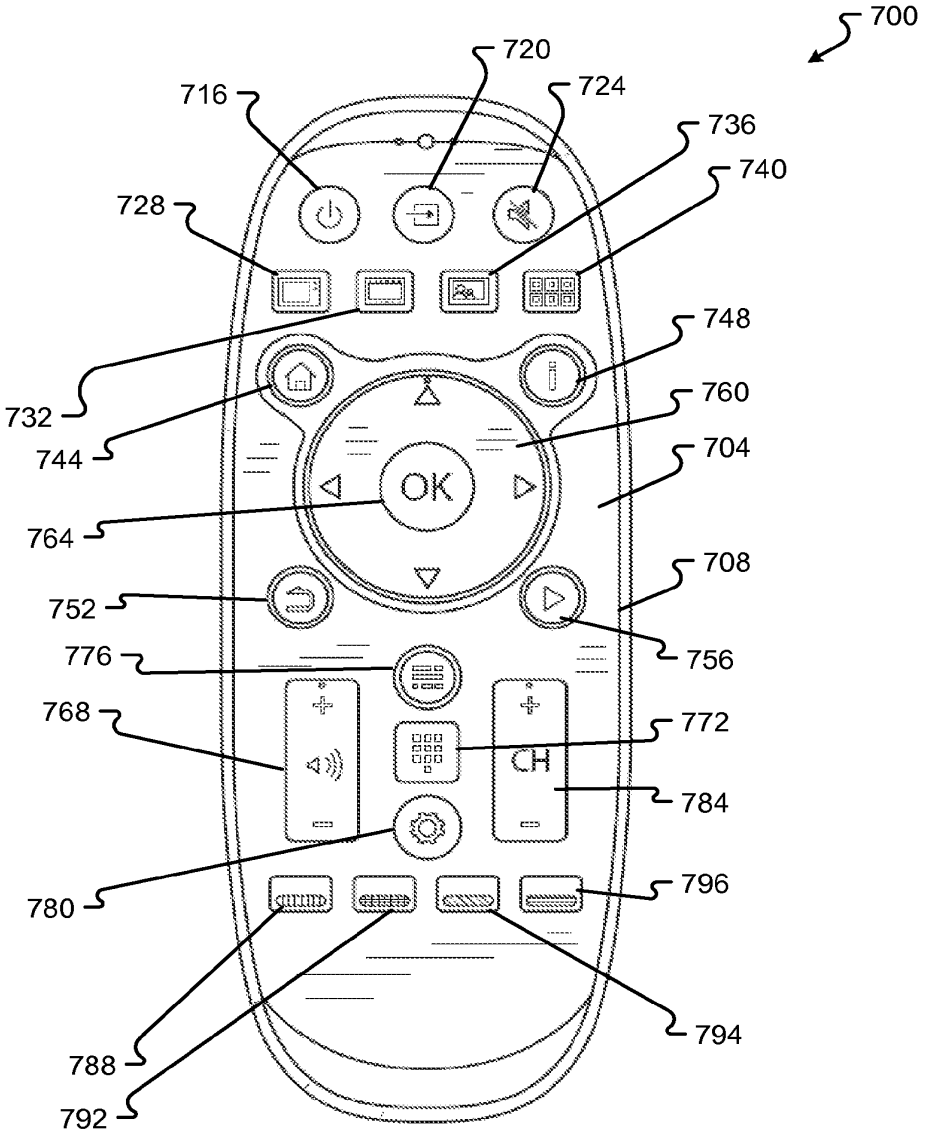

700
720
716
724
736
740
728
748
732
760
744
704
OK
764
708
752
756
776
768
772
CH
784
780
796
794
788
792

Fig. 7

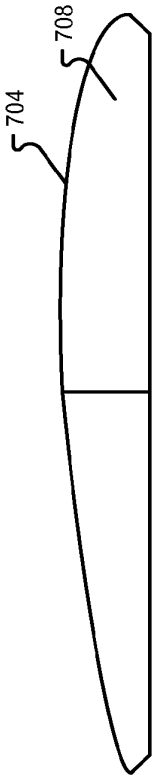


Fig. 8

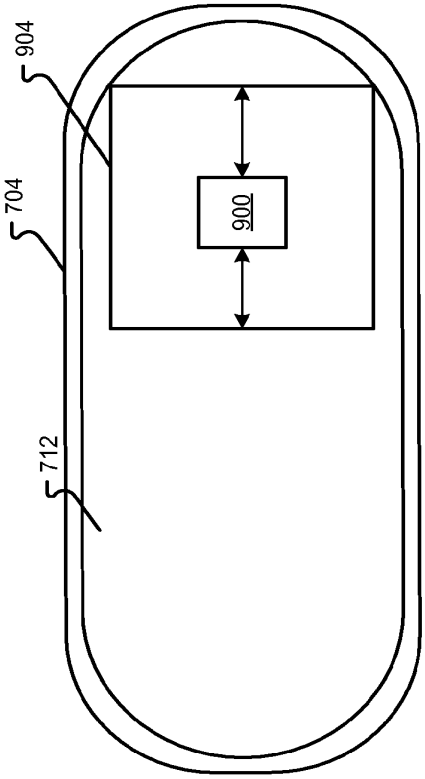


Fig. 9A

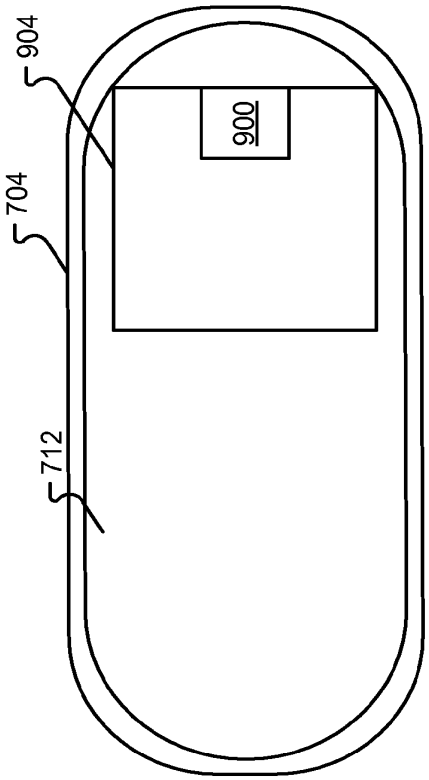


Fig. 9B

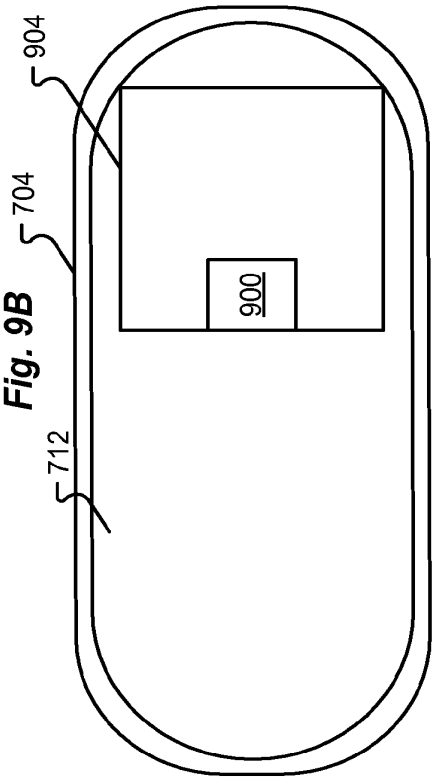


Fig. 9C

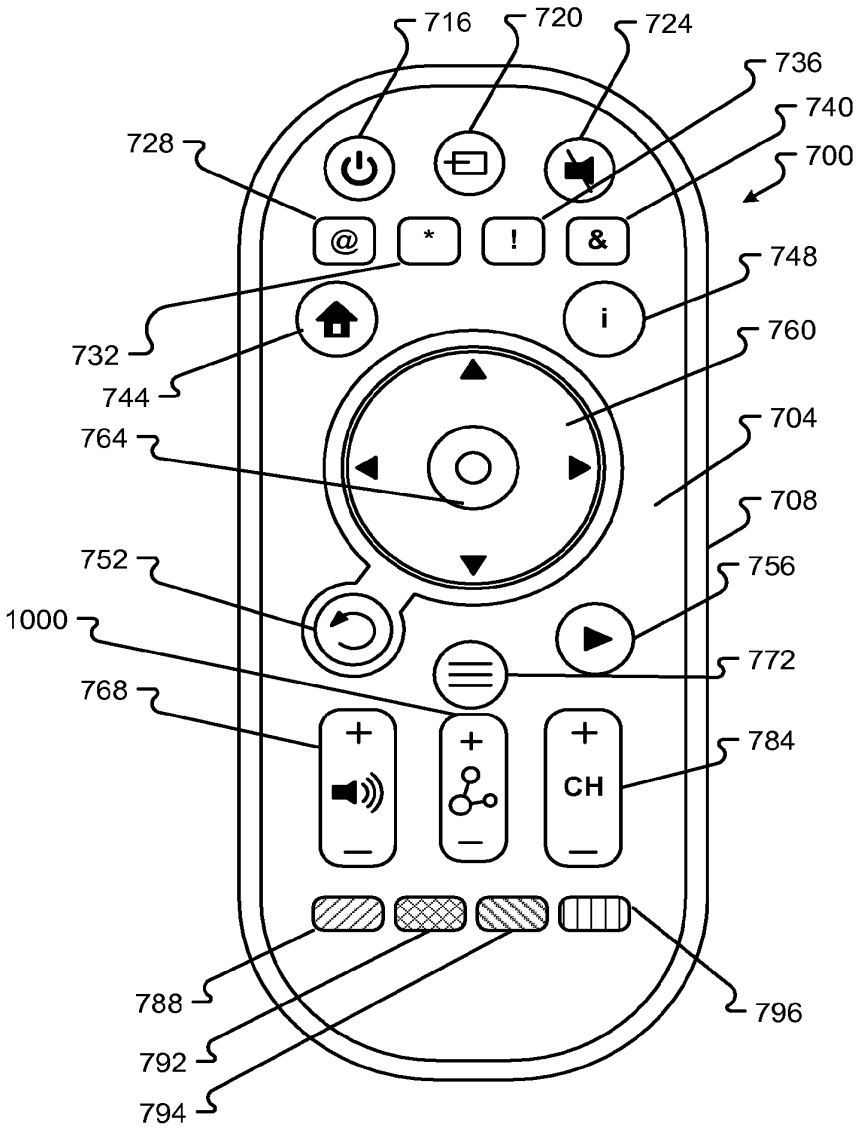

716
720
724
736
740
728
700
@
*
!
&
748
i
732
760
744
704
764
708
752
756
1000
772
768
784
CH
788
796
792
794

Fig. 10

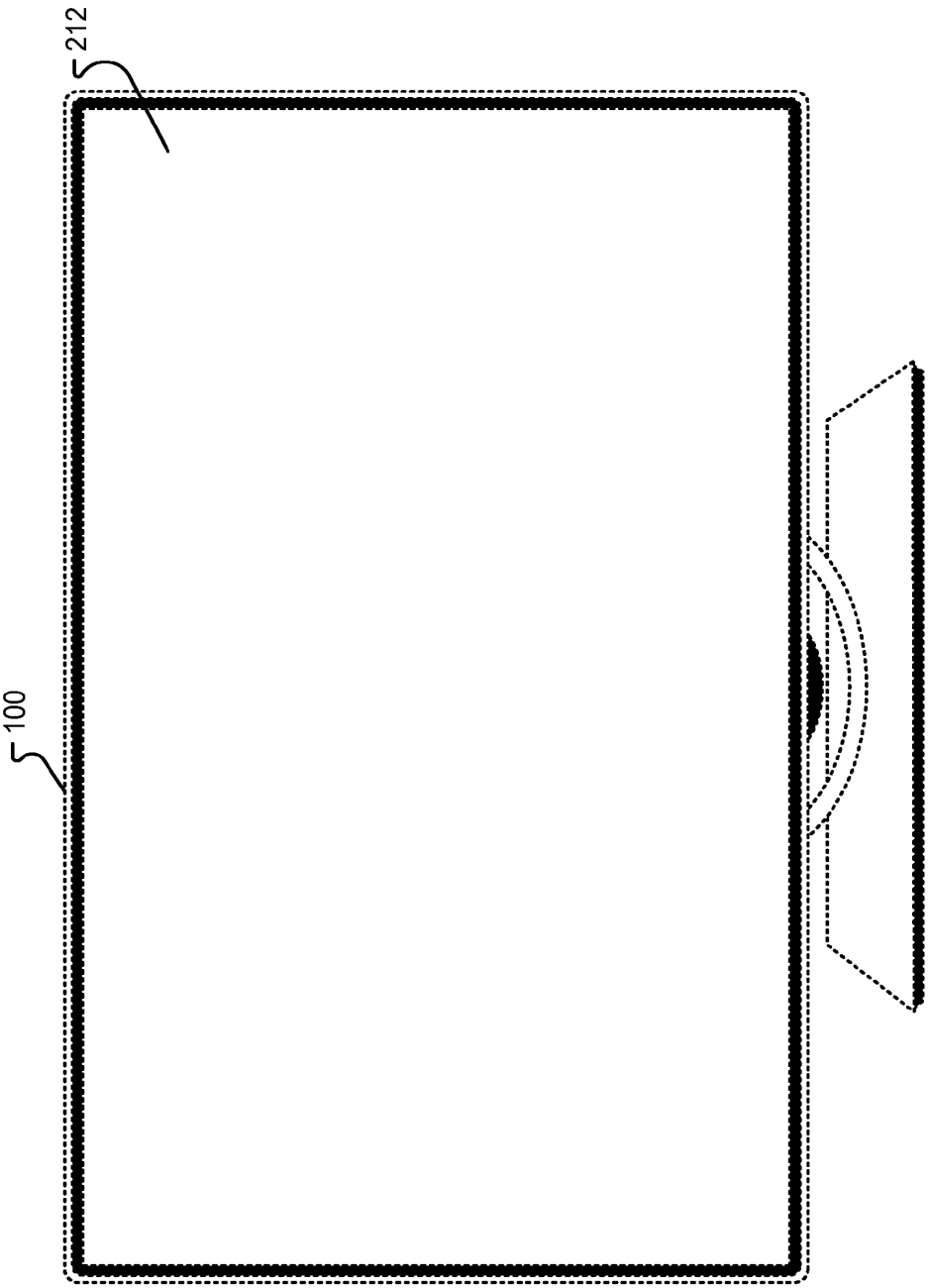


Fig. 11A

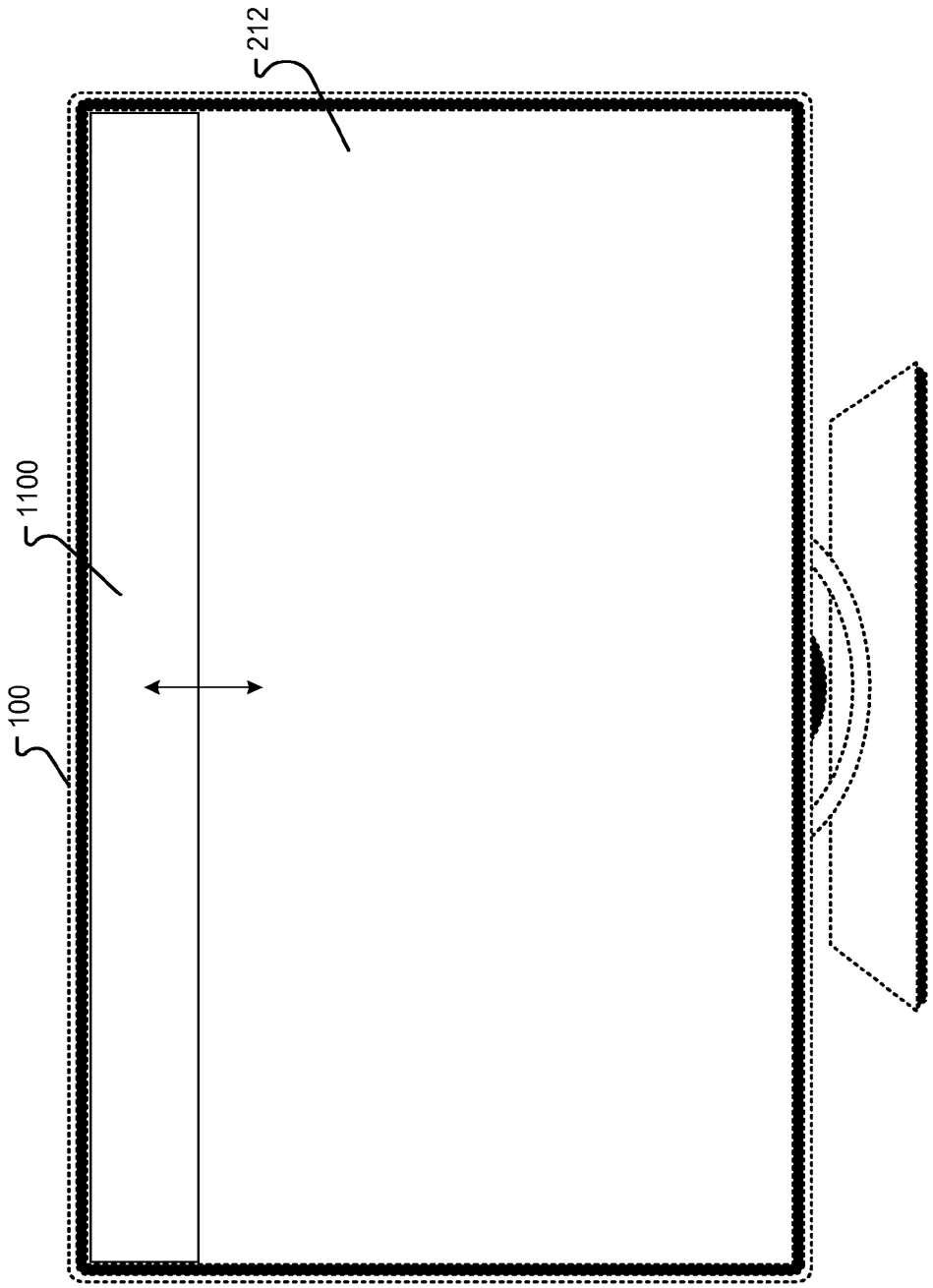


Fig. 11B

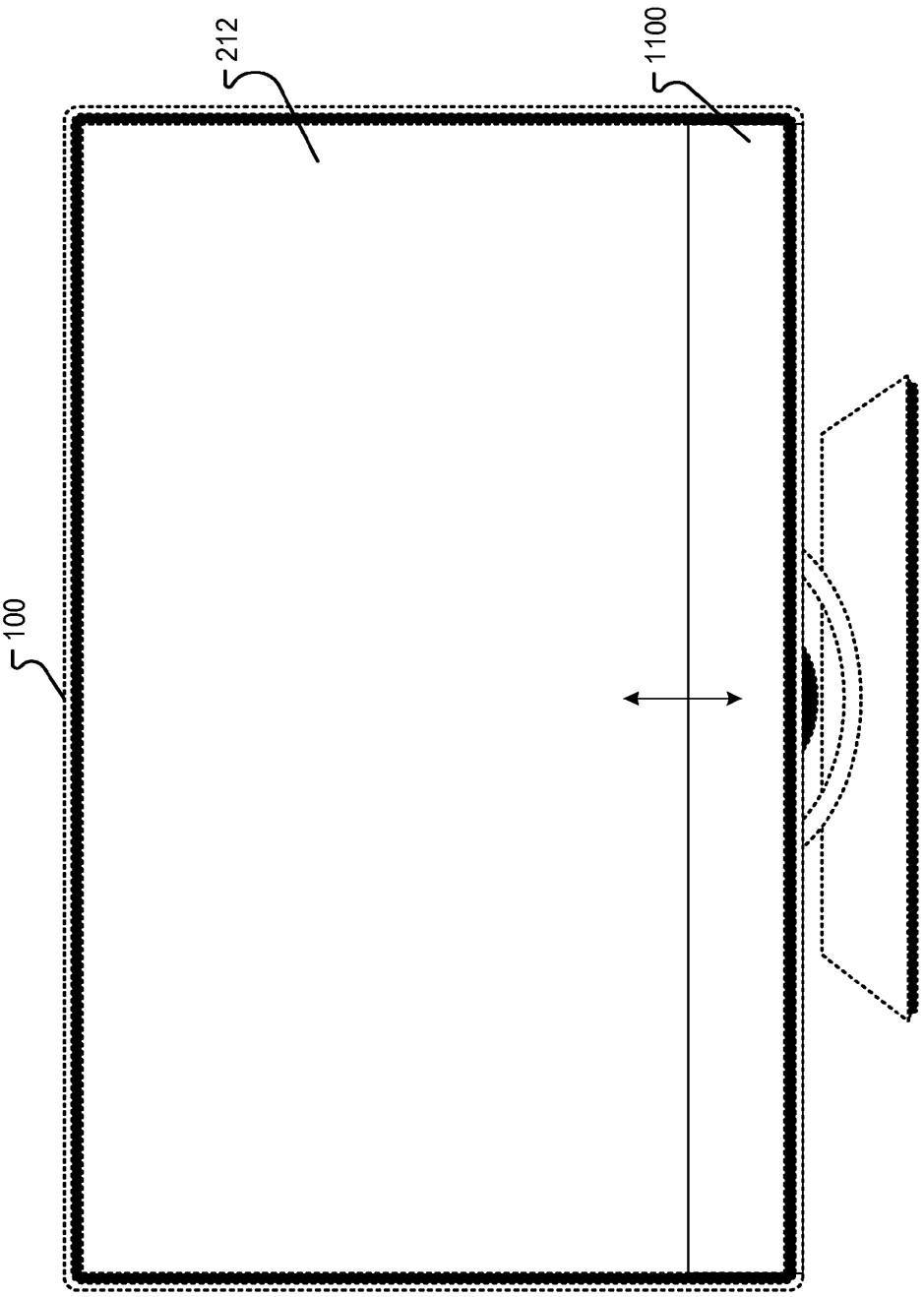


Fig. 11C

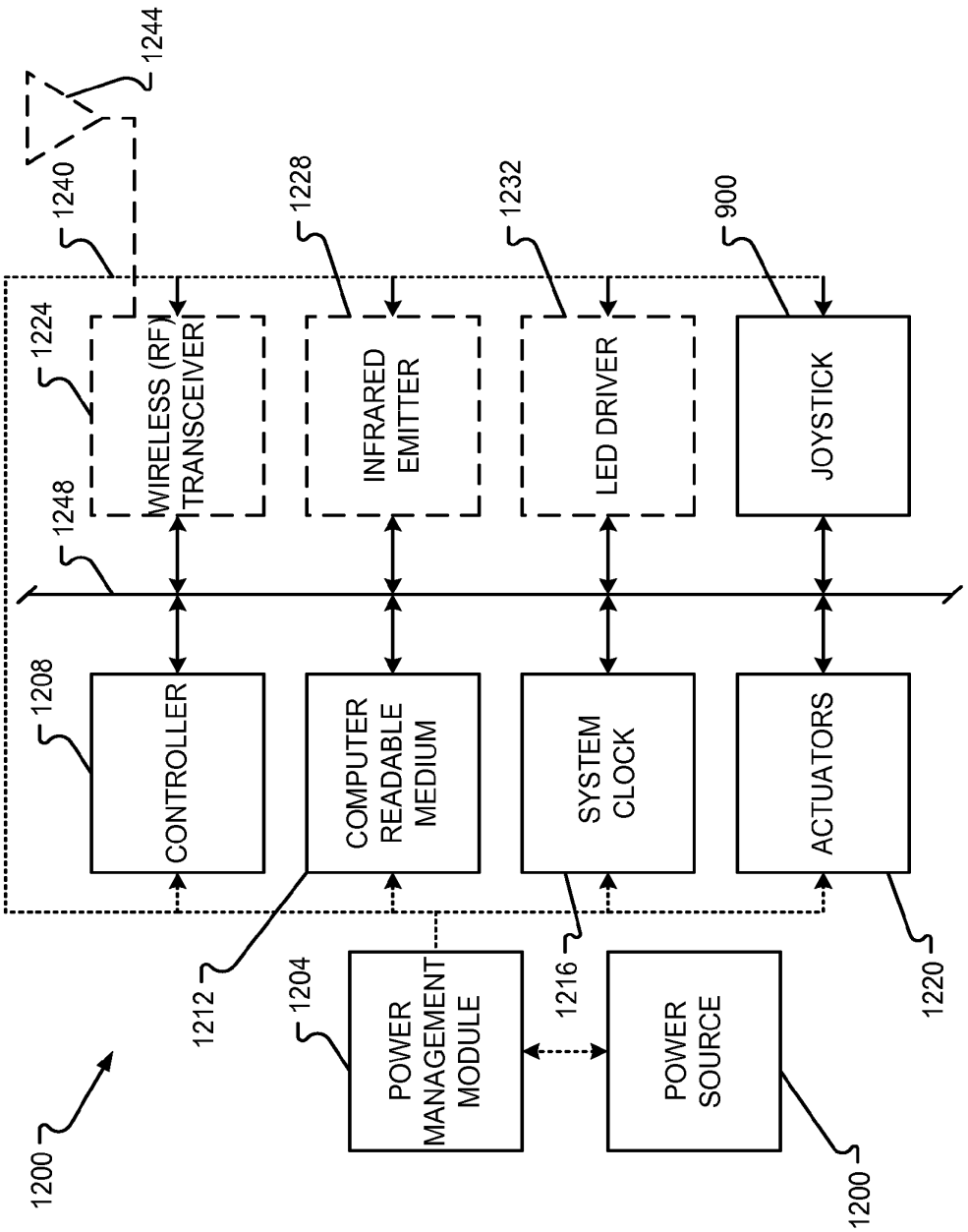

1244
1240
1228
1232
900
1224
WIRELESS (RF) TRANSCEIVER
INFRARED EMITTER
LED DRIVER
JOYSTICK
1248
1208
CONTROLLER
COMPUTER READABLE MEDIUM
SYSTEM CLOCK
ACTUATORS
1212
1204
POWER MANAGEMENT MODULE
1216
POWER SOURCE
1220
1200
1200

Fig. 12

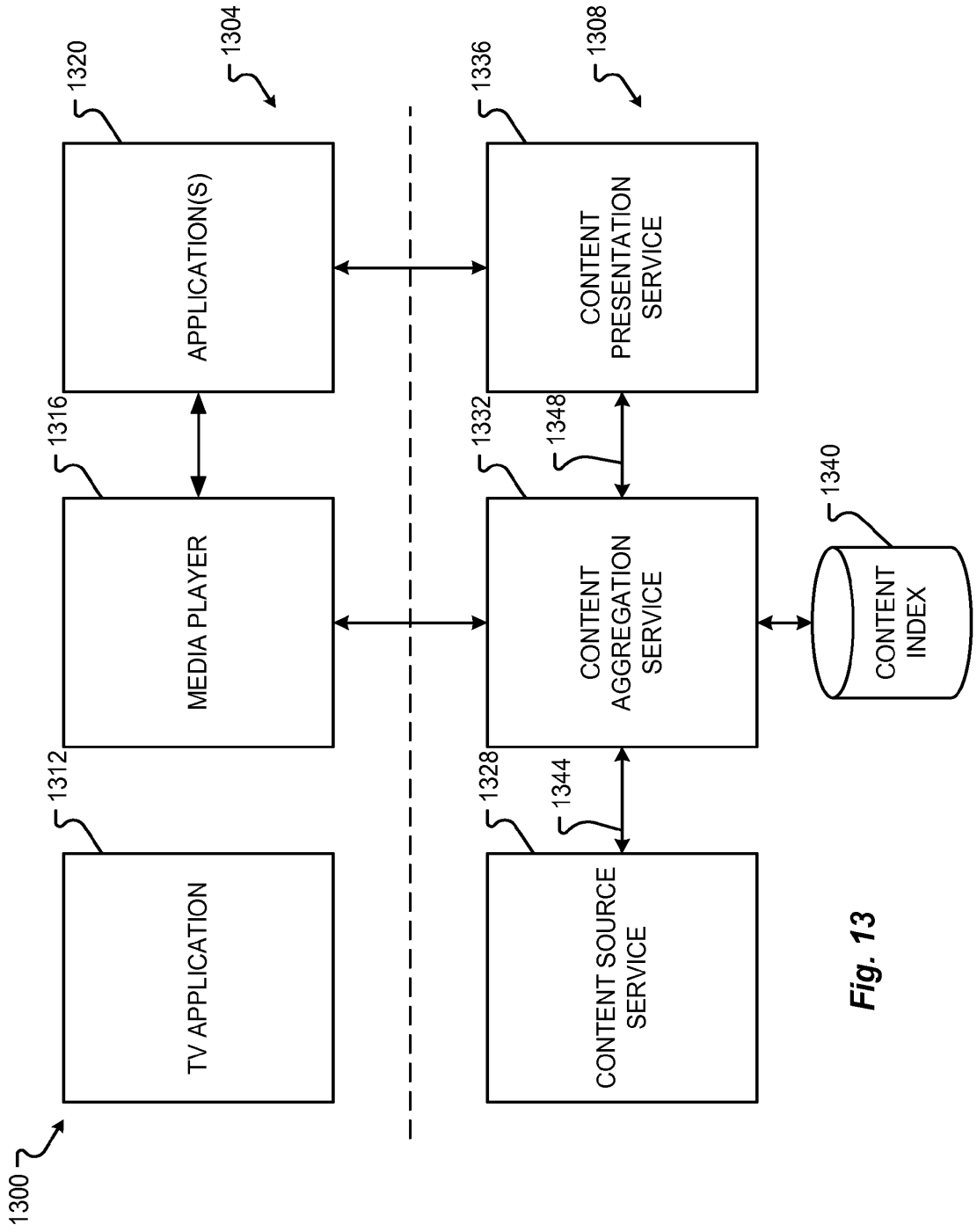

1300
1304
1320
APPLICATION(S)
1316
MEDIA PLAYER
1312
TV APPLICATION
1308
1336
CONTENT PRESENTATION SERVICE
1332
1348
CONTENT AGGREGATION SERVICE
1340
CONTENT INDEX
1328
1344
CONTENT SOURCE SERVICE

Fig. 13

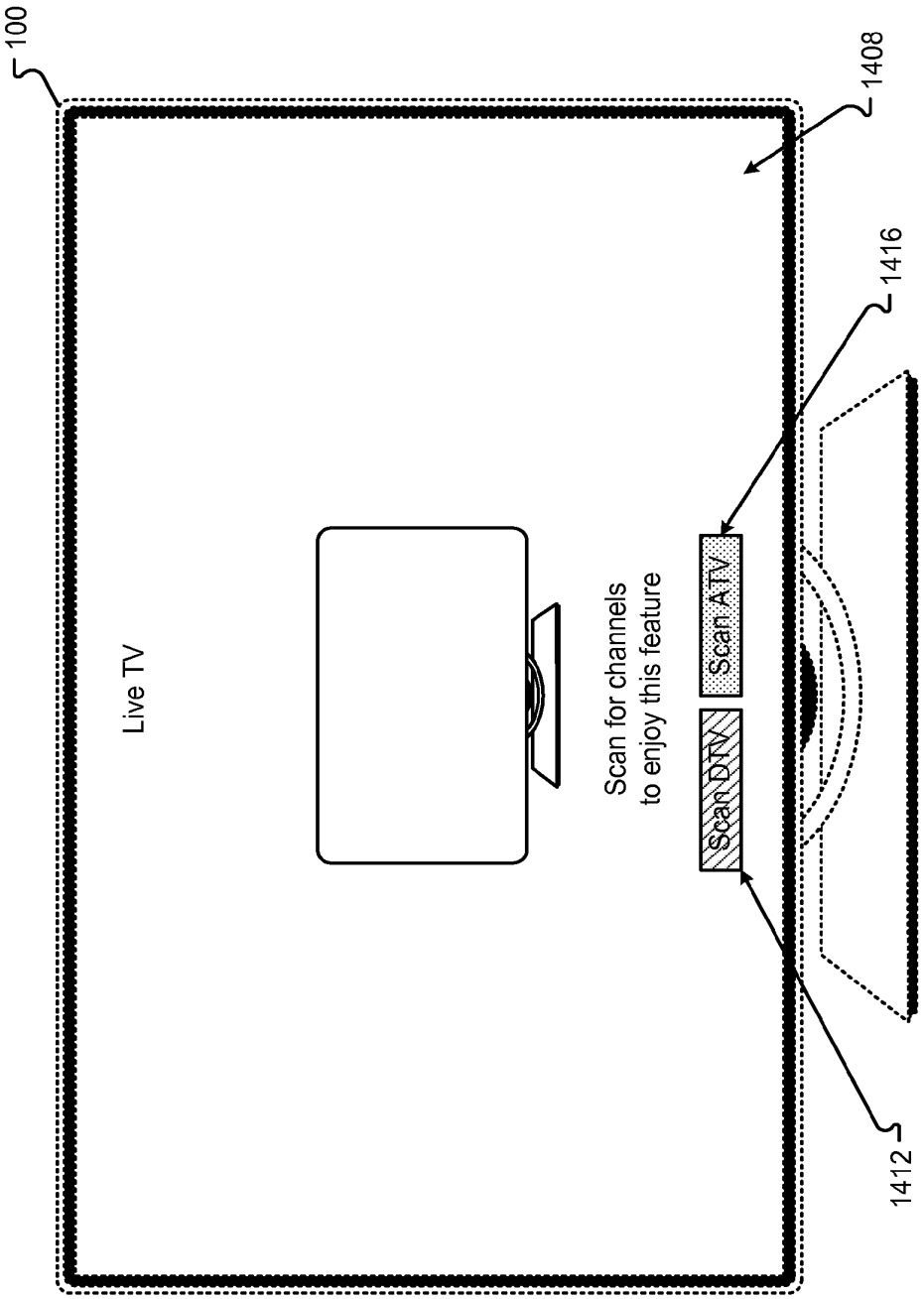

100
1408
1416
Live TV
Scan for channels
to enjoy this feature
Scan ATV
Scan DTV
1412

Fig. 14

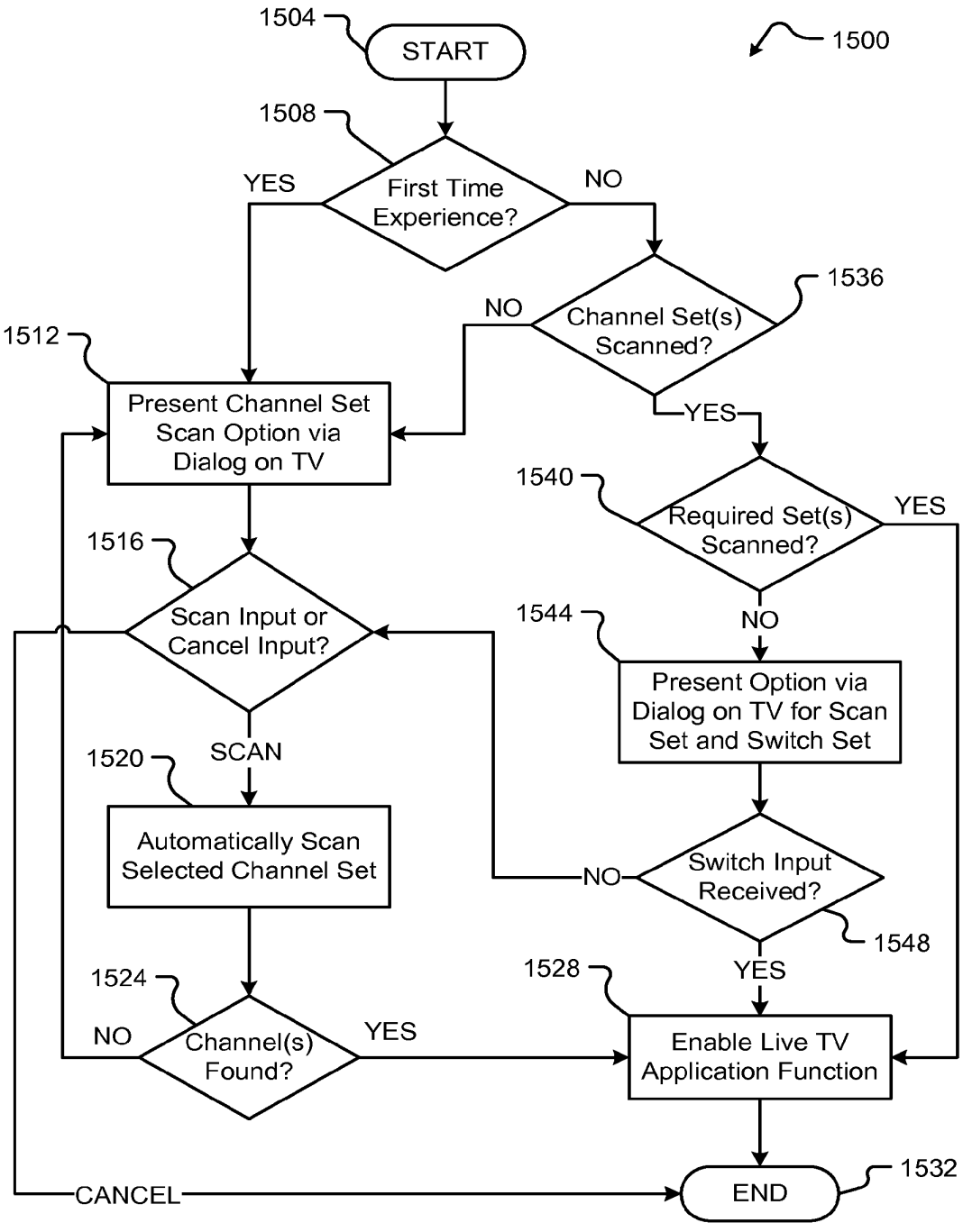

1504
START
1500
1508
First Time Experience?
YES
NO
1536
Channel Set(s) Scanned?
NO
1512
Present Channel Set Scan Option via Dialog on TV
YES
1540
Required Set(s) Scanned?
YES
1516
Scan Input or Cancel Input?
NO
1544
Present Option via Dialog on TV for Scan Set and Switch Set
SCAN
1520
Automatically Scan Selected Channel Set
NO
Switch Input Received?
1548
YES
1528
1524
NO
Channel(s) Found?
YES
Enable Live TV Application Function
1532
CANCEL
END

Fig. 15

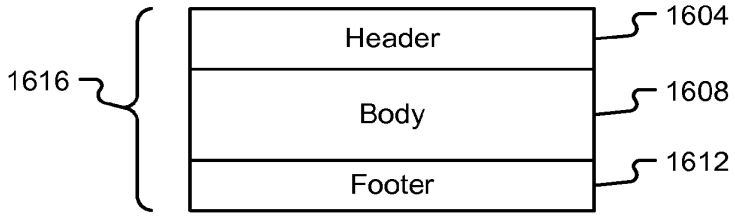


Fig. 16A

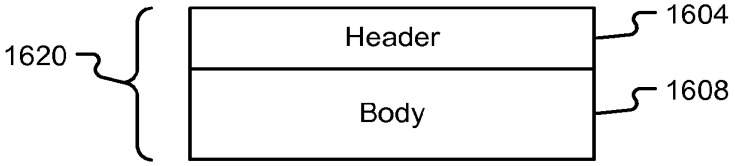


Fig. 16B

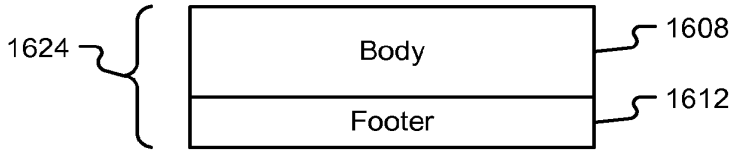


Fig. 16C

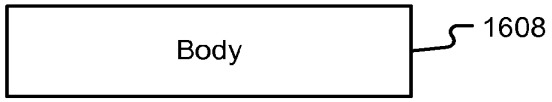


Fig. 16D

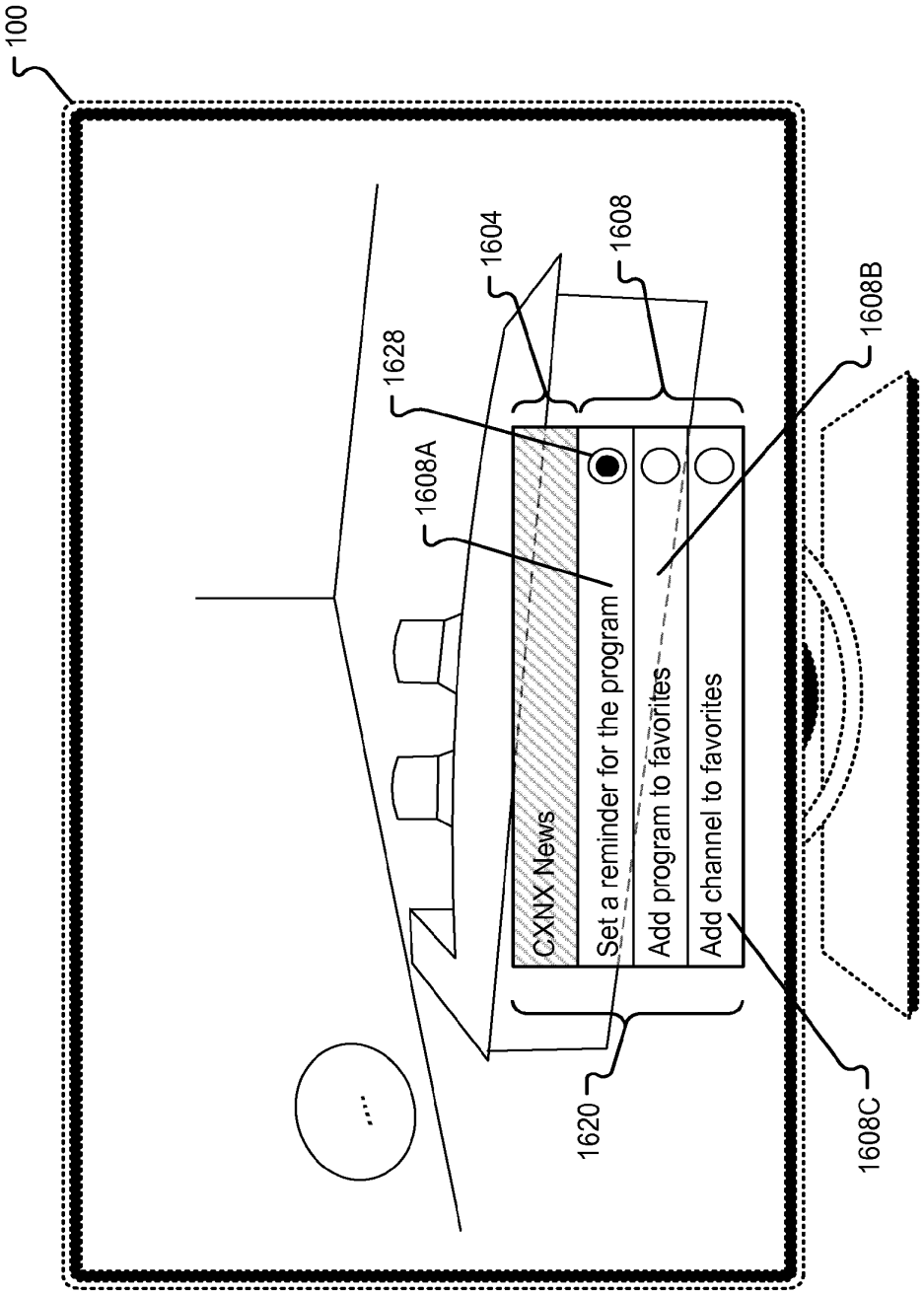

100
1628
1604
1608
1608B
1608A
CXNX News
Set a reminder for the program
Add program to favorites
Add channel to favorites
1620
1608C

Fig. 16E

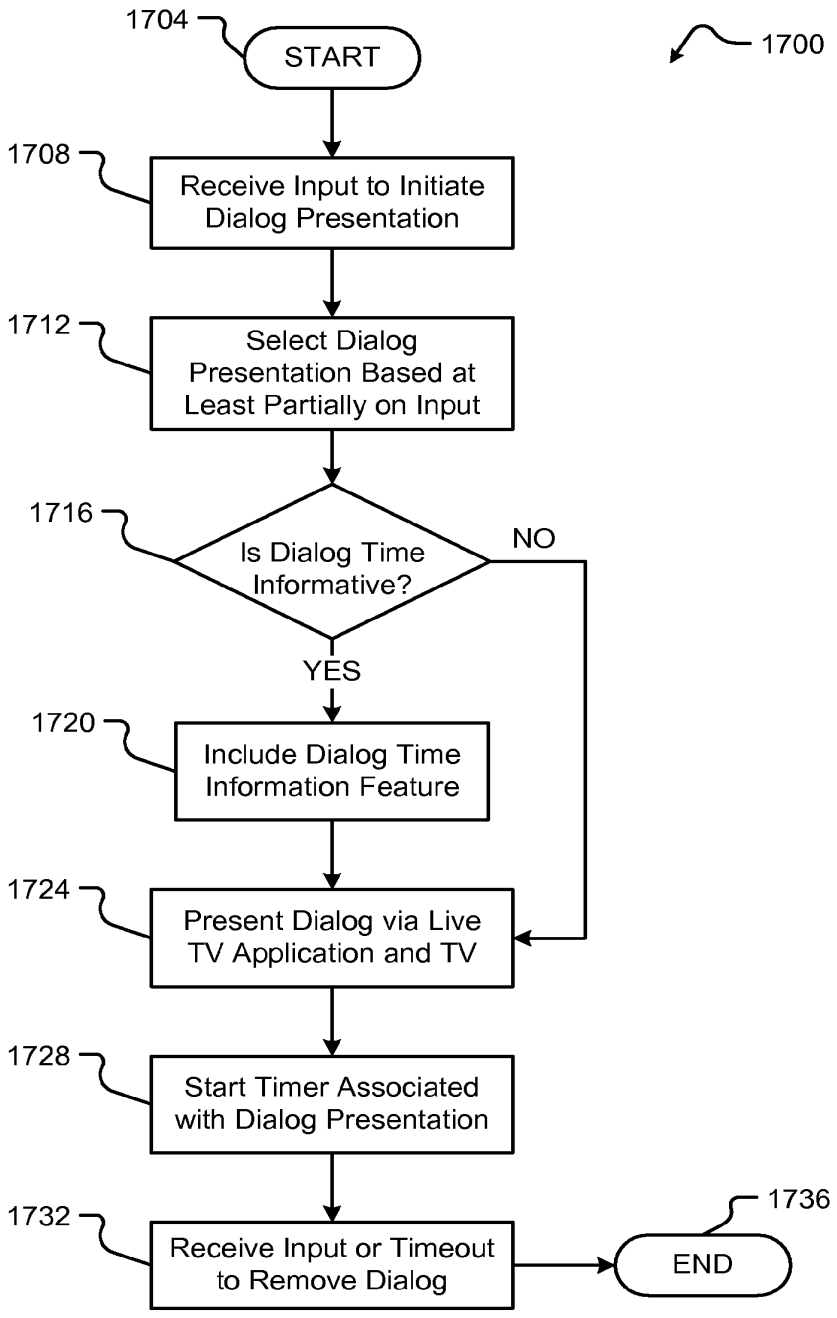

1704
START
1700
1708
Receive Input to Initiate Dialog Presentation
1712
Select Dialog Presentation Based at Least Partially on Input
1716
Is Dialog Time Informative?
NO
YES
1720
Include Dialog Time Information Feature
1724
Present Dialog via Live TV Application and TV
1728
Start Timer Associated with Dialog Presentation
1732
Receive Input or Timeout to Remove Dialog
1736
END

Fig. 17

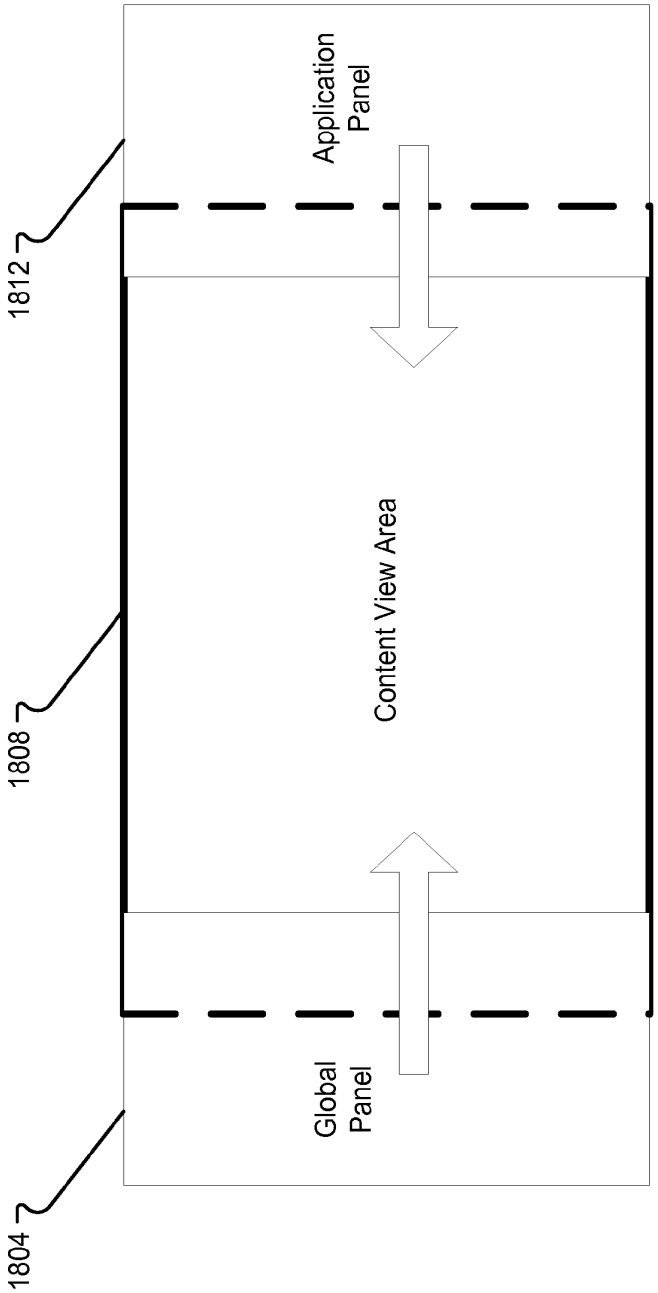

Application Panel
1812
Content View Area
1808
Global Panel
1804

Fig. 18

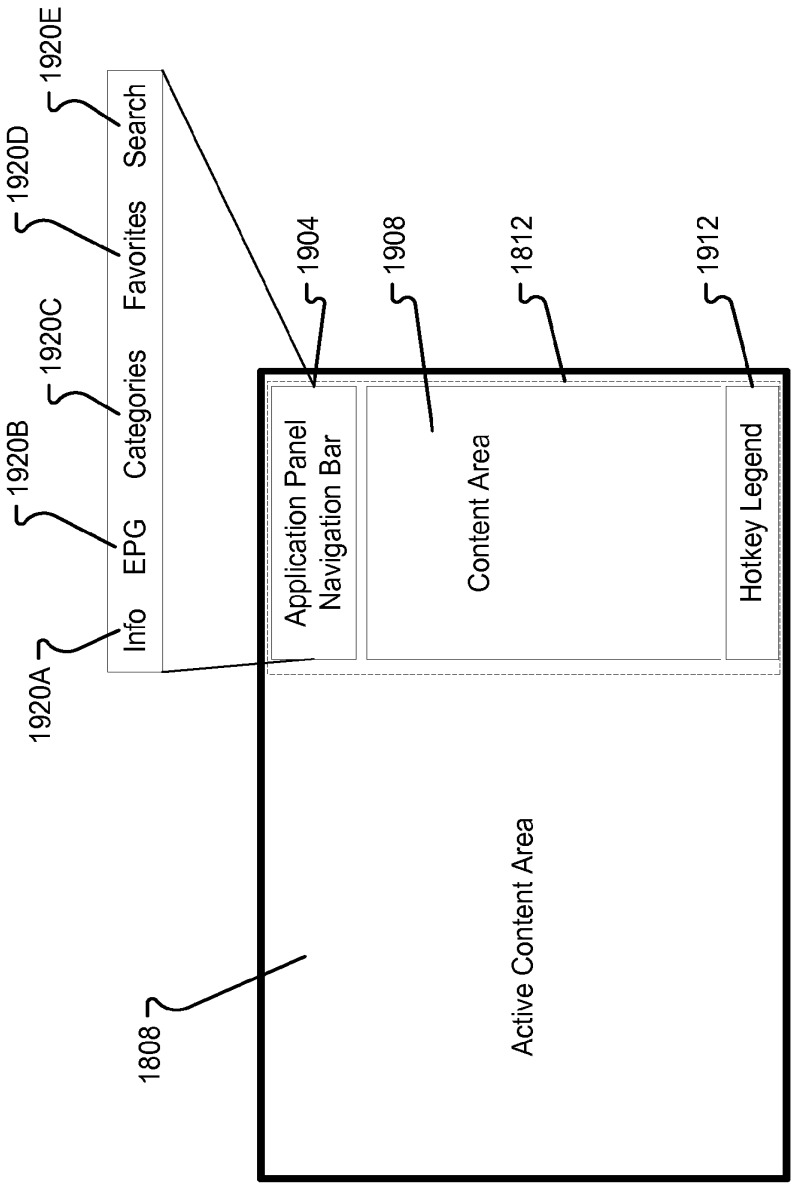

1920E
Search
1920D
Favorites
1920C
Categories
1920B
EPG
Info
1920A
1904
1908
1812
1912
Application Panel Navigation Bar
Content Area
Hotkey Legend
Active Content Area
1808

Fig. 19

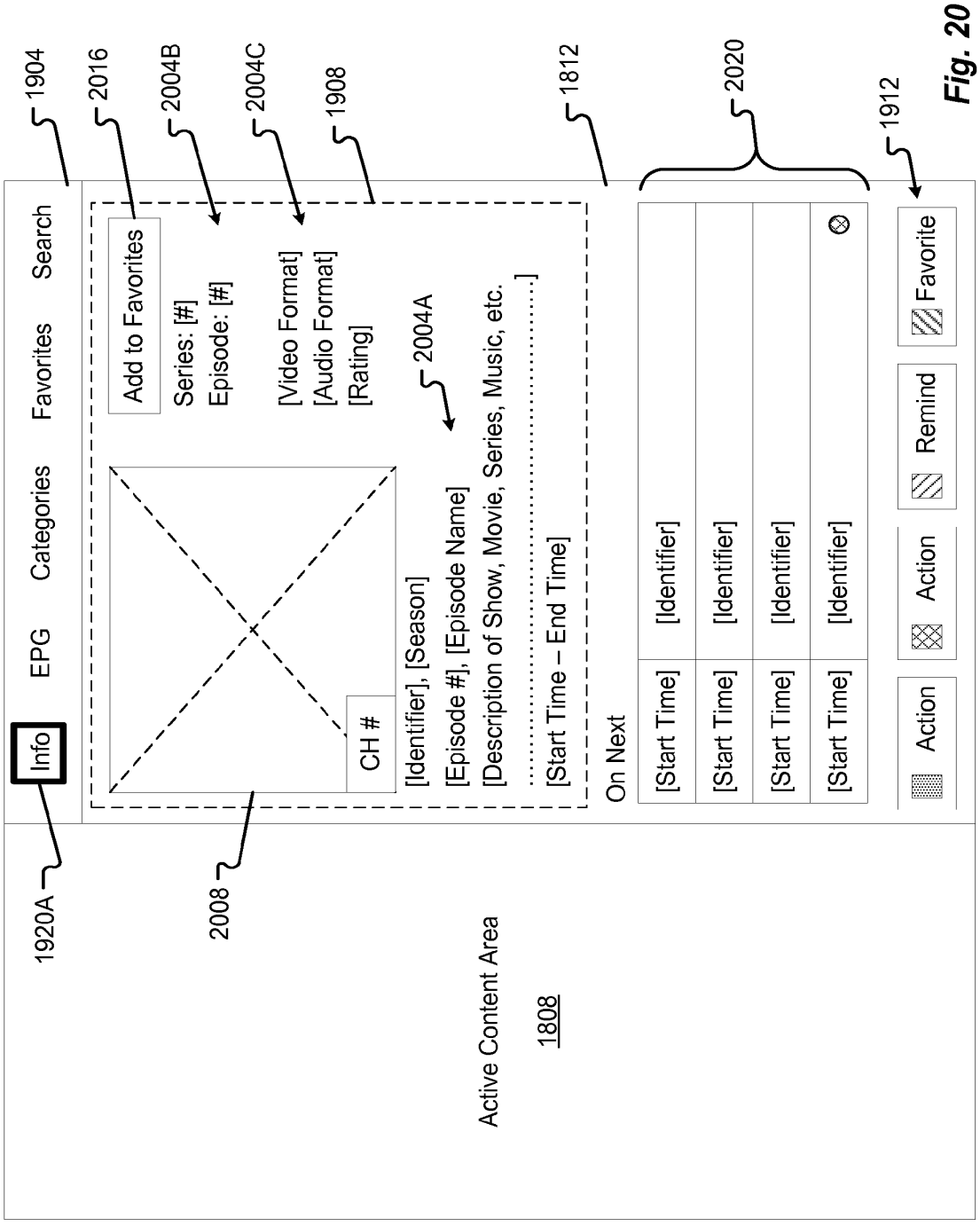

1904
2016
2004B
2004C
1908
1812
2020
1912
Info
EPG
Categories
Favorites
Search
Add to Favorites
Series: [#]
Episode: [#]
[Video Format]
[Audio Format]
[Rating]
2004A
CH #
[Identifier], [Season]
[Episode #], [Episode Name]
[Description of Show, Movie, Series, Music, etc.
.....]
[Start Time – End Time]
On Next
[Start Time] [Identifier]
[Start Time] [Identifier]
[Start Time] [Identifier]
[Start Time] [Identifier]
Action
Action
Remind
Favorite
1920A
2008
Active Content Area
1808

Fig. 20

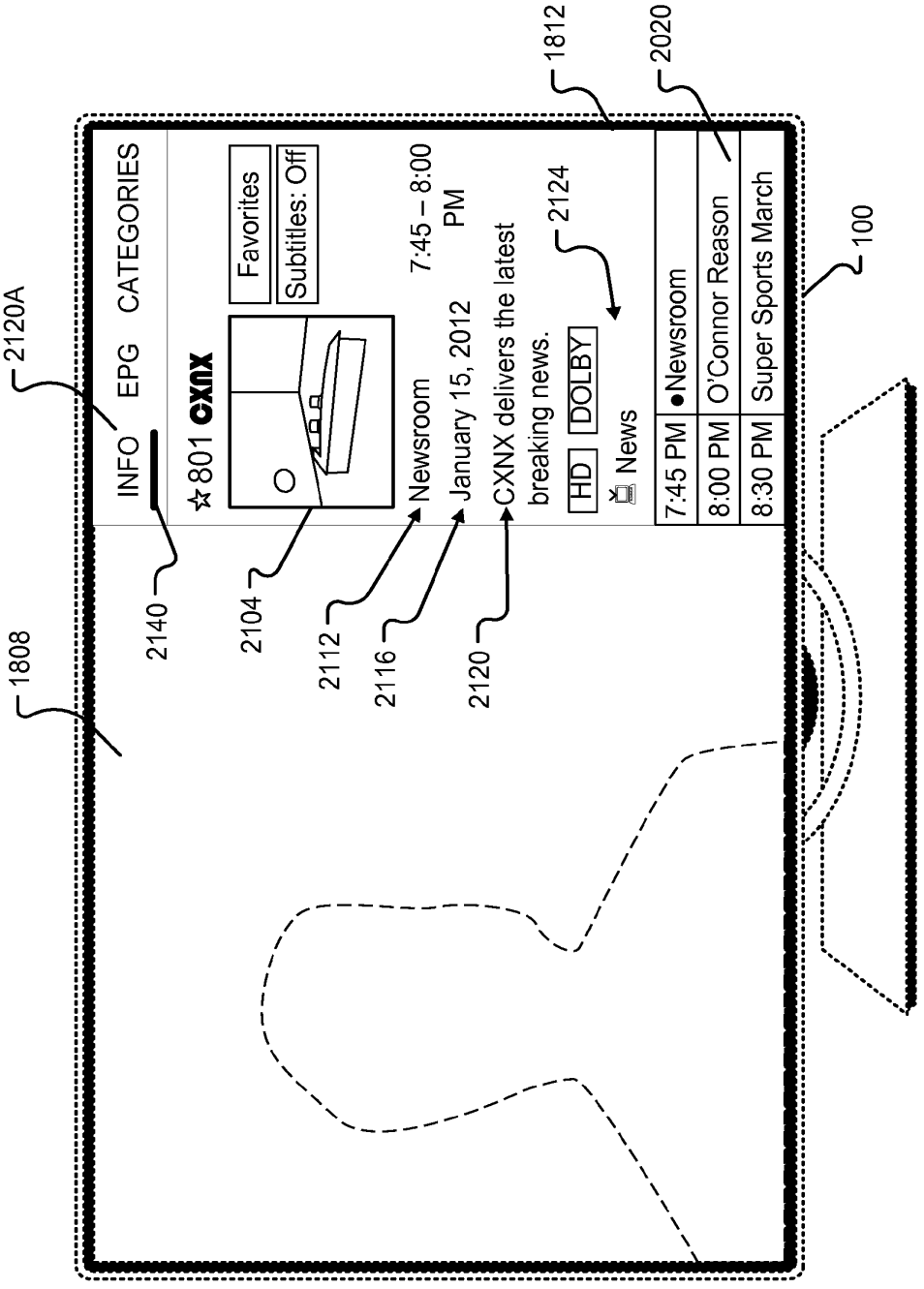

2120A
INFO
EPG
CATEGORIES
801 CXNX
Favorites
Subtitles: Off
Newsroom
January 15, 2012
7:45 – 8:00 PM
CXNX delivers the latest breaking news.
HD
DOLBY
News
2124
1812
2020
7:45 PM
Newsroom
8:00 PM
O'Connor Reason
8:30 PM
Super Sports March
100
1808
2140
2104
2112
2116
2120

Fig. 21

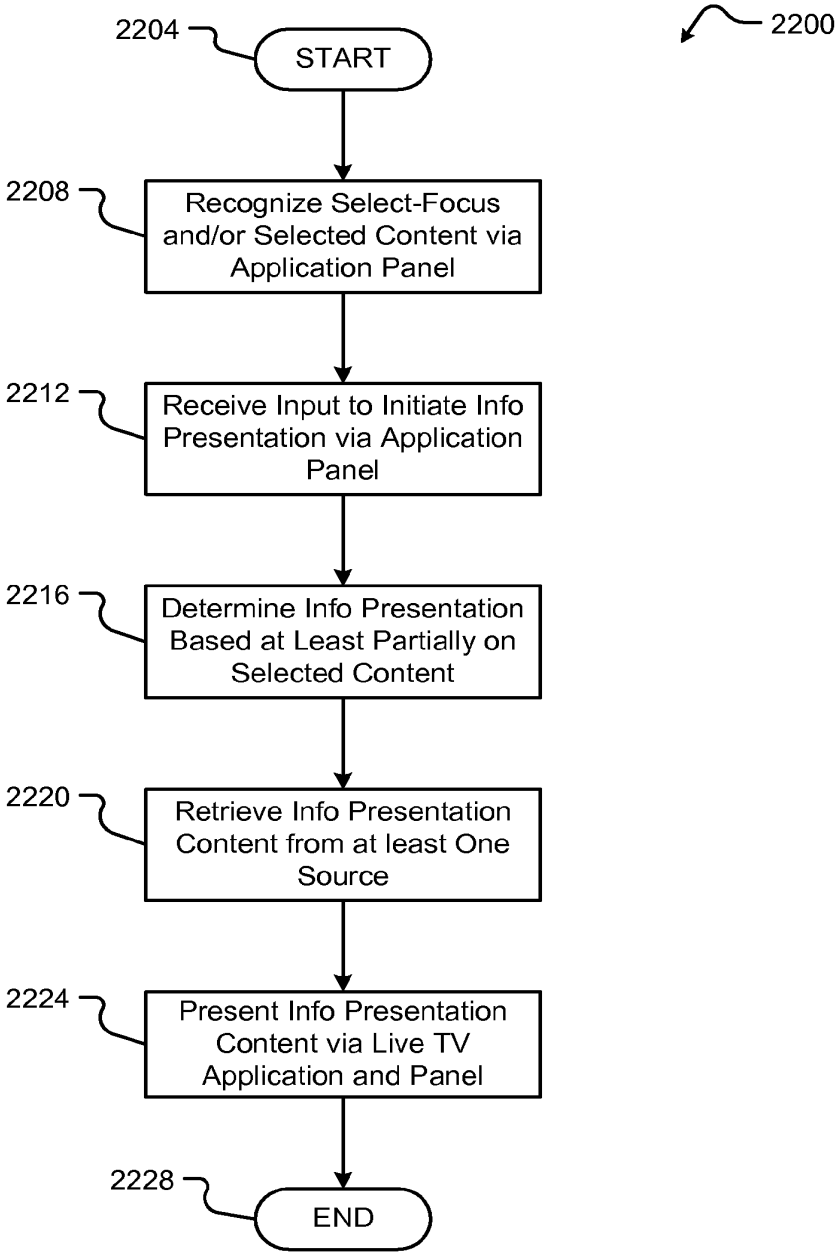

2200
2204
START
2208
Recognize Select-Focus and/or Selected Content via Application Panel
2212
Receive Input to Initiate Info Presentation via Application Panel
2216
Determine Info Presentation Based at Least Partially on Selected Content
2220
Retrieve Info Presentation Content from at least One Source
2224
Present Info Presentation Content via Live TV Application and Panel
2228
END

Fig. 22

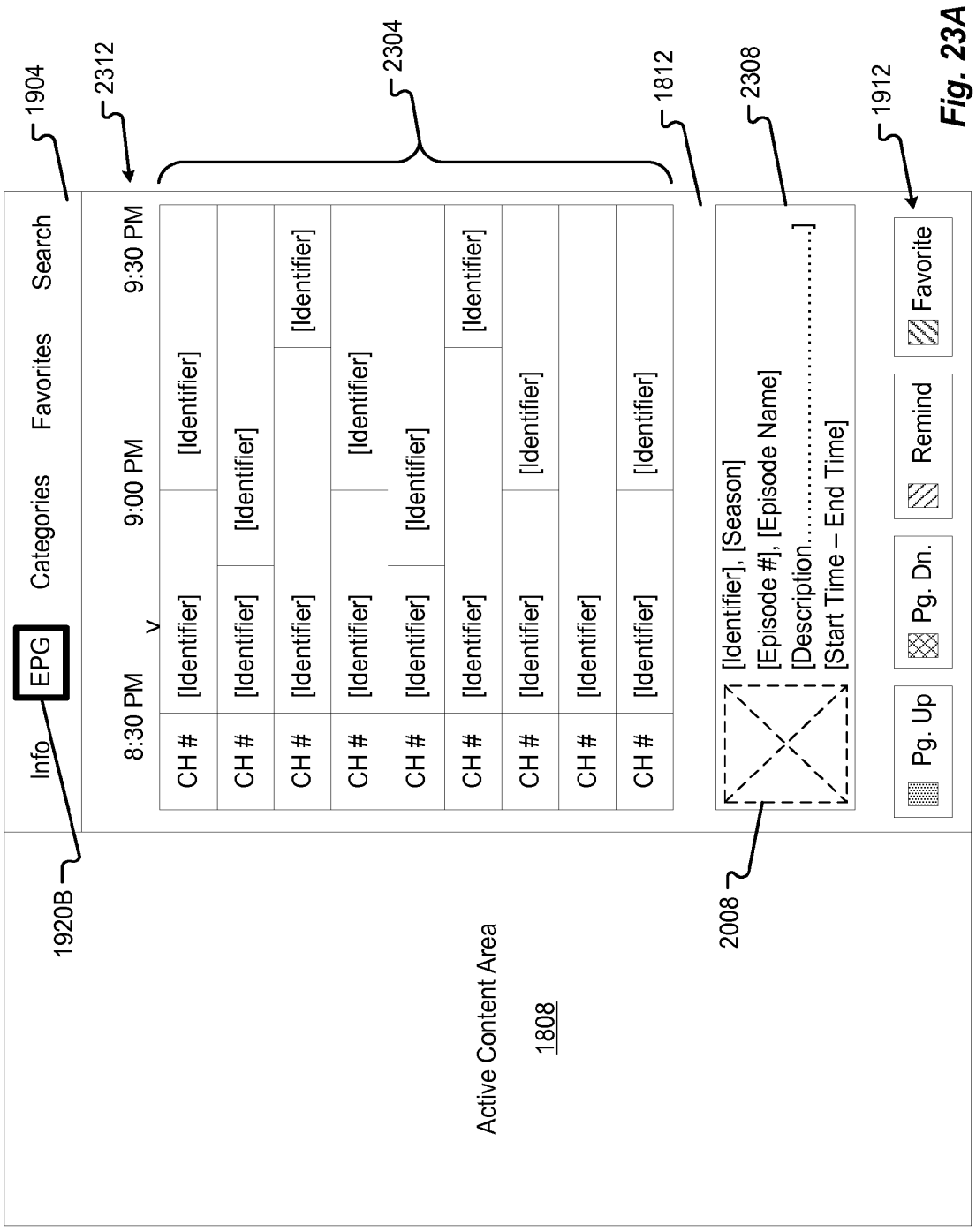

1904
2312
2304
1812
2308
1912
Info
EPG
Categories
Favorites
Search
8:30 PM
9:00 PM
9:30 PM
CH #
[Identifier]
[Identifier], [Season]
[Episode #], [Episode Name]
[Description.....]
[Start Time – End Time]
Pg. Up
Pg. Dn.
Remind
Favorite
1920B
2008
Active Content Area
1808

Fig. 23A

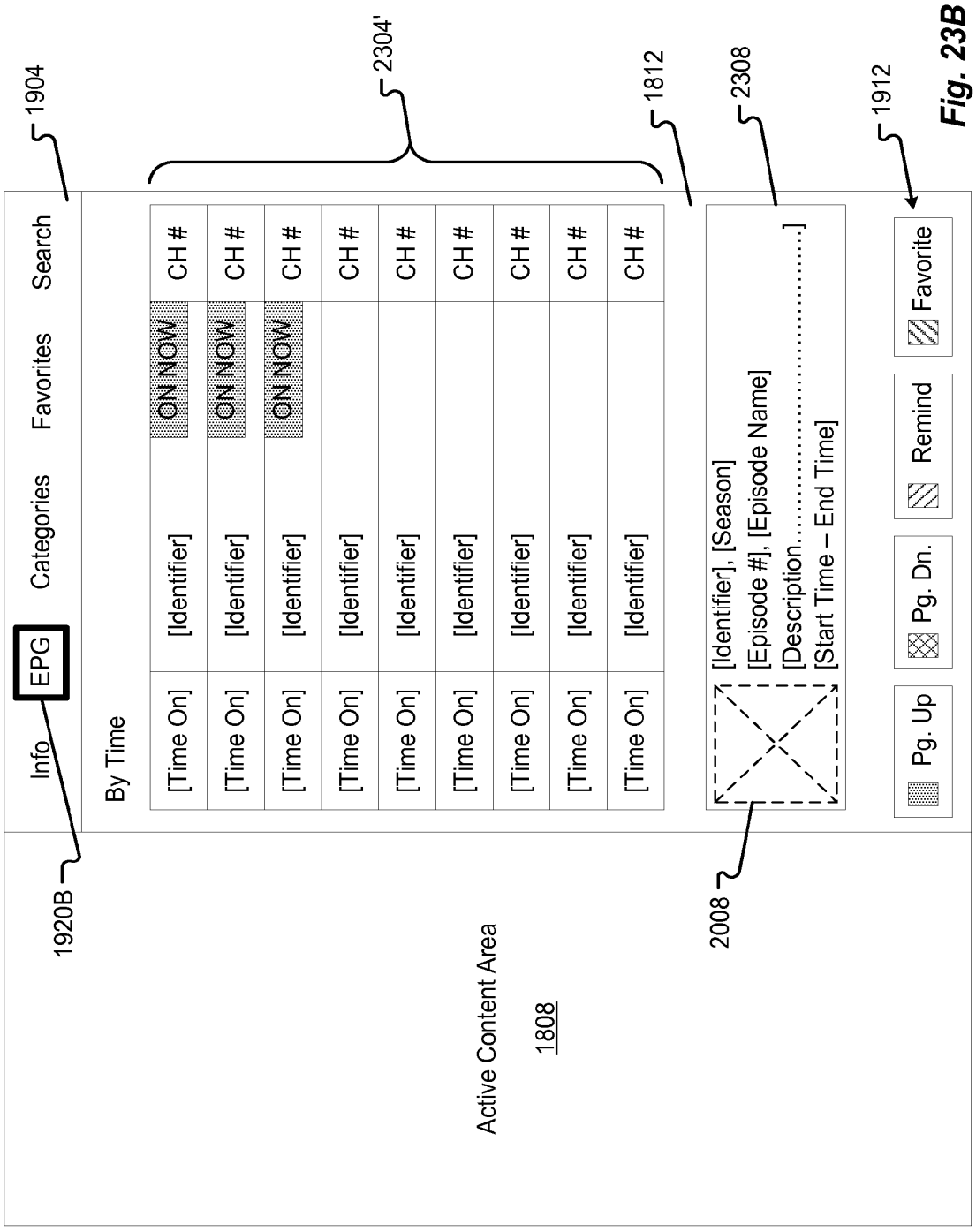

1904
2304'
1812
2308
1912
Info
EPG
Categories
Favorites
Search
By Time
[Time On]
[Identifier]
ON NOW
CH #
[Identifier], [Season]
[Episode #], [Episode Name]
[Description.....]
[Start Time – End Time]
Pg. Up
Pg. Dn.
Remind
Favorite
1920B
2008
Active Content Area
1808

Fig. 23B

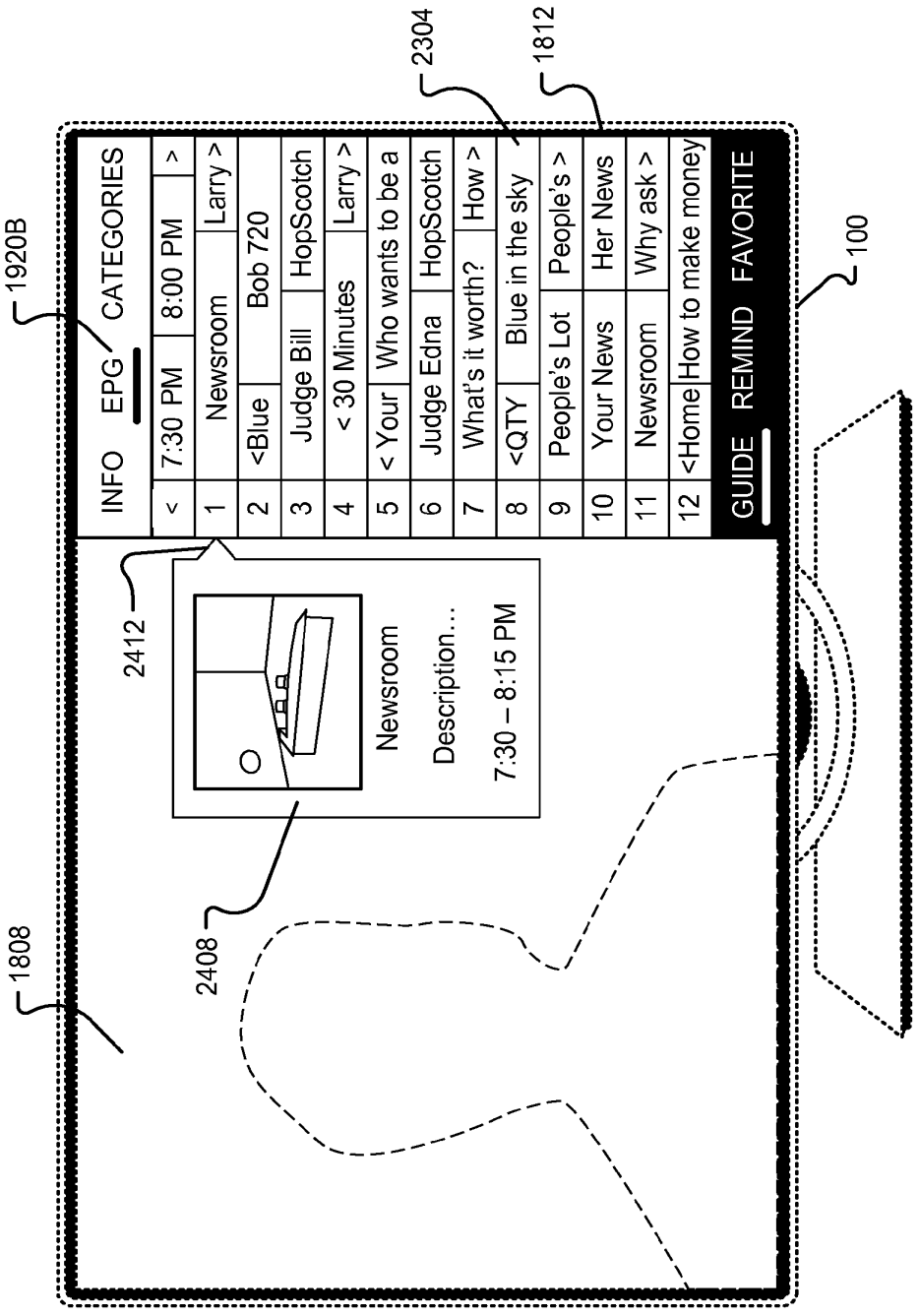

1920B
INFO
EPG
CATEGORIES
2304
1812
< | 7:30 PM | 8:00 PM | >
1 | Newsroom | Larry >
2 | <Blue | Bob 720
3 | Judge Bill | HopScotch
4 | < 30 Minutes | Larry >
5 | < Your | Who wants to be a
6 | Judge Edna | HopScotch
7 | What's it worth? | How >
8 | <QTY | Blue in the sky
9 | People's Lot | People's >
10 | Your News | Her News
11 | Newsroom | Why ask >
12 | <Home | How to make money
GUIDE REMIND FAVORITE
100
2412
Newsroom
Description…
7:30 – 8:15 PM
2408
1808

Fig. 24A

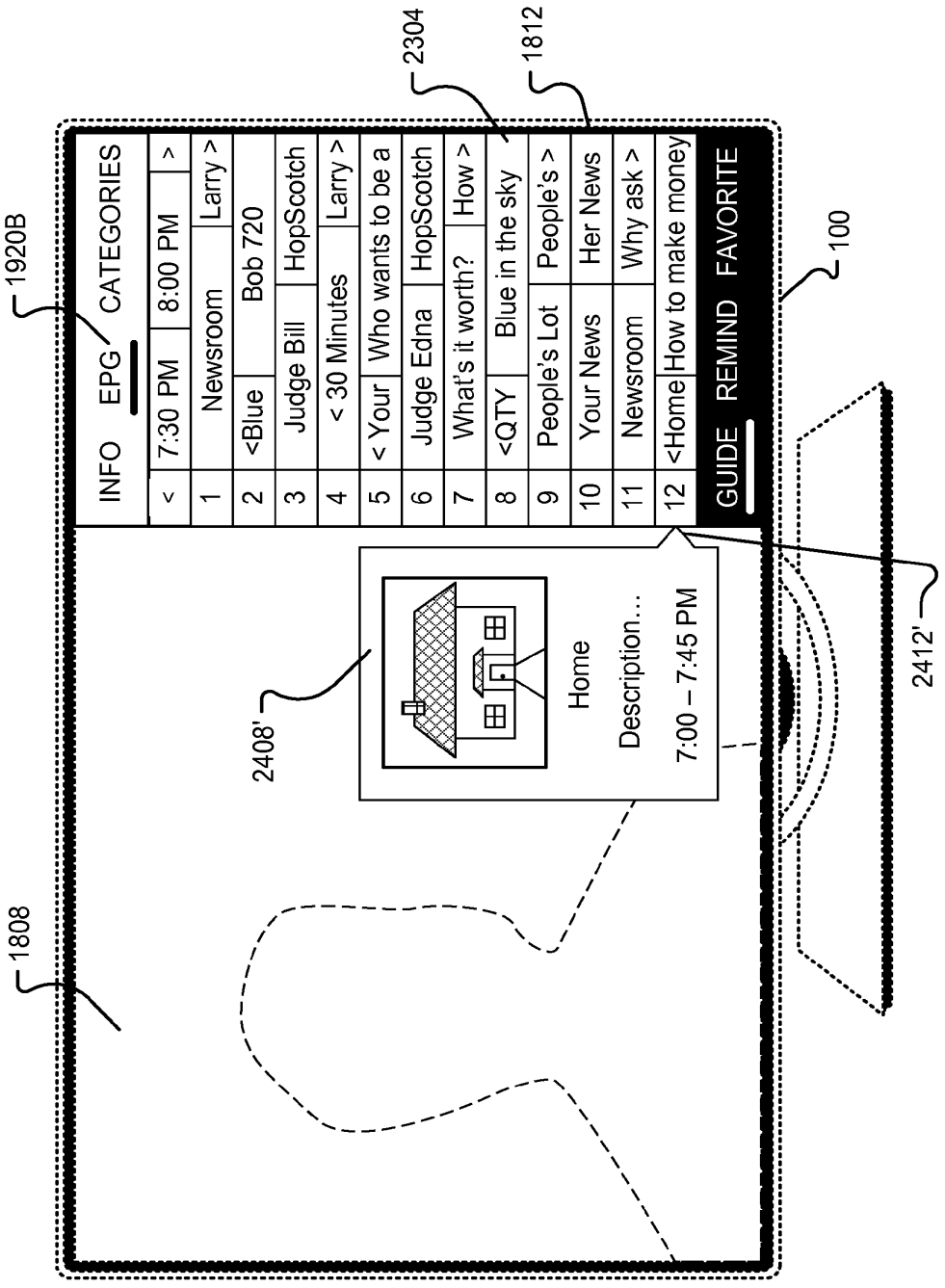

1920B
2304
1812
100
1808
2408'
2412'
INFO
EPG
CATEGORIES
GUIDE
REMIND
FAVORITE
Home
Description...
7:00 – 7:45 PM

Fig. 24B

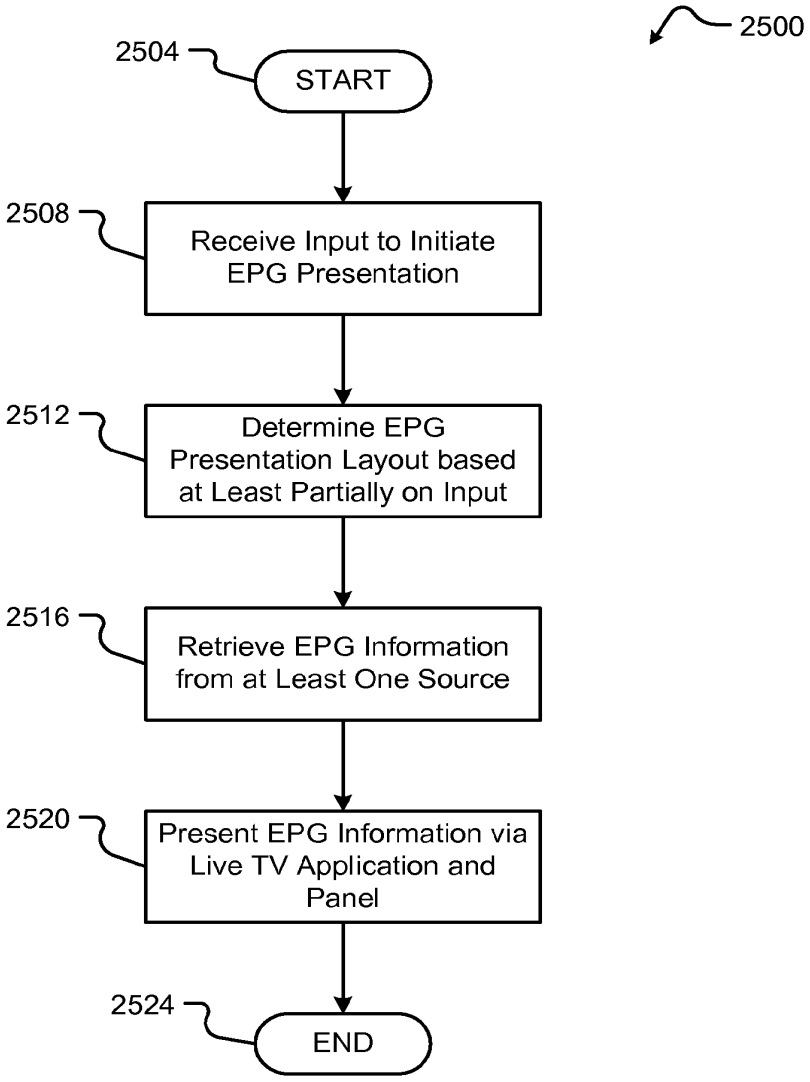

2500
2504
START
2508
Receive Input to Initiate EPG Presentation
2512
Determine EPG Presentation Layout based at Least Partially on Input
2516
Retrieve EPG Information from at Least One Source
2520
Present EPG Information via Live TV Application and Panel
2524
END

Fig. 25

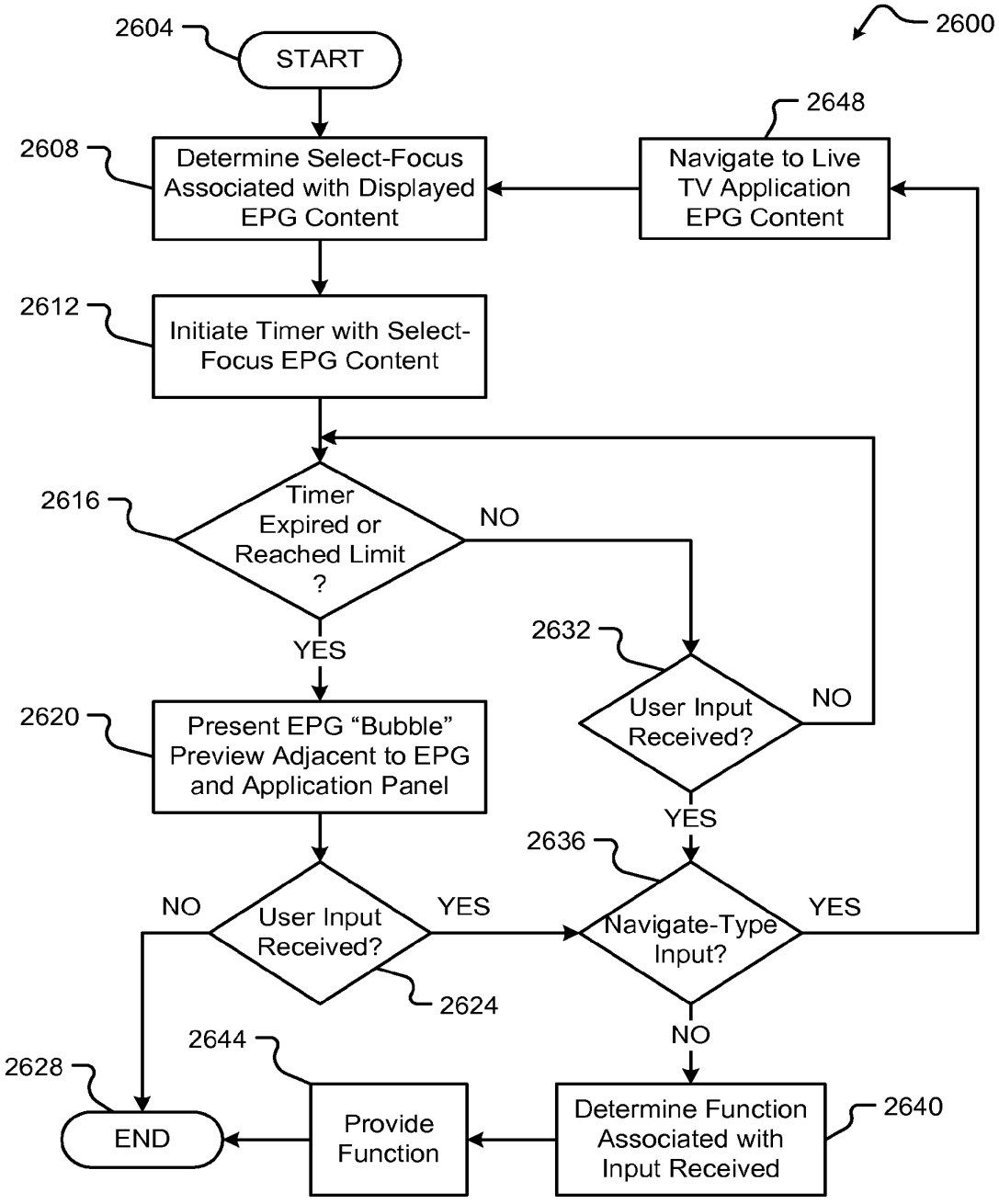

2600
2604
START
2608
Determine Select-Focus Associated with Displayed EPG Content
2648
Navigate to Live TV Application EPG Content
2612
Initiate Timer with Select-Focus EPG Content
2616
Timer Expired or Reached Limit ?
NO
YES
2620
Present EPG "Bubble" Preview Adjacent to EPG and Application Panel
2632
User Input Received?
NO
YES
2636
Navigate-Type Input?
YES
NO
User Input Received?
NO
YES
2624
2644
Provide Function
Determine Function Associated with Input Received
2640
2628
END

Fig. 26

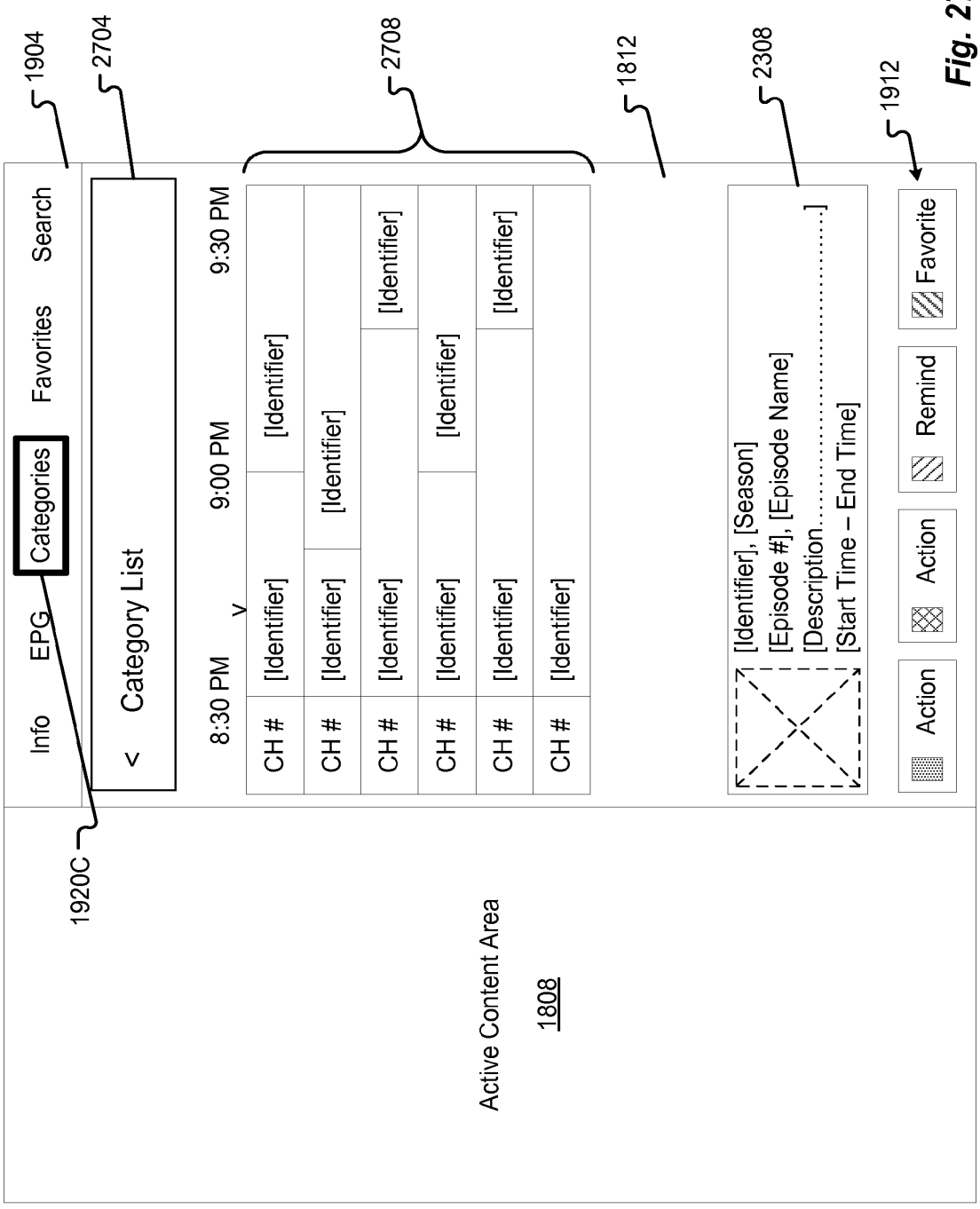

1904
2704
2708
1812
2308
1912
Info
EPG
Categories
Favorites
Search
1920C
< Category List
8:30 PM
9:00 PM
9:30 PM
CH # [Identifier]
[Identifier], [Season]
[Episode #], [Episode Name]
[Description.....]
[Start Time – End Time]
Action
Action
Remind
Favorite
Active Content Area
1808

Fig. 27

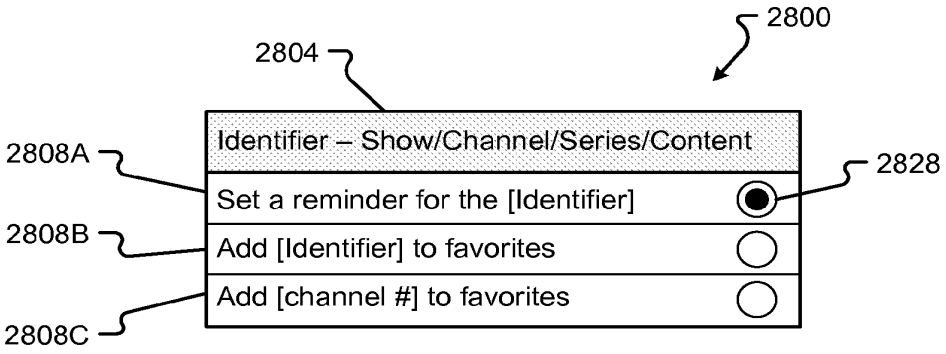


Fig. 28A

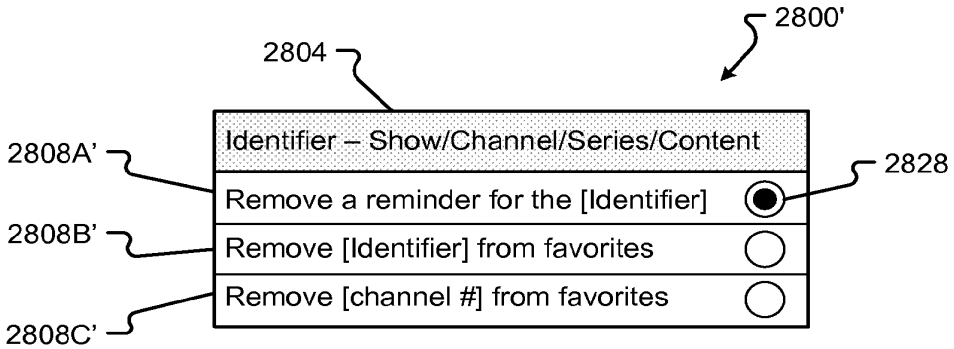


Fig. 28B

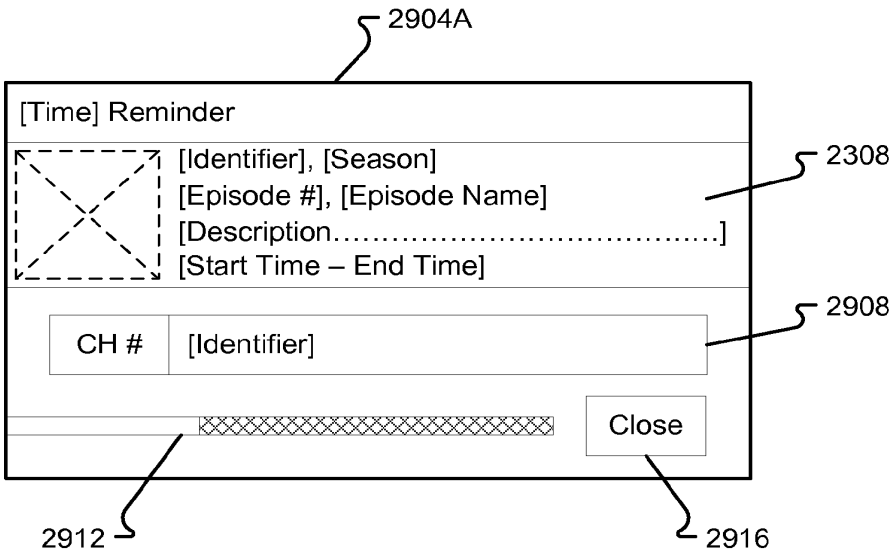


Fig. 29A

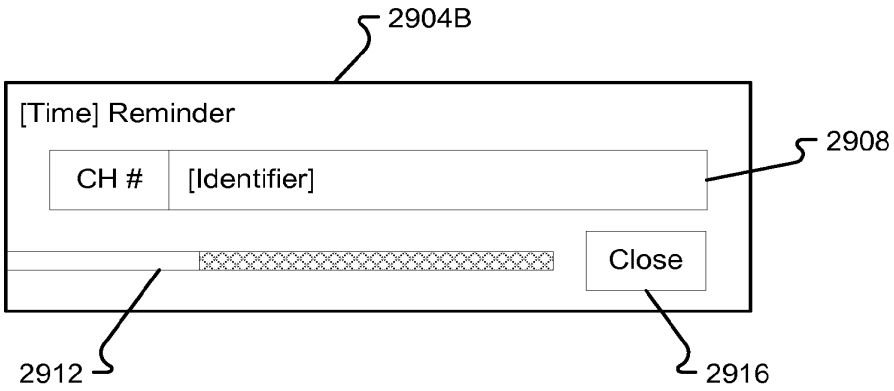


Fig. 29B

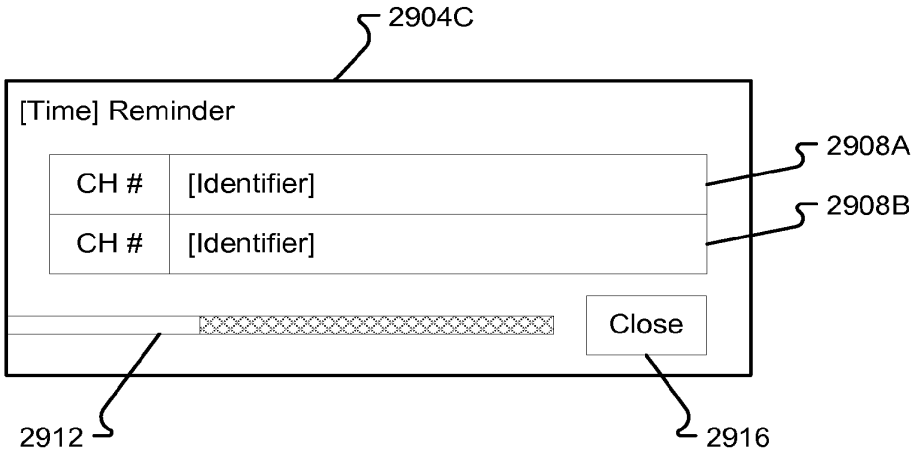


Fig. 29C

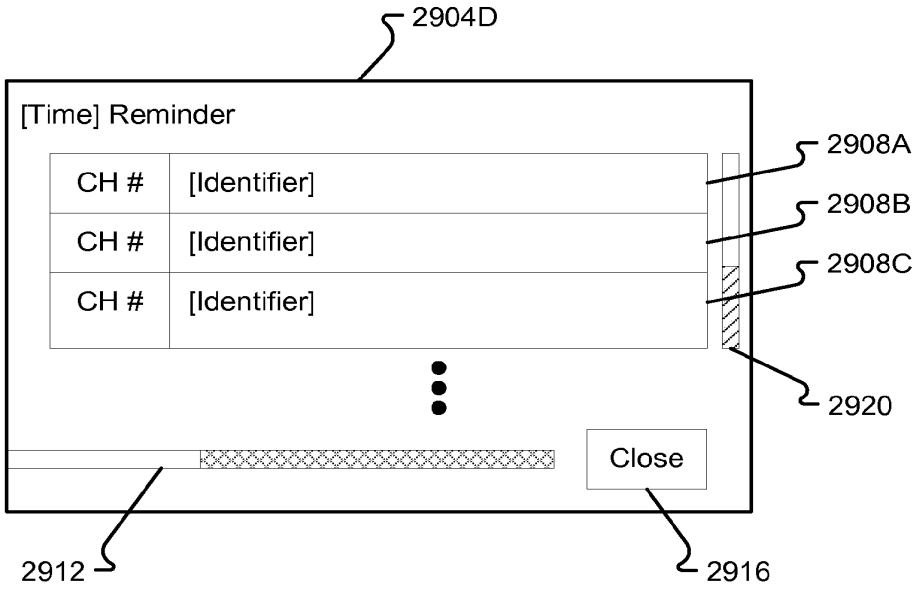


Fig. 29D

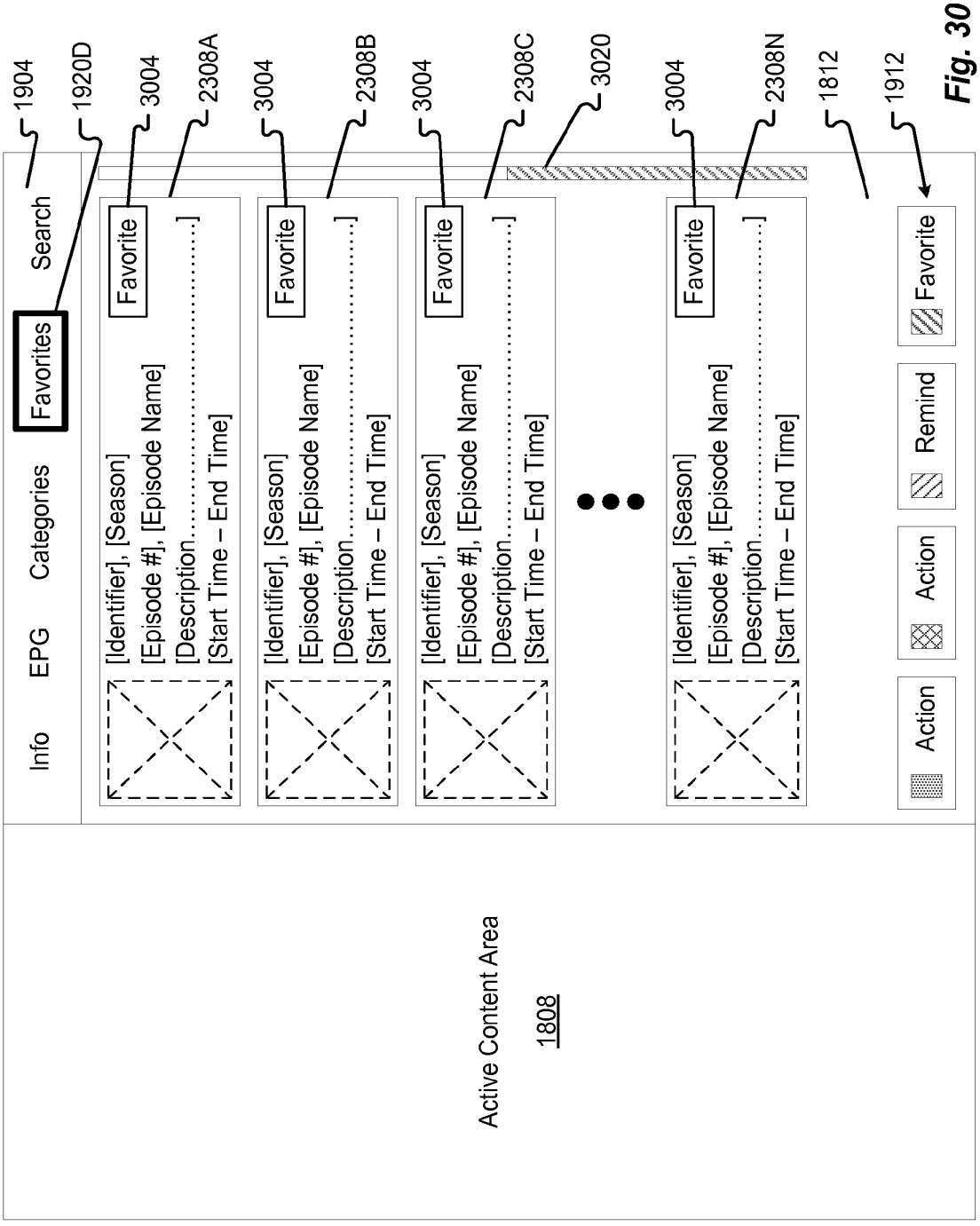

1904
1920D
3004
2308A
3004
2308B
3004
2308C
3020
3004
2308N
1812
1912
Info
EPG
Categories
Favorites
Search
Favorite
[Identifier], [Season]
[Episode #], [Episode Name]
[Description.....]
[Start Time – End Time]
Action
Action
Remind
Favorite
Active Content Area
1808

Fig. 30

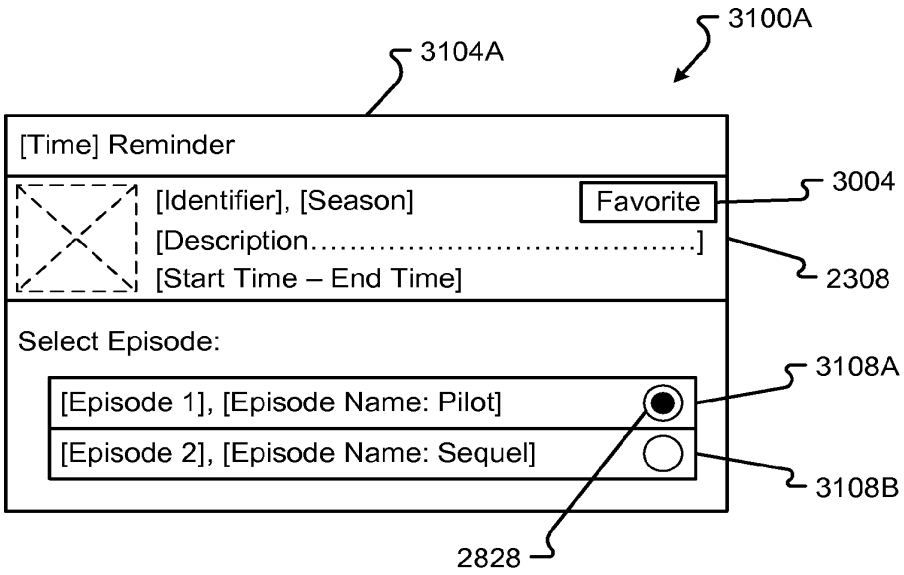


Fig. 31A

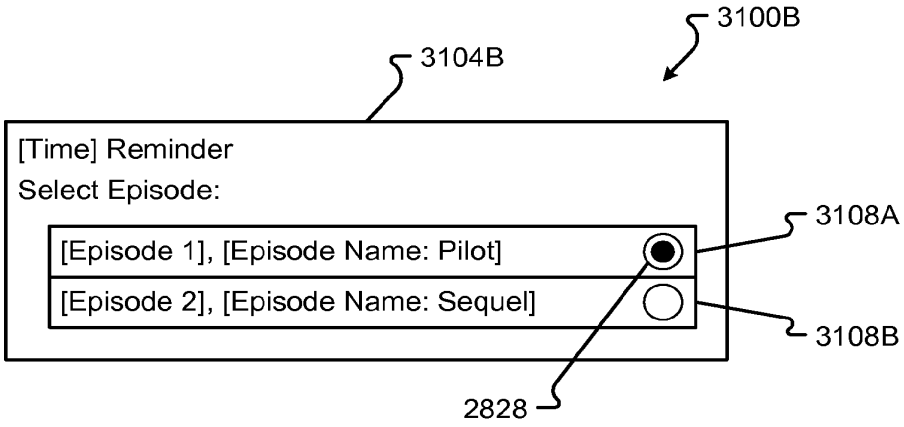


Fig. 31B

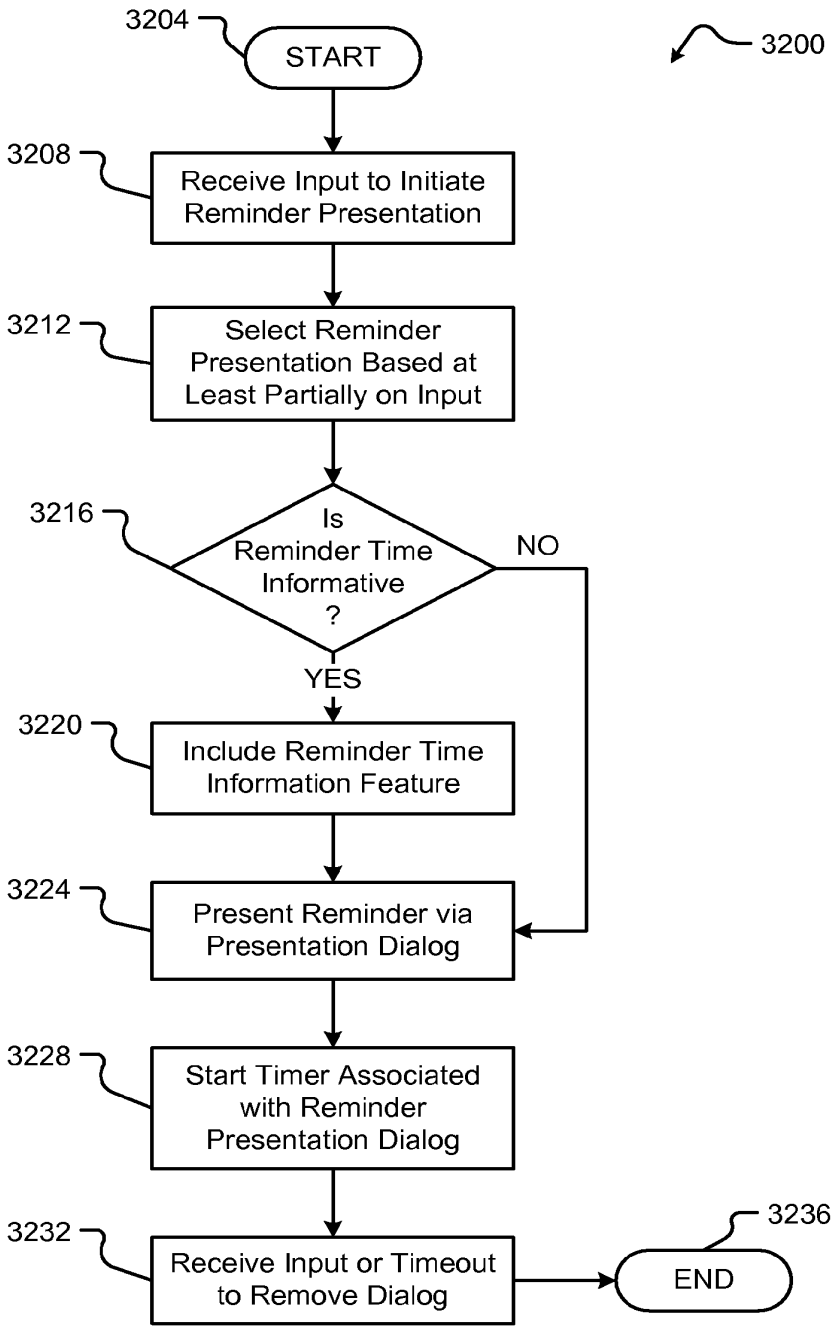

3204
START
3200
3208
Receive Input to Initiate Reminder Presentation
3212
Select Reminder Presentation Based at Least Partially on Input
3216
Is Reminder Time Informative ?
NO
YES
3220
Include Reminder Time Information Feature
3224
Present Reminder via Presentation Dialog
3228
Start Timer Associated with Reminder Presentation Dialog
3232
Receive Input or Timeout to Remove Dialog
3236
END

Fig. 32

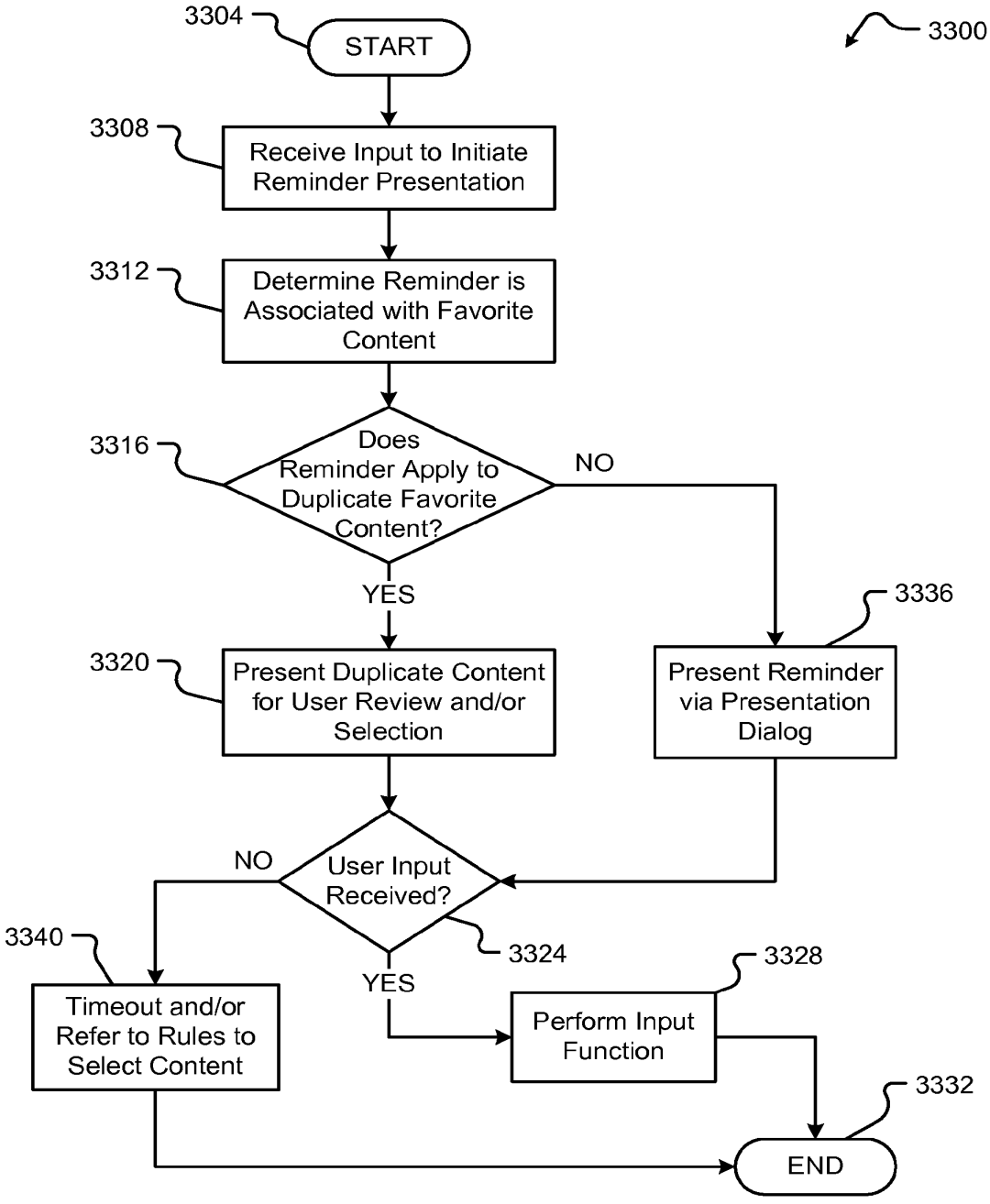

3304
START
3300
3308
Receive Input to Initiate Reminder Presentation
3312
Determine Reminder is Associated with Favorite Content
3316
Does Reminder Apply to Duplicate Favorite Content?
NO
YES
3336
3320
Present Duplicate Content for User Review and/or Selection
Present Reminder via Presentation Dialog
NO
User Input Received?
3340
3324
YES
3328
Timeout and/or Refer to Rules to Select Content
Perform Input Function
3332
END

Fig. 33

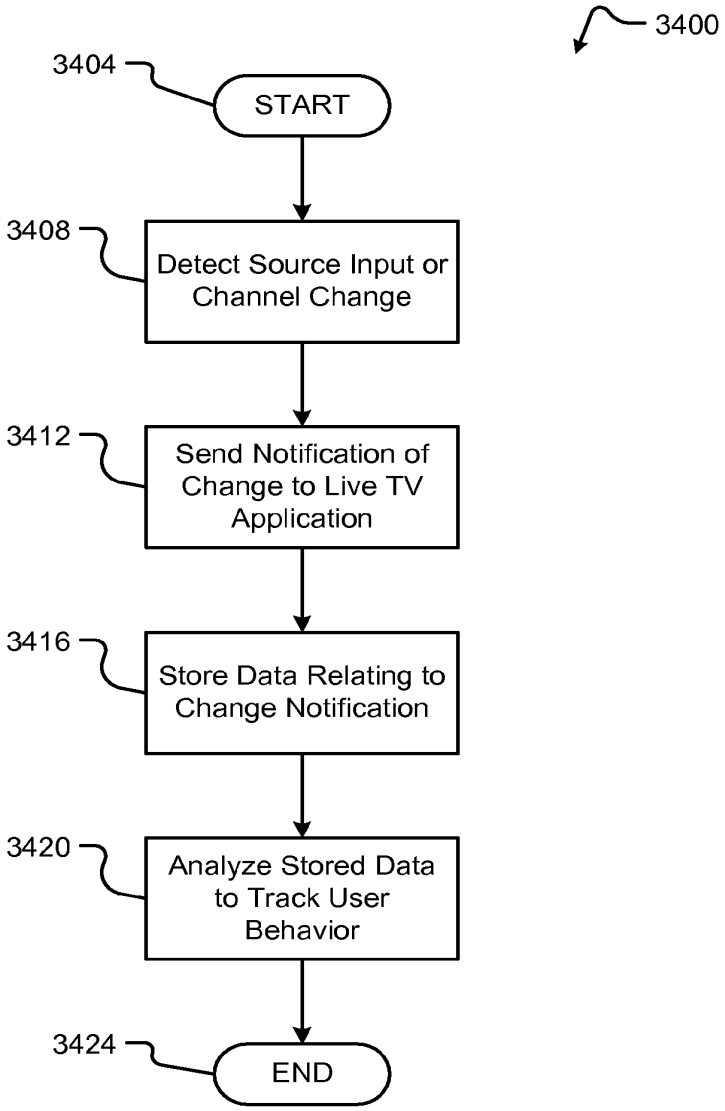

3400
3404
START
3408
Detect Source Input or Channel Change
3412
Send Notification of Change to Live TV Application
3416
Store Data Relating to Change Notification
3420
Analyze Stored Data to Track User Behavior
3424
END

Fig. 34

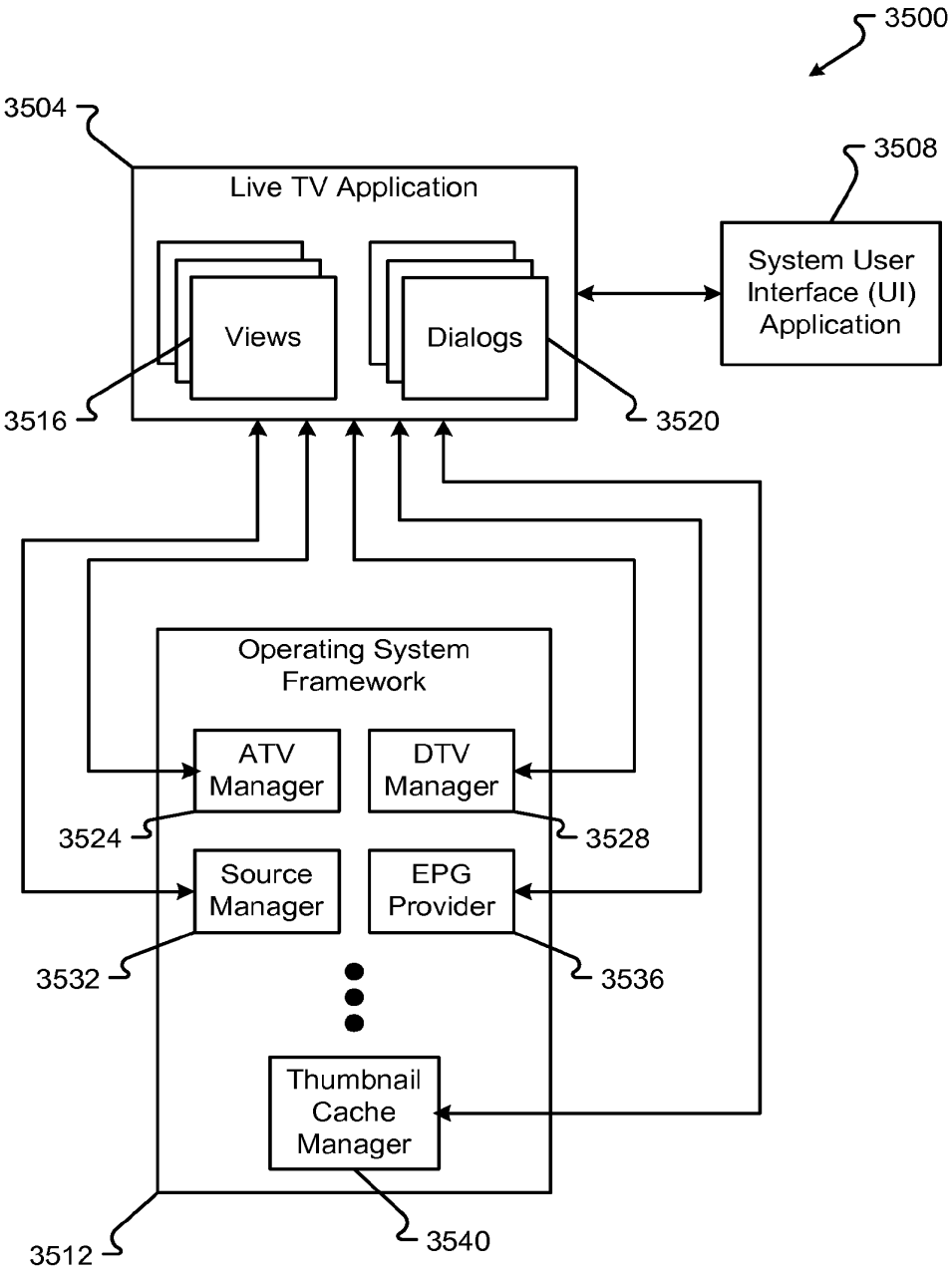

3500
3504
Live TV Application
3508
System User Interface (UI) Application
Views
Dialogs
3516
3520
Operating System Framework
ATV Manager
DTV Manager
3524
3528
Source Manager
EPG Provider
3532
3536
Thumbnail Cache Manager
3512
3540

FIG. 35

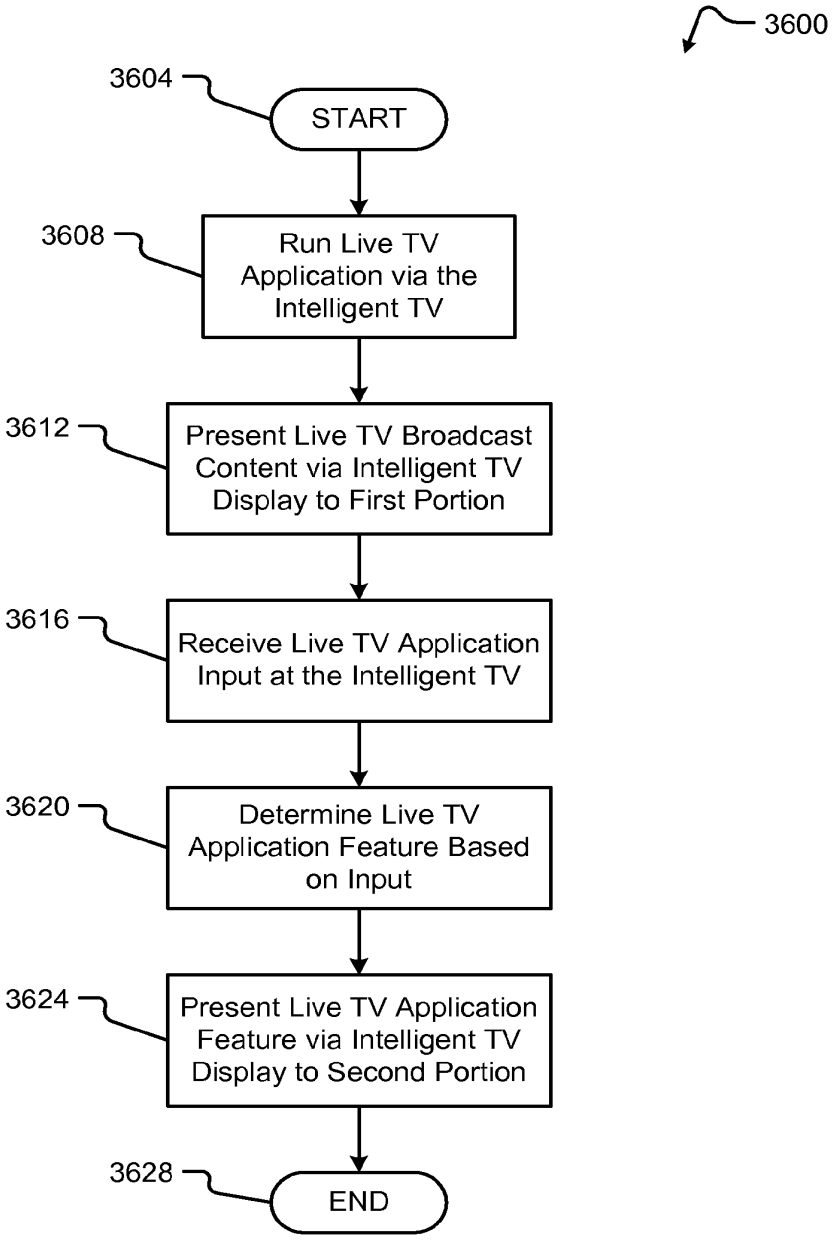

3600
3604
START
3608
Run Live TV Application via the Intelligent TV
3612
Present Live TV Broadcast Content via Intelligent TV Display to First Portion
3616
Receive Live TV Application Input at the Intelligent TV
3620
Determine Live TV Application Feature Based on Input
3624
Present Live TV Application Feature via Intelligent TV Display to Second Portion
3628
END

Fig. 36

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)

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)

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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
61/805,027	25 March 2013 (25.03.2013)	US
61/805,038	25 March 2013 (25.03.2013)	US
61/804,971	25 March 2013 (25.03.2013)	US
61/804,942	25 March 2013 (25.03.2013)	US
61/805,030	25 March 2013 (25.03.2013)	US
61/804,998	25 March 2013 (25.03.2013)	US
61/805,003	25 March 2013 (25.03.2013)	US
61/805,042	25 March 2013 (25.03.2013)	US
61/805,053	25 March 2013 (25.03.2013)	US
61/804,990	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, Ontario L6M 0E3 (CA). **WU, Fuqu**; 5653 Roseville Court, Burlington, Ontario L7L 6V4 (CA). **DOURADO, Saulo, Correia**; 2420 Ravinebrook Crescent, Oakville, Ontario L6H 6Y2 (CA). **SELIM, Mohammed**; 2488 Oakhaven Drive, Oakville, Ontario L6M 4B9 (CA).

(74) Agent: **WEITZEL, Scott**; 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, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK,

[Continued on next page]

(54) Title: ON-SCREEN SETTINGS INTERACTION FOR INTERACTIVE TELEVISION

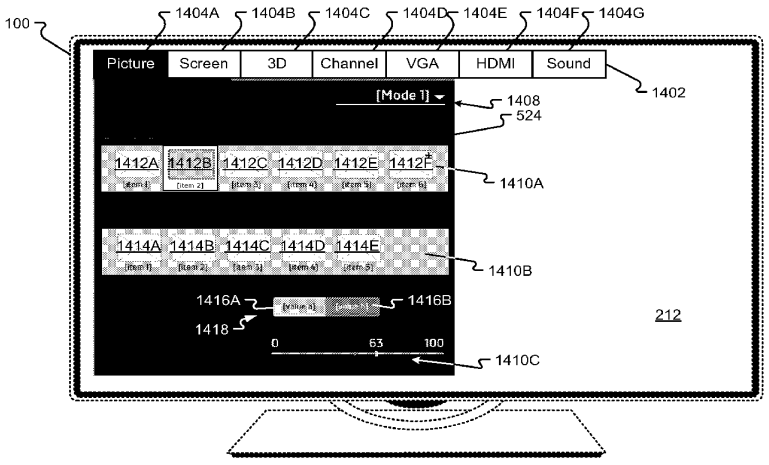


Fig. 14

(57) Abstract: A means for setting a television's settings with a particular value is provided. As the user selects a graphical target associated with a particular setting value, the value is applied and the user is provided with immediate feedback. If the user accepts the setting, they can navigate away from the graphical target or navigate to another target to change the setting to a different value. The setting may be associated with a particular silo of the television.

WO 2014/028067 A1

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))*

ON-SCREEN SETTINGS INTERACTION FOR INTERACTIVE 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 a 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 one embodiment, a method is disclosed, comprising, 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; receiving, at an input interface of the electronic device, a user interface event associated with the user interface; 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; and upon receiving the user interface event indicating an exit function, preserving the setting change to the electronic device.

[0007] In another embodiment, an electronic device is disclosed, comprising, a display, operable to present a visual portion of a audio-visual presentation; a silos, representing at least one of an application and an source input; a settings dialog, operable to present a number of settings associated with the silo; 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; an input operable to receive a user input; 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.

[0008] In another embodiment, a non-transitory machine readable medium is disclosed with instructions to cause the machine to perform, 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; receiving, at an input interface of the electronic device, a user interface event associated with the user interface; 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; and upon receiving the user interface event indicating an exit function, preserving the setting change to the electronic device.

[0009] The present disclosure can provide a number of advantages depending on the particular aspect, embodiment, and/or configuration. One advantage provided by the present disclosure is a more user-friendly means to set the settings of the electronic device. Another advantage provided is the configuration of the electronic device by silo.

[0010] These and other advantages will be apparent from the disclosure.

[0011] 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.

[0012] 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.

[0013] 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."

[0014] 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.

[0015] A "blogging service" is a blog-publishing service that allows private or multi-user blogs with time-stamped entries.

[0016] 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.

[0017] 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.).

[0018] 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.

[0019] 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.

[0020] 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.

[0021] 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.

[0022] 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.

[0023] The term "silo," as used herein, can be a logical representation of inputs or applications. 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.). 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.).

[0024] 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.

[0025] 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.

[0026] 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.

[0027] 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

[0028] 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.

[0029] The term "Live TV," as used herein, refers to a television production broadcast in real-time, as events happen, in the present.

[0030] 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.

[0031] 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.

[0032] 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.

[0033] 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.

[0034] 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.

[0035] 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.

[0036] 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.

[0037] 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.

[0038] 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.

[0039] 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.

[0040] 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.

[0041] 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.

[0042] 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.

[0043] 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.

[0044] 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.

[0045] 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.

[0046] 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.

[0047] The term "social network" refers to a web-based social network.

[0048] 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.

[0049] 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.

[0050] 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.

[0051] 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.

[0052] The term "setting" or "settings," as used herein, refers to the operating parameter of the Smart TV. Certain settings may be readily modified by a user, while other settings are factory-set and resist user modification. Settings include, but are not limited to, operating parameters associated with visual output (e.g., brightness, hue, saturation, and gamma correction), format (e.g., NTSC, PAL, letterbox and zoom), electrical operation (e.g., power saving features, voltage and cycles per second), administrative operation (e.g., parental controls and timers), audio output (e.g., Dolby settings, surround sound configuration and bass and treble levels), and any of the many other operating parameters associated with the operation of an audio-video device, such as Smart TV.

[0053] The term "sub-interface," as used herein, refers to a number of logical groupings of targets presented with a common visual association (e.g., a display area, a window, a dialog, and an emphasized portion of a display area visually grouping a number of targets). Furthermore, it should be noted that the term "sub-interface" is not used to denote a child interface within a hierarchical organization of interfaces or sub-interfaces, although such a relationship may exist.

[0054] The term "target," as used herein, refers to a displayed icon, text, geometric shape, symbol or other representation by which a user may associate a function of the television with selecting, or interacting, therewith. A target may be associated with a preset function, a preset function that is designated as configurable by the user, or

associated with one or more secondary input values whereby a specific value may be applied by the user to a setting.

[0055] 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

[0056] FIG. 1A includes a first view of an embodiment of an environment or a intelligent television;

[0057] FIG. 1B includes a second view of an embodiment of an environment or a intelligent television;

[0058] FIG. 2A includes a first view of an embodiment of a intelligent television;

[0059] FIG. 2B includes a second view of an embodiment of a intelligent television;

[0060] FIG. 2C includes a third view of an embodiment of a intelligent television;

[0061] FIG. 2D includes a fourth view of an embodiment of a intelligent television;

[0062] FIG. 3 is a block diagram of an embodiment of the hardware of the intelligent television;

[0063] FIG. 4 is a block diagram of an embodiment of the intelligent television software and/or firmware;

[0064] FIG. 5 is a second block diagram of an embodiment of the intelligent television software and/or firmware;

[0065] FIG. 6 is a third block diagram of an embodiment of the intelligent television software and/or firmware;

[0066] FIG. 7 is a plan view of an embodiment of a handheld remote control;

[0067] Fig. 8 is a side view of an embodiment of a remote control;

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

[0069] Fig. 9B is a bottom view of an embodiment of a remote control with the joystick in a lower position;