WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055283

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

1. Statement

Novelty (N)	Claims	9-10, 19-20	YES
	Claims	1-8, 11-18	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-8, 11-18 lack novelty under PCT Article 33(2) as being anticipated by Jordan et al., hereinafter referred to as Jordan.

Regarding claim 1, Jordan discloses a non-transitory computer readable storage medium having stored thereon instructions that cause a processor to execute (fig. 25, para 127) a method for accessing media on a television (method for content browsing on television, abstract, Fig. 1, para 42; see Fig. 15), the method comprising the steps of: searching a network connected to the television to identify a plurality of media sources (step 1510, Fig. 15; para 97-98); determining a number of media items associated with the plurality of media sources (processing content information, step 1512, Fig. 15; para 97-98); identifying metadata associated with the determined number of media items (content information and metadata associated with the content, para 100, 33); storing the metadata in a memory (storing metadata, para 33); receiving a request from a user to display one or more of the media items (user requests search and selects content item, step 1514, Fig. 15, para 97-98); and displaying on the television display the one or more media items based on the stored metadata (selected item presented to user, step 1516, Fig. 15, para 98; para 33).

Regarding claim 11, Jordan discloses a television system (Fig. 1, para 42), comprising: a display (2510, Fig. 25); a memory (main memory 2504, Fig. 25); a processor in communication with the memory and the display (processor 2502, Fig. 25), the processor operable to: search a network connected to the television to identify a plurality of media sources (step 1510, Fig. 15; para 97-98); determine a number of media items associated with the plurality of media sources (processing content information, step 1512, Fig. 15; para 97-98); identify metadata associated with the determined number of media items (content information and metadata associated with the content, para 100, 33); store the metadata in the memory (storing metadata, para 33); receive a request from a user to display one or more of the media items (user requests search and selects content item, step 1514, Fig. 15, para 97-98); and display on the display the one or more media items based on the stored metadata (selected item presented to user, step 1516, Fig. 15, para 98; para 33).

Regarding claim 17, Jordan discloses a method for accessing media on a television (method for content browsing on television, abstract, Fig. 1, para 42; see Fig. 15), the method comprising: searching a network connected to the television to identify a plurality of media sources (step 1510, Fig. 15; para 97-98); the plurality of media sources comprising at least one of: a video server, an audio server, a digital video recorder, a set-top box, a social media site, a voice mail server, a source marked by the user, a content provider (see Fig. 1-2, content source from service provider, para 39-40), a compact disk player, a digital video device player, a cellular telephone, a personal digital assistant, a notebook, an audio player, a document server, a personal computer, a really simple syndication feed, a social media site, a universal serial bus device, an internet site (Netflix, para 42), and a tablet device; determining a number of media items associated with the plurality of media sources (processing content information, step 1512, Fig. 15; para 97-98); identifying metadata associated with the determined number of media items (content information and metadata associated with the content, para 100, 33); storing the metadata in a memory (storing metadata, para 33); receiving a request from a user to display one or more of the media items (user requests search and selects content item, step 1514, Fig. 15, para 97-98); and displaying on the television display the one or more media items based on the stored metadata (selected item presented to user, step 1516, Fig. 15, para 98; para 33).

Regarding claims 2, 12, 18, Jordan discloses receiving a search request from the user for an individual media item (user search request, step 1514, Fig. 15); identifying multiple media sources in the plurality of media sources that have the individual media item (content gathered from multiple media sources, para 97-98, 33, Fig. 15); presenting a list of offers from the multiple media sources to the user for the individual item (content item displayed to user, Fig. 15-16, para 97-98; content items offered to consumer, para 71); receiving a selection by the user of an individual offer from the list of offers (para 71, 97-98); and providing access to the individual item (access content items offered, para 71).

Regarding claims 3, 13, Jordan discloses wherein the list of offers comprises at least one of: an offer to play the individual media item, an offer to view the individual media item, a pay per view offer to view the individual media item, an offer to rent the individual media item, an offer to purchase a ticket to a movie theater showing the individual media item, an offer to purchase the individual media item, a trial access offer to the individual media item, an offer to check out the individual media item, and an offer to access the individual media item on a social media site (enable a consumer to browse, access, purchase, and download particular content items offered by the particular content source 130, para 71, Fig. 8).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055283

Supplemental Box

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

Regarding claims 4, 14, Jordan discloses wherein the plurality of media sources comprises at least two of: a video server, an audio server, a digital video recorder, a set-top box, a social media site, a voice mail server, a source marked by the user, a content provider (see Fig. 1-2, content source from service provider, para 39-40), a compact disk player, a digital video device player, a cellular telephone, a personal digital assistant, a notebook, an audio player, a document server, a personal computer, a really simple syndication feed, a social media site, a universal serial bus device, an internet site (Netflix, para 42), and a tablet device.

Regarding claims 5-6, 15-16, Jordan discloses wherein at least one of the media sources is a device that can be temporarily connected to the network, and wherein one of the at least one temporarily connected devices is not connected to the network (devices such as network attached storage device, or computer, para 42, Fig. 1-2).

Regarding claim 7, Jordan discloses wherein the one or more media items displayed includes at least one recommended media item based on the stored metadata (recommendation of content items, para 60, 65-66).

Regarding claim 8, Jordan discloses after receiving the request, identifying the user associated with the request, wherein the one or more media items displayed are based on stored metadata related to the identified user (content items recommended based on user behavior and user profile information, para 66-68).

Claims 9, 19 lack an inventive step under PCT Article 33(3) as being obvious over Jordan in view of Jeong.

Regarding claims 9, 19, Jordan discloses the invention above, but fails to disclose wherein identifying metadata comprises: performing a first scan of the determined number of media items; retrieving basic metadata associated with the determined number of media items; identifying media items that need a second scan; and performing the second scan after the first scan is completed. Jeong is in the field of Television signal processing and smart tv's in general and presents methods for accessing multimedia documents ([0054]] performing a first scan of the determined number of media items ([0111] The external device interface module 135 is connected to external devices such as Digital Versatile Disks (DVD), Blu-rays, game devices, cameras, camcorders, computers (e.g., notebook computers), etc. through wire/wireless cables.); retrieving basic metadata associated with the determined number of media items ([0097] The metadata manager 712 manages metadata related to the service and stores the metadata in the SI and Metadata DB 711); identifying media items that need a second scan; and performing the second scan after the first scan is completed ([0190] Fig. 9 shows a communication procedure performed between a display device and one or more other devices. As illustrated in Fig. 9, display device 100 can perform communication with a broadcasting station 210, a network server 220, or an external device 230). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Jeong and incorporate the above features in the invention of Jordan in order to provide a system for providing multitude of ways in which multimedia content can be accessed (Jeong, [0110] The external device interface module 135 may connect an external device to the display device 100. To this end, external device interface module 135 may include an A/V input/output unit (not shown) or a wireless communication unit).

Claims 10, 20 lack an inventive step under PCT Article 33(3) as being obvious over Jordan in view of Wilf et al., hereinafter referred to as Wilf, and further in view of Jeong.

Regarding claims 10, 20, Jordan discloses the invention above, but fails to disclose wherein storing the metadata in memory comprises: assigning a unique media source identifier to each of the plurality of media sources; assigning a unique media item identifier to each of the determined number of media items; creating a personal metadata table to record media items viewed and media items tagged as a favorite; creating a media source table to record metadata for all connected and disconnected media sources; and creating a media data table to record all other identified metadata. Wilf is in the field of accessing media on a television (Fig. 11 – Television Signal)and teaches assigning a unique media source identifier to each of the plurality of media sources (Pg. 18 Lines 8 to 11, As mentioned above, the method for computing attribute-specific indexing data and for querying these attributes can be implemented by methods known in the art.); assigning a unique media item identifier to each of the determined number of media items (Pg. 17 Lines 21 to 29, The search menu consists of a set of content-based attributes such as visual attributes 710. audio attributes 720, topic-related attributes 730, and special attributes 740 such as breaking news or explosions.); creating a personal metadata table to record media items viewed and media items tagged as a favorite (Pg. 20 Lines 3 to 27; Pg. 21 Lines 9 to 17); and creating a media data table to record all other identified metadata (Pg. 21 Lines 9 to 17, Interactive television systems establish a database of viewer preferences based on particular characteristics previously delivered to the viewer.). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the metadata identifier features as taught in Wilf with the invention of Jordan in order to tag favorite content items.
Jeong is in the field of Television signal processing and smart tv's in general and presents methods for accessing multimedia documents ([0054]] wherein storing the metadata in memory comprises (Fig. 5, Block 711 – SI & Metadata DB & Block 712 – Metadata Manager; [0097]: The metadata manager 712 manages metadata related to the service and stores the metadata in the SI and Metadata DB 711. The SI and Metadata DB 711 stores the service information decoded by the PSI and (PSIP and/or SI) decoder 704, the metadata managed by the metadata manager 712, and the information required to select the service provider provided by the service discovery manager 710.) ; creating a media source table to record metadata for all connected and disconnected media sources ([0097] The metadata manager 712 manages metadata related to the service and stores the metadata in the SI and Metadata DB 711. The SI and Metadata DB 711 stores the service information decoded by the PSI and (PSIP and/or SI) decoder 704, the metadata managed by the metadata manager 712, and the information required to select the service provider provided by the service discovery manager 710.);
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Jeong and incorporate the above features in the invention of Jordan in order to add additional aspects of storing of metadata and providing enhanced services (Jeong, Fig. 5, Block 711 – SI & Metadata DB & Block 712 – Metadata Manager; [0097]).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Yiu F. Au
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-496-PCT	Date of mailing *(day/month/year)* 22 NOV 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/55564	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)
Applicant Flextronics AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-496-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55564	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

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

☒ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55564

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 7/00 (2013.01)
USPC - 725/141
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8): G06F 3/048; H04N 7/00 (2013.01)
USPC: 715/854; 725/55, 141

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); Google Scholar; IEEE; DialogPRO; television, intelligent, TV, smart, interactive, high-definition, HDTV, aggregate, combine, sum, electronic, programming, guide, EPG, poll, search, collect, update, modify, change, manage, control, relevant, related, retrieve

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012/0174039 A1 (RHOADS J et al.) July 5, 2012, paragraphs [0025], [0028]-[0035], [0043], [0053], [0075], [0077], [0127], [0128], [0131], [0145], [0148]	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
14 November 2013 (14.11.2013)	22 NOV 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Yiu F. Au
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	22 NOV 2013
Applicant's or agent's file reference 6583-496-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55564	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 7/00 (2013.01)
USPC - 725/141

Applicant Flextronics AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	14 November 2013 (14.11.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55564

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55564

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

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1-20	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-20 lack novelty under PCT Article 33(2) as being anticipated by US 2012/0174039 A1 to Rhoads et al. (hereinafter 'Rhoads').

As per claim 1, Rhoads discloses a method of managing Electronic Programming Guide (EPG) information for an Intelligent television (TV) (a control circuitry for controlling (managing) a television program guide for a HDTV (intelligent TV), paragraphs [0025], [0043], [0053], [0075] and [0077]), comprising: polling and retrieving a plurality of EPG sources for updated EPG information (navigating (polling) and retrieving updated program guide information, paragraphs [0127], [0128], [0131], [0145] and [0148]); aggregating the EPG information from the plurality of EPG sources (combining (aggregating) media guidance data for content from different types of content sources, paragraph [0031]); and providing a relevant portion of the EPG information to an application of the Intelligent TV (providing options within the region 126 is related (relevant) to features in program listings (applications) of the grid 102 in the HDTV, paragraphs [0035], [0043] and [0053]).

As per claim 9, Rhoads discloses an EPG data service for an Intelligent TV (a control circuitry for controlling a television program guide for a HDTV (intelligent TV), paragraphs [0025], [0043], [0053], [0075] and [0077]), comprising: a plurality of source plugins configured to poll and retrieve updated EPG information from a plurality of respective EPG information sources (media sources for navigating (polling) and retrieving updated program guide information, paragraphs [0056], [0127], [0128], [0131], [0145] and [0148]); and an EPG subservice configured to receive the EPG information retrieved by the plurality of source plugins (media sources retrieve plurality of program guide information, paragraphs [0056], [0064], [0088] and [0108]), aggregate the EPG information (combining (aggregating) media guidance data for content from different types of content sources, paragraph [0031]), and provide a relevant portion of the EPG information to an application of the Intelligent TV (providing options within the region 126 is related (relevant) to features in program listings (applications) of the grid 102 in the HDTV, paragraphs [0035], [0043] and [0053]).

As per claim 17, Rhoads discloses an Intelligent TV (a HDTV (intelligent TV), paragraphs [0043] and [0053]) comprising: an EPG display application configured to generate an EPG display for the Intelligent TV (a TV program guide displayed on a HDTV screen, figure 1 and paragraphs [0028]-[0035] and [0092]); and an EPG data service (television program guide that receives program guide data, paragraph [0075]), the EPG data service comprises a plurality of source plugins configured to poll and retrieve updated EPG information from a plurality of respective EPG information sources (media sources for navigating (polling) and retrieving updated program guide information, paragraphs [0056], [0127], [0128], [0131], [0145] and [0148]) and an EPG subservice configured to receive the EPG information retrieved by the plurality of source plugins (media sources retrieve plurality of program guide information, paragraphs [0056], [0064], [0088] and [0108]), aggregate the EPG information (combining (aggregating) media guidance data for content from different types of content sources, paragraph [0031]), and provide a relevant portion of the EPG information to the EPG display application (providing options within the region 126 is related (relevant) to features in program listings (applications) of the grid 102 in the HDTV, paragraphs [0035], [0043] and [0053]).

As per claims 2 and 10, Rhoads further discloses wherein for an EPG source with substantially no updated EPG information (a regular daily broadcast TV programs like ABC or HOB programs that needed no to be updated, paragraph [0074]), the polling and retrieving step/ the respective source plugin comprises associating the EPG information from the EPG source with dummy EPG data (a content source 416 is the originator of content (dummy EPG data) such as a television broadcaster, a Webcast provider or is not originator of content such as an on demand content provider, an Internet provider of content of broadcast programs for downloading, wherein the content source 416 may include cable sources, satellite providers, on-demand providers, Interniet providers, over-the-top content providers, or other providers of content, paragraph [0074]).

As per claim 3, Rhoads further discloses wherein the polling and retrieving step is activated by the Intelligent TV at a default or user-defined interval (the navigating and retrieving HDTV programs is selected (activated) by a user-defined action, paragraphs [0028], [0043] and [0053]).

As per claim 4, Rhoads further discloses wherein the polling and retrieving step is activated after a channel scanning operation by the Intelligent TV (a navigating and retrieving of TV program happened after the HDTV display the favorite channels (scanning operation by the Intelligent TV), paragraphs [0043] and [0053]).

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55564

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.
Continuation of:
-***-Continued from Previous Supplemental Box-***-

As per claim 5, Rhoads further discloses wherein the polling and retrieving step comprises sending to an Internet or cloud EPG source a channel name list of the Intelligent TV (a list of channels of the HDTV is provided on cloud source or on an internet, paragraphs [0035], [0043], [0053], [0078], [0083]-[0086], [0090] and [0092]) and retrieving EPG information from the Internet or cloud EPG source that matches channels in the channel name list (acquiring the channels from list or menu that that match user-defined list of channels, paragraphs [0035], [0043], [0053], [0078], [0083]-[0086], [0090] and [0092], [0117] and [0118]).

As per claim 6, Rhoads further discloses wherein the polling and retrieving step further comprises retrieving EPG information for only selected programs and/or channels from the EPG sources (displaying descriptive information of the selected channels programs, paragraphs [0051], [0056], [0088], [0096], [0101] and [0110]).

As per claims 7 and 15, Rhoads further discloses wherein the aggregating step/the EPG subservice comprises aggregating the updated EPG information from the plurality of EPG sources (combining (aggregating) new or updated media guidance data for content from different types of content sources, paragraphs [0031], [0127] and [0128]) and resolving conflicts between duplicate EPG information from the plurality of EPG sources according to a plurality of rules (a condition (rule) is set when a user desires to traverse a same path that led the user to a media asset, paragraphs [0025], [0063] and [0137]).

As per claims 8 and 16, Rhoads further discloses wherein the resolving conflicts step/ the EPG subservice comprises using EPG information from a first EPG source as a primary source (a media source that displays a main TV program menu, paragraph [0035]) and overwriting conflicting EPG information from the primary source with a second EPG source that is considered more reliable (replacing or updating a TV program menu from one media source with another TV program menu from different media source, paragraphs [0053], [0056], [0127], [0128], [0131], [0145] and [0148]).

As per claims 11 and 18, Rhoads further discloses wherein one or more of the plurality of source plugins is configured to poll and retrieve the updated EPG information at a default or user-defined interval (TV programs are retrieved from media sources using TV programs selected (activated) by a user-defined action, paragraphs [0028], [0043], [0053], [0056], [0127], [0128], [0131], [0145] and [0148]).

As per claim 12, Rhoads further discloses one or more of the plurality of source plugins is configured to poll and retrieve the updated EPG information after a channel scanning operation by the Intelligent TV (using the media source, a navigating and retrieving of TV program happened after the HDTV display the favorite channels (scanning operation by the Intelligent TV), paragraphs [0043], [0053], [0056], [0127], [0128], [0131], [0145] and [0148]).

As per claims 13 and 19, Rhoads further discloses wherein an Internet or cloud source plugin of the plurality of source plugins is configured to send to an Internet or cloud EPG source a channel name list of the Intelligent TV (using media source, a list of channels of the HDTV is provided on cloud source or on an internet, paragraphs [0035], [0043], [0053], [0056], [0078], [0083]-[0086], [0090], [0092], [0127], [0128], [0131], [0145] and [0148]).

As per claim 14, Rhoads further discloses wherein one or more of the plurality of source plugins are configured to poll and retrieve the updated EPG information for only selected programs and/or channels from the EPG sources (using media source, displaying descriptive information of the selected channels programs, paragraphs [0051], [0053], [0056], [0088], [0096], [0101] and [0110], [0127], [0128], [0131], [0145] and [0148]).

As per claim 20, Rhoads further discloses a tangible and non-transient computer readable medium comprising microprocessor executable instructions that, when executed by the microprocessor, perform the steps of claim 1 (microprocessor for executing instructions stored in a memory, paragraphs [0049] and [0077]).

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

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-497-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55379	International filing date *(day/month/year)* 16 August 2013 (16.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

a. the figure of the **drawings** to be published with the abstract is Figure No. 17

☒ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55379

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04W 80/04 (2013.01)
USPC - 370/331
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04W 80/04; H04W 92/04; H04W 36/00; H04N 21/00; G06F 15/16; G06F 15/173 (2013.01)
USPC - 709/231; 370/331; 709/219; 709/227; 709/224; 707/10

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); Google/ Google patents; IEEE; Proquest.

Keywords: DLNA; Status; UPnP

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X ---- Y	US 2009/0129340 A1 (HANDA, M) 21 May 2009; Abstract; Paragraphs [0008], [0036], [0037], [0047], [0050], [0054], [0055], [0078]-[0080], [0099], [0140], [0209], [0214], [0219], [0220].	1, 5-8, 13 and 15-18 ---------- 2-4, 9-12, 14, 19 and 20
Y	US 2012/0151006 A1 (MCINERNEY, J et al.) 14 June 2012; Abstract; Paragraphs [0016], [0021], [0044], [0050], [0055].	2-4, and 14
Y	US 2010/0306402 A1 (RUSSELL, R et al.) 2 December 2010; Abstract; Paragraphs [0039], [0040], [0043], [0073], [0133], [0136].	9-12, 19 and 20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
7 November 2013 (07.11.2013)	06 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Yiu F. Au
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	06 DEC 2013
Applicant's or agent's file reference 6583-497-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55379	16 August 2013 (16.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04W 80/04 (2013.01)
USPC - 370/331

Applicant Flextronics AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	7 November 2013 (07.11.2013)	Shane Thomas PCT Helpdesk: 571-272-4300. PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55379

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55379

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

1. Statement

Novelty (N)	Claims	2-4, 9-12, 14, 19 and 20	YES
	Claims	1, 5-8, 13 and 15-18	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1, 5-8, 13 and 15-18 lack novelty under PCT Article 33(2) as being anticipated by US 2009/0129340 A1 (Handa).

As per Claims 1, 8 and 13, Handa discloses a method, an intelligent television (TV) and DLNA subservice module, comprising: a Digital Living Network Alliance (DLNA) subservice module (the service determination unit 301a (DLNA subservice module) of the controller sends a confirm message to the digital television and the storage server in reply to live status confirmation, paragraph [0209]) configured to retrieve status data from a plurality of DLNA devices connected through a network (the system includes controllers 12 and 32 that may be integrally constituted by an apparatus that provides a data receiving service, such as the digital television 11 (Intelligent TV) that has a digital media player and digital media server (DLNA devices) that is connected to a home network having a network interface via a controlling protocol DLNA and by a service determination unit 301a that determines the status of the connected DLNA devices (status data), with respect to the digital television and the storage devices, paragraphs [0008], [0036], [0037], [0047], [0050], [0065], [0209]); updating an internal status data for the external devices in the Intelligent TV using the retrieved status (the storage server (external device) is connected to a home network to which the digital television 11 provides the service data retrieved from the DLNA control protocol and the service determination unit 301a (DLNA subservice module) of the controller that determines the status of the network connection (status data) and sends a confirm message to the digital television and the storage server in reply to live status confirmation, paragraphs [0038], [0065], [0209]); and notifying an internal content provider module of the Intelligent TV with the updated internal status data (the controller 12, which may be integrally constituted with the digital television (intelligent TV), has a SIP control unit (internal content provider) that sends a signal for ending confirmation data request in response to information from the service determination unit 301a (notification) that a DLNA device is unavailable (internal status data), paragraphs [0054], [0055], [0080], [0099], [0140], [0214]).

As per Claims 5 and 16, Handa discloses the method and DLNA subservice of claims 1 and 13, wherein the external device is a Digital Living Network Alliance (DLNA) device,and communicates with the Intelligent TV using the Universal Plug and Play (UPnP) protocol (the storage server (external device) communicates with the controller that may be integrally constituted by an apparatus that provides a data receiving service, such as the digital television 11 (Intelligent TV) via DLNA in which UPnP is used to recognize each device connected to home network 1, paragraphs [0037], [0047], [0078], [0079]).

As per Claims 6 and 17, Handa discloses the method and DLNA subservice of claims 1 and 13, wherein the retrieved status data is sent by the external device on one or more of a connection of the external device to the network, a disconnection of the external device from the network, and a change of status to the external device (a SIP control unit in the controller adds information data request (update internal status data) that it receives from the DLNA control protocol via SIP session control protocol that is used to communicate between the storage devices on the storage server (external device) and the digital television; it further sends signal to connect the storage server (external device) with the home network and sends a disconnect signal to end the service request to the storage server (external device), paragraphs [0054], [0055], [0099], [0140], [0219], [0220]).

As per Claims 7 and 18, Handa discloses the method and DLNA subservice of claims 1 and 13, wherein the status data comprises one or more of device discovery data, device disconnection data, and media data (service determination unit 301a determines whether DLNA devices connected to the network are available or disconnected (device discovery and disconnection data), paragraphs [0038], [0065], [0209]-[0213]).

As per Claim 15, Handa discloses the DLNA subservice of claim 13, wherein the internal content provider module comprises one or more of a media scanner and a media browser (SIP control unit (internal content provider module) communicates with respect to the availability of DLNA devices on the home networks (media scanner), paragraphs [0008], [0039], [0052], [0054], [0080], [0214]).

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

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55379

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:
Claims 14 - 20 are objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof: Claims 14 - 20 have a typo error ("DNLA"). It should be DLNA.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55379

Supplemental Box

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

-***-Continued from Previous Supplemental Box-***-

Claims 2-4 and 14 lack an inventive step under PCT Article 33(3) as being obvious over Handa in view of US 2012/0151006 A1 to McInerney et al. (hereinafter 'McInerney').

As per Claims 2 and 14, Handa discloses the method and DLNA subservice module of managing external devices of claims 1 and 13. Handa fails to disclose further comprising aggregating the updated internal status data with status data for other devices connected through the network as a unified data. McInerney disclose further comprising aggregating the updated internal status data with status data for other devices connected through the network as a unified data (the method providing a status list (aggregating) may have update data (unified data) of DLNA rendering devices (external devices) that reflects changes to the list (internal status data) that may originate from the mobile content relay device which can be a digital media player or from another device in the local network (such as a DLNA server or controller) based on the local network status of the DLNA renderer devices (external devices), paragraphs [0016], [0044], [0050]). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Handa's method and DLNA subservice module to manage external devices include wherein aggregating the updated internal status data with status data for other devices connected through the network as a unified data, as taught by McInerney, for the advantage of centralizing status data for all connected devices, allowing more efficient management of external devices.

As per Claim 3, the combination of Handa and McInerney discloses the method of managing external devices of claim 2. However, Handa fails to disclose wherein the aggregating the updated internal status data with status data for other devices connected through the network is performed by an internal content provider module of the Intelligent TV. McInerney further discloses wherein the aggregating the updated internal status data with status data for other devices connected through the network is performed by an internal content provider module of the Intelligent TV (a method providing the status list (aggregating) that may have update data of DLNA rendering devices (external devices) that reflects changes to the list (internal status data) that may originate from the mobile content relay device which can be a digital media player (Intelligent TV) based on the local network status of the DLNA renderer devices (external devices) and the mobile content relay device which includes a presence status monitor (internal content provider module) can communicate the received content list with the DLNA server, paragraphs [0016], [0031], [0044], [0050], [0055]). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Handa's method to manage external devices include wherein the aggregating the updated internal status data with status data for other devices connected through the network is performed by an internal content provider module of the Intelligent TV, as taught by McInerney, for the advantage of centralizing status data for all connected devices, allowing more efficient management of external devices.

As per Claim 4, Handa discloses the method of claim 3, wherein the internal content provider module comprises one or more of a media scanner and a media browser (SIP control unit (internal content provider module) communicates with respect to the availability of DLNA devices on the home networks (media scanner), paragraphs [0008], [0039], [0052], [0054], [0080], [0214]).

Claims 9-12, 19 and 20 lack an inventive step under PCT Article 33(3) as being obvious over Handa in view of US 2010/0306402 A1 to Russell et al. (hereinafter 'Russell').

As per Claims 9 and 19, Handa disclose the Intelligent TV and DLNA subservice module of claims 8 and 15. Handa further fails to disclose wherein the internal content provider module comprises a media browser configured to provide a real-time view of media sources of the Intelligent TV. Russell discloses wherein the internal content provider module comprises a media browser configured to provide a real-time view of media sources of the Intelligent TV (the method and apparatus include content providers (internal content provider module) that are used to download media data on the client devices such as set-top box connected to TV (Intelligent TV) in the home network that support DLNA, downloads content from media providers and makes the content available to PlayStation via DLNA in which the media can be searched using Content browser (media browser) and the game client (media sources) that may be integrated within a TV to provide video in real time via the Internet, paragraphs [0039], [0040], [0043], [0073], [0133], [0136]). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Handa's system that includes an Intelligent TV wherein the internal content provider module comprises a media browser configured to provide a real-time view of media sources of the Intelligent TV as taught by Russell, for the advantage of displaying to the user in a friendly fashion the available media sources.

As per Claim 10, the combination of Handa and Russell discloses the Intelligent TV of claim 9. Handa fails to disclose wherein the media browser comprises a plug-in configured to retrieve metadata from the plurality of DLNA devices that are DLNA content servers. Russell further discloses wherein the media browser comprises a plug-in configured to retrieve metadata from the plurality of DLNA devices that are DLNA content servers (the method and apparatus include content providers that are used to download media data on the client devices such as set-top box connected to TV (Intelligent TV) or home computer (DLNA devices) in the home network that support DLNA, downloads content from media providers and makes the content available to PlayStation via DLNA in which the media can be searched using Content browser (media browser) that includes information described in the Content source information (plug-in) that can access other servers (DLNA content servers) with information regarding media, such as Media Metadata database, paragraphs [0043], [0073]). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Handa's system that includes the Intelligent TV wherein the media browser comprises a plug-in configured to retrieve metadata from the plurality of DLNA devices that are DLNA content servers as taught by Russell, for the advantage of providing easier access to connected DLNA media sources.

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55379

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Previous Supplemental Box-***-

As per Claims 11 and 20, the combination of Handa and Russell discloses the Intelligent TV and DLNA subservice module of claims 9 and 19. Handa fails to disclose further comprising a media scanner configured to populate a media table using data retrieved by the media browser. Russell discloses further comprising a media scanner configured to populate a media table using data retrieved by the media browser (the media data on the client devices such as set-top box connected to TV (Intelligent TV) or home computer (DLNA devices) downloads content from media providers and makes the content available to PlayStation via DLNA in which the media can be searched using Content browser (media browser) which includes content source information accessed through Content Manager 610 (media scanner) that determines how to retrieve content for the user that can be obtained from internal media library 606 (media table), or from the Internet via Content Loader (DLNA subservice module), paragraphs [0043], [0070], [0073]). It would have been obvious for one of ordinary skill in the art at the time the invention was made to modify Handa's system that includes an Intelligent TV further comprising a media scanner configured to populate a media table using data retrieved by the media browser as taught by Russell, for the advantage of entire media monitoring process.

As to Claim 12, the combination of Handa and Russell discloses the Intelligent TV of Claim 11. Handa fails to disclose wherein the media scanner is further configured to aggregate data of DLNA and non-DLNA devices as a unified metadata. Russell discloses wherein the media scanner is further configured to aggregate data of DLNA and non-DLNA devices as a unified metadata (Content Manager 610 contains information about available media on local sources, network sources which may be DLNA devices, and internet sources (non-DLNA devices), through centralized media metadata, paragraphs [0043], [0069], [0073]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the Intelligent TV disclosed in Handa to include wherein the media scanner is further configured to aggregate data of DLNA and non-DLNA devices as a unified metadata, as taught in Russell, for the benefit of centralizing media information, improving efficiency of access.

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

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-498-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055349	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

a. the figure of the **drawings** to be published with the abstract is Figure No. 36

☒ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055349

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/39
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04N 5/445, 7/173 (2013.01)
USPC - 348/E5.104, E5.105, E5.112; 725/39, 40, 43, 44, 47

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - H04N 5/45, 5/44543, 21/47, 21/482, 21/4316, 21/4626 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase, Google Patents, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2002/0067376 A1 (MARTIN et al) 06 June 2002 (06.06.2002) entire document	1-20
A	US 2001/0056577 A1 (GORDON et al) 27 December 2001 (27.12.2001) entire document	1-20
A	US 2011/0145860 A1 (WEI) 16 June 2011 (16.06.2011) entire document	1-20
A	US 8,220,021 B1 (LOOK et al) 10 July 2012 (10.07.2012) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
20 November 2013	29 NOV 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)* 29 NOV 2013

Applicant's or agent's file reference	FOR FURTHER ACTION
6583-498-PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055349	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445 (2013.01)
USPC - 725/39

Applicant FLEXTRONICS AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	20 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055349

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055349

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

1. Statement

Novelty (N)	Claims	None	YES
	Claims	1-20	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-20 lack novelty under PCT Article 33(2) as being anticipated by Martin et al. hereinafter referred to as Martin.
Regarding Claim 1, Martin discloses a method, comprising: running, via a processor associated with an intelligent television (TV) (Para. [0049] regarding processor; Para. [0005] regarding systems and methods described herein relate to a portal for simultaneously viewing video channels, launching interactive applications, and/or interfacing with locally or remotely stored content), a live TV application, wherein the live TV application is configured to control one or more interactive user functions of the intelligent TV (Para. [0055] regarding Central processor 220 may be adapted to run a number of applications defining the functionality of STB; Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject); presenting, simultaneously via a display of the intelligent TV, live TV broadcast content (Fig. 7A regarding talkshow video 700; Para. [0088] regarding A given page may display a composite program consisting entirely of live video cells, a composite program containing some live video combined with locally displayed content), wherein the live TV broadcast content is presented to a first portion of the display (Fig. 7A regarding talkshow video 700 over the entire display); receiving a live TV application input at the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); determining, by the processor and in response to receiving the live TV application input, a live TV application feature to present via the display, wherein the one or more interactive user functions of the intelligent TV are controlled via the live TV application feature (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); and presenting, via the display, the live TV application feature to a second portion of the display (Fig. 7A regarding info content 704, 706, 708 within semitransparent bar 702; Fig. 7B regarding info cell 710, overlay 712), wherein the second portion of the display overlaps at least a portion of the presented live TV broadcast content (Para. [0122] regarding a semi-transparent bar 702 across the bottom of the screen that includes an information icon... the text may be in a semi-transparent background overlaid in the upper left comer of screen 700).

Regarding Claim 2, Martin discloses the method of claim 1, and further discloses wherein the live TV broadcast content includes at least one of a TV episode, a TV special, a movie, a sport event, and a radio program (Fig. 7A regarding talkshow video 700).

Regarding Claim 3, Martin discloses the method of claim 1, and further discloses wherein the live TV application input is provided automatically via the processor associated with the intelligent TV (Para. [0051] regarding Central processor 220 generally handles the processing of data within STB 1140. In the case of received audio and video signals, the MPEG packets containing these signals are demultiplexed and filtered).

Regarding Claim 4, Martin discloses the method of claim 1, and further discloses wherein live TV application input is provided by a user via a remote control associated with the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed).

Regarding Claim 5, Martin discloses the method of claim 1, and further discloses wherein presenting the live TV application feature further comprises presenting views and dialogs via the display of the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject; Para. [0055] regarding program guide applications).

Regarding Claim 6, Martin discloses the method of claim 1, and further discloses wherein the one or more interactive user functions of the intelligent TV include at least one of channel changing, channel viewing, program information viewing, setting reminders, clearing reminders, setting favorites, and clearing favorites (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject; Para. [0055] regarding program guide applications).

Regarding Claim 7, Martin discloses the method of claim 1, and further discloses wherein the live TV application is configured to communicate with at least one manager and provider of an operating system framework associated with the intelligent TV (Para. [0054] regarding a virtual machine interacting via an interface layer with a lower level operating system implemented in the hardware components... a device manager layer 304).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055349

Supplemental Box

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

Regarding Claim 8, Martin discloses the method of claim 1, and further discloses wherein the live TV application is configured to communicate with a system user interface (UI) application associated with the intelligent TV (Para. [0084] regarding All of the control data for configuring the mosaic is input via a graphical user interface).

Regarding Claim 9, Martin discloses the method of claim 8, wherein the system UI application is configured to automatically format one or more applications for use by the live TV application (Para. [0084] regarding The portal computer generates an MPEG-2 private mosaic table and injects it into the MPEG transport along with the composite program).

Regarding Claim 10, Martin discloses a tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor (Para. [0049] regarding processor; Para. [0051] regarding The memory of STB 1140 may include EEPROM, host RAM, flash memory for software and data), perform the method comprising: running, via a processor associated with an intelligent television (TV), a live TV application, wherein the live TV application is configured to control one or more interactive user functions of the intelligent TV (Para. [0055] regarding Central processor 220 may be adapted to run a number of applications defining the functionality of STB; Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject); presenting, simultaneously via a display of the intelligent TV, live TV broadcast content (Fig. 7A regarding talkshow video 700; Para. [0088] regarding A given page may display a composite program consisting entirely of live video cells, a composite program containing some live video combined with locally displayed content), wherein the live TV broadcast content is presented to a first portion of the display (Fig. 7A regarding talkshow video 700 over the entire display); receiving a live TV application input at the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); determining, by the processor and in response to receiving the live TV application input, a live TV application feature to present via the display, wherein the one or more interactive user functions of the intelligent TV are controlled via the live TV application feature (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); and presenting, via the display, the live TV application feature to a second portion of the display (Fig. 7A regarding info content 704, 706, 708 within semitransparent bar 702; Fig. 7B regarding info cell 710, overlay 712), wherein the second portion of the display overlaps at least a portion of the presented live TV broadcast content (Para. [0122] regarding a semi-transparent bar 702 across the bottom of the screen that includes an information icon... the text may be in a semi-transparent background overlaid in the upper left comer of screen 700).

Regarding Claim 11, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein the live TV broadcast content includes at least one of a TV episode, a TV special, a movie, a sport event, and a radio program (Fig. 7A regarding talkshow video 700).

Regarding Claim 12, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein the live TV application input is provided automatically via the processor associated with the intelligent TV (Para. [0051] regarding Central processor 220 generally handles the processing of data within STB 1140. In the case of received audio and video signals, the MPEG packets containing these signals are demultiplexed and filtered).

Regarding Claim 13, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein live TV application input is provided by a user via a remote control associated with the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed).

Regarding Claim 14, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein presenting the live TV application feature further comprises presenting views and dialogs via the display of the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject; Para. [0055] regarding program guide applications).

Regarding Claim 15, martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein the one or more interactive user functions of the intelligent TV include at least one of channel changing, channel viewing, program information viewing, setting reminders, clearing reminders, setting favorites, and clearing favorites (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject; Para. [0055] regarding program guide applications).

Regarding Claim 16, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein the live TV application is configured to communicate with at least one manager and provider of an operating system framework associated with the intelligent TV (Para. [0054] regarding a virtual machine interacting via an interface layer with a lower level operating system implemented in the hardware components... a device manager layer 304).

Regarding Claim 17, Martin discloses the tangible, non-transitory computer readable medium of claim 10, and further discloses wherein the live TV application is configured to communicate with a system user interface (UI) application associated with the intelligent TV (Para. [0084] regarding All of the control data for configuring the mosaic is input via a graphical user interface).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055349

Supplemental Box

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

Regarding Claim 18, Martin discloses the tangible, non-transitory computer readable medium of claim 17, and further discloses wherein the system UI application is configured to automatically format one or more applications for use by the live TV application (Para. [0084] regarding The portal computer generates an MPEG-2 private mosaic table and injects it into the MPEG transport along with the composite program).

Regarding Claim 19, Martin discloses a system, comprising: an intelligent television (TV) having a display (Para. [0005] regarding systems and methods described herein relate to a portal for simultaneously viewing video channels, launching interactive applications, and/or interfacing with locally or remotely stored content) and a tuner (Para. [0050] regarding STB 1140 also includes a tuner 24), wherein the tuner is configured to receive and convert broadcast content signals to be displayed by the display (Para. [0050] regarding STB 1140 also includes a tuner 242 and demodulator 244 (e.g., a 256 QAM demodulator) to receive and demodulate the received transmissions which are then filtered and demultiplexed by unit 240); an input device associated with the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); a memory (Para. [0049] regarding STB 1140 includes a central processor 220 including associated memory elements); and a microprocessor (Para. [0049] regarding STB 1140 includes a central processor 220 including associated memory elements and adapted to receive input data from...remote) operable to: run a live TV application (Para. [0049] regarding processor; Para. [0005] regarding systems and methods described herein relate to a portal for simultaneously viewing video channels, launching interactive applications, and/or interfacing with locally or remotely stored content), wherein the live TV application is configured to control one or more interactive user functions of the intelligent TV (Para. [0055] regarding Central processor 220 may be adapted to run a number of applications defining the functionality of STB; Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed with details on the selected subject); present, simultaneously via the display of the intelligent TV, live TV broadcast content (Fig. 7A regarding talkshow video 700; Para. [0088] regarding A given page may display a composite program consisting entirely of live video cells, a composite program containing some live video combined with locally displayed content), wherein the live TV broadcast content is presented to a first portion of the display (Fig. 7A regarding talkshow video 700 over the entire display); receive a live TV application input at the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); determine, in response to receiving the live TV application input, a live TV application feature to present via the display, wherein the one or more interactive user functions of the intelligent TV are controlled via the live TV application feature (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed); and present, via the display, the live TV application feature to a second portion of the display (Fig. 7A regarding info content 704, 706, 708 within semitransparent bar 702; Fig. 7B regarding info cell 710, overlay 712), wherein the second portion of the display overlaps at least a portion of the presented live TV broadcast content (Para. [0122] regarding a semi-transparent bar 702 across the bottom of the screen that includes an information icon... the text may be in a semi-transparent background overlaid in the upper left corner of screen 700).

Regarding Claim 20, Martin discloses the system of claim 19, and further discloses wherein live TV application input is provided by a user via the input device associated with the intelligent TV (Para. [0122] regarding When an entry is selected using "OK" key 330 on remote control 230, a new overlay 712 is displayed).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus industrial applicability has been met because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-499-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055312	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

   ☒ the text is approved as submitted by the applicant.

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

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

   ☒ the text is approved as submitted by the applicant.

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

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

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

   ☒ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055312

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 17/00 (2013.01)
USPC - 725/9
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04L 67/22; H04N 7/16, 7/173, 17/00, 21/20, 21/23, 21/47 (2013.01)
USPC - 348/180; 725/9, 14, 39, 61

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - H04L 41/509, 67/22; H04N 21/4667 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase, Google Patents, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	WO 01/06784 A2 (KNEE et al) 25 January 2001 (25.01.2001) entire document	1, 9, 10, 16 --- 2-8, 11-15, 17-20
Y	US 4,284,849 A (ANDERSON et al) 18 August 1981 (18.08.1981) entire document	2, 15, 17, 18
Y	US 2011/0273552 A1 (WANG et al) 10 November 2011 (10.11.2011) entire document	3, 4, 11, 12
Y	US 5,964,839 A (JOHNSON et al) 12 October 1999 (12.10.1999) entire document	5-7, 14, 19, 20
Y	WO 03/044755 A1 (KUTZIK et al) 30 May 2003 (30.05.2003) entire document	8, 13

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
18 November 2013	05 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: SCOTT WEITZEL
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	05 DEC 2013
Applicant's or agent's file reference 6583-499-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055312	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 17/00 (2013.01)
USPC - 725/9

Applicant FLEXTRONICS AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	18 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055312

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055312

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

1. Statement

Novelty (N)	Claims	2-8, 11-15, 17-20	YES
	Claims	1, 9, 10, 16	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1, 9, 10, 16 lack novelty under PCT Article 33(2) as being anticipated by Knee et al. (hereafter Knee).

Regarding claim 1, Knee discloses a method of electronic component operation (Title and Abstract), whereby the component (server 36 or server 56; pg. 10, ln. 30 – pg. 11, ln. 28) performs:
capturing data associated with an activity of a television (Fig. 10, step 134; pg. 10, ln. 30 – pg. 11, ln. 28 describes collecting data on the user's activities with respect to the interactive television applications, which is part of the monitoring of Fig. 10, step 134, described in pg. 25, lns. 7-10);
storing the data (Fig. 10, step 134 describes monitoring the user's activities, where data can be stored on control circuitry 92 as described on pg. 19, lns. 30-32);
generating a report aggregating the data (Fig. 10, step 136 shows the user may be provided with an opportunity to authorize the submission of a report containing information on the user's interactions with the interactive television program guide and other user activities, described in pg. 25, lns. 11-15); and
transmitting the report (Fig. 10, step 138 shows transmitting the report as described on pg. 25, ln. 17-21).

Regarding claim 9, Knee discloses an electronic device (Fig. 1 & 6), comprising:
an activity monitor (control circuitry 92 includes circuitry to monitor interactive television applications as described on pg. 19, lns. 11-32);
a storage (control circuitry 94 can include memory or other storage device as described on pg. 19, lns. 11-32);
a report generator (Fig. 10, step 136 shows a means for providing a user the opportunity to authorize the submission of a report, where the report can be automatically generated in the form shown in Fig. 11 and described on pg. 25, ln. 25 – pg. 26, ln. 4);
a transmitter (Fig. 10, step 138 shows a means for transmitting the report to the data collection facility, described on pg. 25, lns. 5-21);
wherein the activity monitor (92) is operable to identify an activity of a television (display 100; Fig. 6; pg. 20, lns. 1-8) and store information associated with the activity in the storage (94; Fig. 6; pg. 19, lns. 11-32 describes using the control circuitry 92 for monitoring the interactive television applications, where the information may be stored on the storage control circuitry 94);
wherein the report generator is operable to accesses the information in the storage (94) and generate a usage report (pg. 25, lns. 5-21 describes monitoring the television activities, and automatically generating a report based upon the data from the monitoring as described on pg. 25, ln. 25 – pg. 26, ln. 4); and
wherein the transmitter is operable to transmit the usage report to a receiver (Fig. 10, step 138 shows a transmission of the report where it is received by a data collection facility, described on pg. 25, lns. 5-21).

Regarding claim 10, Knee discloses the device of claim 9, and Knee further discloses a television (display 100; Fig. 6; pg. 20, lns. 1-8 describes the display 100 may be a television).

Regarding claim 16, Knee discloses an electronic system (Fig. 1 & 6), comprising:
a television (display 100; Fig. 6; pg. 20, lns. 1-8), operable to execute at least one application (pg. 19, ln. 11 – pg. 20, ln. 8 describes the display 100 can be a television to display an interactive television application);
an activity monitor (control circuitry 92), operable to monitor an activity of the application (control circuitry 92 includes circuitry to monitor interactive television applications as described on pg. 19, lns. 11-32; Fig. 6);
a storage (control circuitry 94), operable to store information about the activity (control circuitry 94 can include memory or other storage device as described on pg. 19, lns. 11-32; Fig. 6);
a report generator, operable to access the stored information and generate a report (Fig. 10, step 136 shows a means for providing a user the opportunity to authorize the submission of a report using the data from monitoring, where the report can be automatically generated in the form shown in Fig. 11 and described on pg. 25, ln. 25 – pg. 26, ln. 4); and
a transmitter, operable to transmit the report to a server (data collection facility 13 in Fig. 1; Fig. 10, step 138 shows a means for transmitting the report to the data collection facility, described on pg. 25, lns. 5-21).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055312

Supplemental Box

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

Claims 2, 15, 17, 18 lack an inventive step under PCT Article 33(3) as being obvious over Knee et al. (hereafter Knee) in view of Anderson et al. (hereafter Anderson).

Regarding claim 2, Knee discloses the method of claim 1, but Knee fails to explicitly disclose upon completion of the transmitting of the report, receiving a failure indicator associated with transmitting the report; and
determining a number of attempted retransmissions is below a previously determined threshold and (i) retransmitting the report and (ii) incrementing the number of attempted retransmissions.
Anderson teaches of a monitoring and signaling system, comprising upon completion of the transmitting of a report (col. 10, ln. 23 – col. 11, ln. 17 describes using a sensor S and signals to monitor the status of a television receiver), receiving a failure indicator associated with transmitting the report (col. 13, lns. 26-66 describes an activity timer that measures the signals from the sensors and sounds an alarm via the CPU if a criteria is met, described in col. 14, lns. 32-50, where the alarm is a type of report; col. 17, lns. 3-44 describes using the CPU to reach the centralized communications center CCC, where several attempts can be made to establish communication with the CCC to provide the alarm; a reattempt at communication would indicate that transmitting the alarm had failed); and
determining a number of attempted retransmissions is below a previously determined threshold and (i) retransmitting the report and (ii) incrementing the number of attempted retransmissions (col. 17, lns. 3-44 describes making repeated attempts at communication with the CCC, where the number of attempts are counted; after eight attempts, the system stops trying to communicate with the CCC using a first telephone number).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include determining a transmission has failed and retransmitting up to a predetermined number of times as taught by Anderson as this allows the system to retransmit the report after a failure occurs, but does not continue to keep retransmitting in the same way if multiple failures continue to occur.

Regarding claim 15, Knee discloses the device of claim 9, but Knee fails to explicitly disclose wherein the transmitter transmits the usage report to a receiver upon a trigger event associated with, at least one of, the passage of time and a number of attempted transmissions of the report.
Anderson teaches of a monitoring and signaling system, wherein a transmitter (central processing unit CPU) transmits a usage report to a receiver (centralized communications center CCC) upon a trigger event associated with, at least one of, the passage of time (col. 10, ln. 23 – col. 11, ln. 17 describes using a sensor S and signals to monitor the status of a television receiver; col. 13, lns. 26-66 describes an activity timer that measures the signals from the sensors and sounds an alarm via the CPU if a criteria is met based upon the activity timer AT, described in col. 14, lns. 32-50, where the alarm is a type of report; col. 17, lns. 3-44 describes using the CPU to reach the centralized communications center CCC) and a number of attempted transmissions of the report.
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include transmitting the report based upon a trigger as taught by Anderson as this allows the report to be transmitted at the appropriate time, rather than at a less useful time.

Regarding claims 17, 18, Knee discloses the device of claim 16, but Knee fails to explicitly disclose [claim 17] wherein the storage is further operable to store reports that were unsuccessfully transmitted to the server; and,
[claim 18] a trigger operable to cause the transmitter to retransmit stored reports in the storage.
Anderson teaches of a monitoring and signaling system, [claim 17] wherein a storage (memory 20; col. 12, ln. 41 – col. 13, ln. 24 describes the memory 20 storing information related to the sensor system) is further operable to store reports that were unsuccessfully transmitted to a server (centralized communications center CCC; Fig. 1 & 2; col. 10, ln. 23 – col. 11, ln. 17 describes using a sensor S and signals to monitor the status of a television receiver; col. 13, lns. 26-66 describes an activity timer that measures the signals from the sensors and sounds an alarm via the CPU if a criteria is met, described in col. 14, lns. 32-50, where the alarm is a type of report; col. 17, lns. 3-44 describes using the CPU to reach the centralized communications center CCC, where several attempts can be made to establish communication with the CCC to provide the alarm; essentially, the memory 20 would store the alarm information until communication with the CCC is established); and,
[claim 18] a trigger operable to cause the transmitter (CPU) to retransmit stored reports in the storage (20; col. 17, lns. 3-44 describes making repeated attempts at communication with the CCC, where the number of attempts are counted; the trigger would be a failure to establish communication with the CCC, in which case communication would be reattempted).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include storing the reports until a trigger causes a retransmit of the reports as taught by Anderson as this allows the reports to remain intact until they are finally transmitted correctly, rather than lose the report if a transmission fails on an initial attempt.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055312

Supplemental Box

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

Claims 3, 4, 11, 12 lack an inventive step under PCT Article 33(3) as being obvious over Knee et al. (hereafter Knee) in view of Wang et al. (hereafter Wang).

Regarding claims 3, 4, Knee discloses the method of claim 1, but Knee fails to explicitly disclose [claim 3] wherein capturing the data further comprises capturing a most used application activity of the television; and,
[claim 4] wherein capturing the data further comprises capturing a last used application activity of the television.
Wang teaches of a method for accessing exercise while watching TV, [claim 3] wherein capturing data further comprises capturing a most used application activity of a television (40; Fig. 1 & 2; para. 0024 describes providing shortcuts on a remote to play the last used or most user exercise program; playing a selected program functions in the same manner as an application, while having a shortcut button to play a last used or most used program inherently captures data related to the television usage, as the last used and most used programs can only be determined by collecting data related to said programs); and,
[claim 4] wherein capturing data further comprises capturing a last used application activity of a television (40; Fig. 1 & 2; para. 0024 describes providing shortcuts on a remote to play the last used or most user exercise program; playing a selected program functions in the same manner as an application, while having a shortcut button to play a last used or most used program inherently captures data related to the television usage, as the last used and most used programs can only be determined by collecting data related to said programs).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include capturing the most used and last used application activity of the TV as taught by Wang as this allows the system to understand the habits of the user based upon application use. This information can then be used to provide advertising and other content based upon the known habits of the television user.

Regarding claims 11, 12, Knee discloses the device of claim 9, but Knee fails to explicitly disclose [claim 11] wherein the activity monitor identifies a most used activity of the television; and,
[claim 12] wherein the activity monitor identifies a last used activity of the television.
Wang teaches of a method for accessing exercise while watching TV, [claim 11] wherein an activity monitor identifies a most used activity of a television (40; Fig. 1 & 2; para. 0024 describes providing shortcuts on a remote to play the last used or most user exercise program; in order to determine the most used and last used programs, the activity of playing said programs must inherently be monitored); and,
[claim 12] wherein an activity monitor identifies a last used activity of the television (40; Fig. 1 & 2; para. 0024 describes providing shortcuts on a remote to play the last used or most user exercise program; in order to determine the most used and last used programs, the activity of playing said programs must inherently be monitored).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include capturing the most used and last used application activity of the TV as taught by Wang as this allows the system to understand the habits of the user based upon application use. This information can then be used to provide advertising and other content based upon the known habits of the television user.

Claims 5-7, 14, 19, 20 lack an inventive step under PCT Article 33(3) as being obvious over Knee et al. (hereafter Knee) in view of Johnson et al. (hereafter Johnson).

Regarding claims 5, 6, Knee discloses the method of claim 1, but Knee fails to explicitly disclose [claim 5] wherein capturing the data further comprises capturing an uninstalled application activity of the television; and,
[claim 6] wherein, upon the capturing of an uninstalled application activity, triggering the generating of the report and the transmitting of the report.
Johnson teaches of a method for monitoring information flow and performing data collection, [claim 5] wherein capturing data further comprises capturing an uninstalled application activity of a television (Fig. 1 shows the system for data collection, including activities from a television 36 and a cable television system 52, described in col. 4, lns. 30-67; col. 5, lns. 56 – 63 describes how the specifics of data communication can applied to the devices of Fig. 1; col. 14, lns. 1-8 describes how after an application has been removed, the application's activity record is updated); and,
[claim 6] wherein, upon the capturing of an uninstalled application activity, triggering a generating of a report and transmitting of the report (Fig. 1 shows the system for data collection, including activities from a television 36 and a cable television system 52, described in col. 4, lns. 30-67; col. 5, lns. 56 – 63 describes how the specifics of data communication can applied to the devices of Fig. 1; col. 14, lns. 1-8 describes how after an application has been removed, the application's activity record is updated and the record is transferred to disk; the activity record is essentially the report and its transfer to disk is the transmission of said report).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include capturing an uninstalled application activity data and transmitting a report of said data as taught by Johnson as this allows data related to the uninstalled application to be sent to be analyzed. This can allow the reason for the application being removed to be determined, such as said application was rarely used.

Regarding claim 7, Knee discloses the method of claim 1, but Knee fails to explicitly disclose wherein capturing the data further comprises capturing an availability application associated with installed applications of the television.
Johnson teaches of a method for monitoring information flow and performing data collection, wherein capturing data further comprises capturing an availability application associated with installed applications of a television (Fig. 1 shows the system for data collection, including activities from a television 36 and a cable television system 52, described in col. 4, lns. 30-67; col. 5, lns. 56 – 63 describes how the specifics of data communication can applied to the devices of Fig. 1; col. 13, ln. 54 – col. 14, ln. 8 describes an application list that determines what applications have been added or removed, which in turn allows the system to determine the installed applications and each application's activity information).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include capturing the availability of installed applications as taught by Johnson as this can help determine what type of applications the user installs, to get a better sense of the habits of said user.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055312

Supplemental Box

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

Regarding claim 14, Knee discloses the device of claim 9, but Knee fails to explicitly disclose wherein the activity monitor identifies an uninstalled application activity of the television.
Johnson teaches of a method for monitoring information flow and performing data collection, wherein an activity monitor identifies an uninstalled application activity of a television (Fig. 1 shows the system for data collection, including activities from a television 36 and a cable television system 52, described in col. 4, lns. 30-67; col. 5, lns. 56 – 63 describes how the specifics of data communication can applied to the devices of Fig. 1; col. 14, lns. 1-8 describes how after an application has been removed, the application's activity record is updated).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include capturing an uninstalled application activity data as taught by Johnson as this allows data related to the uninstalled application to be sent to be analyzed. This can allow the reason for the application being removed to be determined, such as said application was rarely used.

Regarding claims 19, 20, Knee discloses the electronic system of claim 16, but Knee fails to explicitly disclose [claim 19] wherein the activity monitor is operable to monitor the activity of the application further comprises monitoring, at least one of, the installation of the application on the television and the removal of the application from the television; and,
[claim 20] wherein, upon the activity monitor monitoring the, at least one of, the installation of the application on the television and the removal of the application from the television, causing the report generator to generate a report and the transmitter to transmit the report.
Johnson teaches of a method for monitoring information flow and performing data collection, [claim 19] wherein an activity monitor is operable to monitor an activity of an application further comprises monitoring, at least one of, the installation of the application on the television and the removal of the application from the television (Fig. 1 shows the system for data collection, including activities from a television 36 and a cable television system 52, described in col. 4, lns. 30-67; col. 5, lns. 56 – 63 describes how the specifics of data communication can applied to the devices of Fig. 1; col. 13, ln. 54 – col. 14, ln. 8 describes an application list that determines what applications have been added or removed, as well as monitoring each application's activity information); and,
[claim 20] wherein, upon the activity monitor monitoring the, at least one of, the installation of the application on the television and the removal of the application from the television (Fig. 1 shows the system for data collection, including activities from a television 36 and a cable television system 52, described in col. 4, lns. 30-67; col. 5, lns. 56 – 63 describes how the specifics of data communication can applied to the devices of Fig. 1; col. 13, ln. 54 – col. 14, ln. 8 describes an application list that determines what applications have been added or removed, as well as monitoring each application's activity information),
causing a report generator to generate a report and a transmitter to transmit the report (col. 14, lns. 1-8 describes how after an application has been removed, the application's activity record is updated and the record is transferred to disk using the system of Fig. 1; the activity record is essentially the report and its transfer to disk is the transmission of said report).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include capturing an uninstalled application activity data and transmitting a report of said data as taught by Johnson as this allows data related to the uninstalled application to be sent to be analyzed. This can allow the reason for the application being removed to be determined, such as said application was rarely used.

Claims 8, 13 lack an inventive step under PCT Article 33(3) as being obvious over Knee et al. (hereafter Knee) in view of Kutzik et al. (hereafter Kutzik).

Regarding claim 8, Knee discloses the method of claim 1, but Knee fails to explicitly disclose upon transmitting of the report, resetting a reporting period.
Kutzik teaches of monitoring a daily living activity and analyzing data related, comprising upon transmitting of a report, resetting a reporting period (pg. 35, lns. 9-30 describes monitoring of TV habits; pg. 23, ln. 24 – pg. 24, ln. 4 describes providing scheduled periodic user activity reports based upon information gathered from any of the monitored activities).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include resetting a reporting period after transmitting a report as taught by Kutzik as this allows reports to be sent on a schedule, at pre-determined times, in an automatic fashion.

Regarding claim 13, Knee discloses the device of claim 9, but Knee fails to explicitly disclose wherein the activity monitor identifies a duration of a last activity of the television.
Kutzik teaches of monitoring a daily living activity and analyzing data related, wherein an activity monitor identifies a duration of a last activity of a television (pg. 35, lns. 9-30 describes monitoring of TV habits so as to log the duration of television viewing throughout the day; pg. 23, ln. 24 – pg. 24, ln. 4 describes providing scheduled periodic user activity reports based upon information gathered from any of the monitored activities).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include monitoring a duration of the last activity of the television as taught by Kutzik as this information is also used to determine the habits of the user, for later use in advertisements and personalized content.

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Jason H. Vick
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-500-PCT	Date of mailing *(day/month/year)* 12 NOV 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/55374	International filing date *(day/month/year)* 16 August 2013 (16.08.2013)
Applicant Flextronics AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-500-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55374	International filing date *(day/month/year)* 16 August 2013 (16.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

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

☒ as suggested by the applicant.

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

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55374

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 21/47 (2013.01)
USPC - 715/825
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - G06F 17/00; H04H 60/33; H04N 21/47 (2013.01)
USPC - 715/825; 725/14; 725/39

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); Google Patents, DialogPro, IEEE, Google Scholar; smart tv, icon, menu, usage, set top box, statistics, metric

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2007/0050733 A1 (LEE, S et al.) 1 March 2007; Abstract, Figure 1, Paragraphs [0035], [0043], [0044], [0049], [0053], and [0061].	1-4, 7, 10-14, 17 and 20 --- 5, 6, 8, 9, 15, 16, 18 and 19
Y	US 2012/0096264 A1 (TRAVERSAT, B et al.) 19 April 2012; Abstract, Paragraphs [0019]-[0021], [0036], [0046], [0053] and [0068].	5, 6, 8, 9, 15, 16, 18 and 19

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
29 October 2013 (29.10.2013)	12 NOV 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Jason H. Vick
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	12 NOV 2013
Applicant's or agent's file reference 6583-500-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55374	16 August 2013 (16.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 21/47 (2013.01)
USPC - 715/825

Applicant Flextronics AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	29 October 2013 (29.10.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55374

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55374

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

1. Statement

Novelty (N)	Claims	5, 6, 8, 9, 15, 16, 18 and 19	YES
	Claims	1-4, 7, 10-14, 17 and 20	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-4, 7, 10-14, 17 and 20 lack novelty under PCT Article 33(2) as being anticipated by 2007/0050733 Al, Lee, et al. (hereinafter 'Lee').

As per Claims 1, 11 and 20, Lee discloses a method and systems to assemble and manage usage information with usage statistics provider in an intelligent TV comprising: assembling one or more of usage information and installation information (a set-top box associated with the television (intelligent TV) detects (assembles) which option is frequently executed (usage information) while using the videophone (usage statistics provider) wherein the application options are based on use frequency (usage statistics), paragraphs [0035], [0061]); querying the one or more of usage information and installation information to populate one or more of icons and information in a view on the intelligent TV (the set-top box associated with a television (intelligent TV) receives a user command (query) that detects the current application and accordingly arranges application in order of use frequency; a list is prepared based on the same with corresponding menu options (one or more icons), paragraphs [0061], [0067]); assembling the one or more of icons and information into a requested view and displaying the view on a display of the intelligent TV when user chooses button for dynamic menu construction (requested view), (when user chooses button for dynamic menu construction (requested view) the list of preferred applications are arranged in order of use frequency with corresponding menu options (one or more icons) and displays that menu accordingly, paragraphs [0060], [0061], [0067]).

As per Claim 2 and 12, Lee discloses the method and system of claims 1 and 11. Lee further discloses wherein the view includes a master view, a collection view and a detail view (an application related map (view) include upper executable applications (master view), the applications executable while in operation (collection view), such as Photo album and adding additional options when doing certain tasks (detail view) in an application, paragraphs [0055], [0056], [0065], [0066]).

As per Claims 3 and 13, Lee discloses the method and system of claims 1 and 11. Lee further discloses a method and system further comprising monitoring and tracking usage information for the intelligent TV (a set-top box associated with a television (intelligent TV) detects (assembles) which option is frequently executed (track usage information) while using the videophone, paragraphs [0035], [0061]).

As per Claims 4 and 14, Lee discloses the method and system of claims 1 and 11. Lee further discloses a method and system further comprising monitoring and tracking usage information for one or more applications installed on the intelligent TV (the set-top box detects which option is frequently executed (track usage information) while using the videophone (usage statistics provider) for selected applications, paragraphs [0043], [0044], [0061], [0067]).

As per Claims 7 and 17, Lee discloses the method of claims 1 and 11. Lee further discloses a method and system comprising a silo manager adapted to sort information in the view based at least on the one or more of usage information and installation information (a history of user application is listed (sorting information) in the order of use frequency (usage information) can be determined by a system manager (sorting or silo manager), paragraphs [0046], [0053]).

As per Claim 10, Lee discloses Claim 1. Lee further discloses a non-transitory computer readable information storage media having stored thereon instructions, that when executed by one or more processors, cause to be performed the method steps in Claim 1 (the set-top box 100 with controller 120 (computer) and internal storage 101 (non-transitory computer readable media) performs the steps of claim 1, paragraphs [0035], [0042]-[0044]).

Claims 5, 6, 8, 9, 15, 16, 18 and 19 lack an inventive step under PCT Article 33(3) as being obvious over Lee in view of US 2012/0096264 A1 Traversat et al. (hereinafter 'Traversat').

As per Claims 5 and 15, Lee discloses the method and system of claims 1 and 14. Lee fails to disclose further a method and system further comprising a system report handler adapted for reporting the usage information to one or more remote servers. Traversat discloses a method and system further comprising a system report handler adapted for reporting the usage information to one or more remote servers (the client usage data is obtained from the network device and the warehouse that has one or more servers (report handler) uses this client usage data to generate trends (report), paragraphs [0020], [0021], [0068]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system disclosed in Lee to include a method and system further comprising a system report handler adapted for reporting the usage information to one or more remote servers, as taught in Traversat, for the benefit of allowing third parties such as application providers to adapt to customer usage.

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55374

Box No. VII Certain defects in the international application

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

Claim 18 is objected to under PCT Rule 66.2(a)(iii) as containing the following defect in the form or contents thereof: Claim 18 appears to be missing the word 'to' between the words 'adapted' and 'sort'. Claim 18 has been best understood to read, in relevant part, "a silo manager adapted to sort information".

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55374

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Previous Supplemental Box-***-

As per Claims 6 and 16, Lee discloses the method and system of claims 1 and 11. Lee fails to further disclose a method and system comprising assembling a notification when a package is installed. Traversat discloses a method and system comprising assembling a notification when a package is installed (the application metrics (170) indicates (notification) information related to the number of times an application (package) has been installed or reinstalled, paragraph [0019], [0020], and [0021]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system disclosed in Lee to include a method and system comprising assembling a notification when a package is installed, as taught in Traversat, for the benefit of allowing third parties such as application providers to adapt to customer usage.

As per Claims 8 and 18, Lee discloses the method of claims 1 and 11. Lee further discloses a method and system further comprising a silo manger adapted to sort information in at least one panel based at least on the one or more of usage information and installation information (a history of user application is listed (sorting information) in the order of use frequency (usage information) can be determined by a system manager (sorting or silo manager), paragraphs [0046], [0053]), but fails to disclose the at least one panel including a plurality of icons each representing an available app or content. Traversat discloses at least one panel including a plurality of icons each representing an available app or content (the application information will display when a user hovers over one or more icons associated with the application, paragraph [0036]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system disclosed in Lee to include at least one panel including a plurality of icons each representing an available app or content, as taught in Traversat, for the benefit of indicating application function to a user visually as well as textually.

As per Claims 9 and 19, Lee discloses the method of claims 1 and 11. Lee further discloses a method and system comprising sorting information in at least one panel subcategory based at least on the one or more of usage information and installation information (a history of user application is listed (sorting information) in the order of use frequency (usage information) paragraphs [0046], [0053]), but fails to disclose the at least one subpanel panel including a plurality of icons each representing an available app or content. Traversat discloses the at least one subpanel panel including a plurality of icons each representing an available app or content (the application information will display when a user hovers over one or more icons associated with the application, paragraph [0036]). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method and system disclosed in Lee to include the at least one subpanel panel including a plurality of icons each representing an available app or content, as taught in Traversat, for the benefit of indicating application function to a user visually as well as textually.

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

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Jason H. Vick
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-501-PCT	Date of mailing *(day/month/year)* 10 MAR 2014 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/55542	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)
Applicant Flextronics AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-501-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55542	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

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

☒ as suggested by the applicant.

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

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

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

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

INTERNATIONAL SEARCH REPORT

PCT/US2013/055542 10.03.2014

International application No.
PCT/US13/55542

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 21/431 (2014.01)
USPC - 725/44
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) Classification(s): G06F 3/048; H04N 21/431, 21/482 (2014.01)
USPC Classification(s): 725/43, 44, 46, 47

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); ProQuest; IEEE; Google/Google Scholar
Keywords: Smart TV, Display, Icon, Widget, Application, Third Party, Programs, Usage, Order

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	WO 2012/094247 A2, (DODSON, C. et al.), 12 July 2012; paragraphs [0034], [0035], [0040], [0047], [0051], [0057], [0058], [0102], [0154], [0190].	1, 10 --- 2-9, 11-20
Y	US 2011/0252446 A1, (JEONG Y. et al.), 13 October 2011; figures 15a, 16b, paragraphs [0048], [0144], [0242], [0275], [0278], [0442], [0443], [0444], [0475], [0492].	2-9, 11-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
04 February 2014 (04.02.2014)	10 MAR 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Jason H. Vick
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	10 MAR 2014
Applicant's or agent's file reference 6583-501-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55542	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 21/431 (2014.01)
USPC - 725/44

Applicant Flextronics AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	04 February 2014 (04.02.2014)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55542

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55542

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

1. Statement

Novelty (N)	Claims	2-9, 11-20	YES
	Claims	1, 10	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1 and 10 lack novelty under PCT Article 33(2) as being anticipated by WO 2012/094247 A2 to Dodson et al. (hereinafter "Dodson").

As to claim 1, Dodson discloses a method to manage and display third party applications on an intelligent TV (a method for media guidance display on a smart TV (method to manage and display third party applications on an intelligent TV), paragraphs [0034], [0035], [0040) comprising: monitoring installation and usage of one or more third party applications on the intelligent TV (user activity or accesses on the smart TV is monitored to determine user preferences (monitoring installation and usage of one or more third party applications on the intelligent TV), paragraph [0047]); updating a most recently installed app value (any suitable mechanism for updating media identifiers may be used by filtering the media identifiers with additional criteria (updating a most recently installed app value), paragraph [0187]); detecting selection of a view (detect whether the location coordinates of a cursor are approaching the center (detecting selection) of a selectable media identifier (of a view), paragraph [0153]); applying a sort order to a plurality of icons each representing one of the one or more third party applications on the intelligent TV at least based on a usage value and the most recently installed app value (any suitable approach for determining the popularity or trending (applying a sort order) of media content may be used to select media content for display in the trending region on the smart TV display (to a plurality of icons representing one of the one or more third party applications on the intelligent TV) based on user activity (usage value) and filtering the media identifiers with additional criteria (and the most recently installed app value), paragraphs [0047], [0101], [0187]); populating the view with the plurality of icons (present the user with a two-dimensional selection region (populating the view) associated with a plurality of media identifiers (with the plurality of icons), paragraph [0057]); and displaying the plurality of icons on a display (displaying the media identifiers (displaying the plurality of icons) on a display screen (on a display), paragraphs [0057], [0058]).

As to claim 10, Dodson discloses a non-transitory computer readable information storage media having stored thereon instructions, that when executed by one or more processors, cause to be performed the method steps in claim 1 (processing circuitry of one or more processing units (one or more processors) execute the instructions (a non-transitory computer readable information) for a media guidance method (cause to be performed the method steps in claim 1) application stored in memory (storage media having stored thereon), paragraph [0051]).

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

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55542

Box No. VII Certain defects in the international application

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

Claim 13 is objected to under PCT Rule 66.2(a)(iii) as containing the following defect(s) in the form or contents thereof:

Claim 13, recites "input even dispatcher ", however, this appears to be a typographical error. For purposes of this opinion, the limitation is interpreted to recite " input event dispatcher ".

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55542

Supplemental Box

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

-***-Continued from Box V: Citations and Explanations-***-

Claims 2-9 and 11-20 lack an inventive step under PCT Article 33(3) as being obvious over Dodson in view of US 2011/0252446 A1 to Jeong et al. (hereinafter "Jeong").

As to claims 11 and 20, Dodson discloses a system to manage and display third party applications on an intelligent TV comprising (a system for media guidance display on a smart TV (system) to manage and display third party applications on an intelligent TV), paragraphs [0034], [0035], [0040]): a third party application support module adapted to monitor installation and usage of one or more third party applications on the intelligent TV (a media guidance application (a third party application support module) user activity or accesses on the smart TV is monitored to determine user preferences (to monitor installation and usage of one or more third party applications on the intelligent TV), paragraph [0047]); a processor adapted to detect selection of a view (a processor (processor) detect whether the location coordinates of a cursor are approaching the center (detecting selection) of a selectable media identifier (of a view), paragraphs [0051] [0153]); However, Dodson fails to disclose a system comprising: and update a most recently installed app value; and apply a sort order to a plurality of icons each representing one of the one or more third party applications on the intelligent TV at least based on a usage value and the most recently installed app value; and a panel manager and a silo manager that populate the view with the plurality of icons and display the plurality of icons on a display. Jeong discloses a system comprising: and update a most recently installed app value (the image display apparatus may arrange the applications which are recently downloaded (update a most recently app value), paragraph [0444]); and apply a sort order to a plurality of icons each representing one of the one or more third party applications on the intelligent TV (the image display apparatus displays the applications as icons (to a plurality of icons each representing one of the one or more third party applications) that can be arranged by different arrangement orders (apply a sort order) on the smart TV (on the intelligent TV), paragraphs [0422], [0492])at least based on a usage value and the most recently installed app value (the image display apparatus may arrange the application menu corresponding to applications most frequently used by the user (based on a usage value) or by applications recently downloaded (and the most recently installed app value), paragraph [0444]); and a panel manager and a silo manager that populate the view with the plurality of icons and display the plurality of icons on a display (the display manager apparatus (a panel manager and a silo manager) shows the screen in a first display of the application icons (panel) and a second display area displaying a card object representing a list of connected external devices (silo) and display icons associated with applications (display the plurality of icons on a display), paragraphs [0144], [0443], [0475]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Dodson to include and update a most recently installed app value; and apply a sort order to a plurality of icons each representing one of the one or more third party applications on the intelligent TV at least based on a usage value and the most recently installed app value; and a panel manager and a silo manager that populate the view with the plurality of icons and display the plurality of icons on a display, as taught by Jeong, for the benefit of changing the display order based on various parameters.

As to claims 2 and 12, Dodson discloses the method of claim 1 and Dodson and Jeong disclose the system of claim 11. However, Dodson fails to disclose a method further comprising placing fixed third party application and pre-installed applications first. Jeong discloses method further comprising placing fixed third party application and pre-installed applications first (applications may be categorized into user-undeletable applications (fixed third party applications); the content provider may provide various applications (pre-installed applications); the image display apparatus can set the display order based on installation order of applications (placing applications first), paragraphs [0048], [0242], [0422]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Dodson to include placing fixed third party application and pre-installed applications first, as taught by Jeong, for the benefit of displaying the fixed and pre-installed applications first.

As to claim 3, Dodson discloses the method of claim 1. However, Dodson fails to disclose a method further comprising allowing selection of an icon for execution of a third party application. Jeong discloses a method further comprising allowing selection of an icon for execution of a third party application (selecting an application icon using a pointer (selection of an icon); the selected third party application is executed (for execution of a third party application), figure 16b, paragraphs [0275], [0278], [0423]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Dodson to include allowing selection of an icon for execution of a third party application, as taught by Jeong, for the benefit of allowing a user to initiate execution of a third party application by selecting an icon.

As to claim 4, Dodson discloses the method of claim 1. However, Dodson fails to disclose a method further comprising detecting an uninstallation of one of the one or more third party applications. Jeong discloses a method further comprising detecting an uninstallation of one of the one or more third party applications (applications can be deleted (uninstallation) an application list is displayed from the applications stored in the image display apparatus (detecting an uninstallation of one or more of the third party applications), paragraphs [0042], [0277]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Dodson to include detecting an uninstallation of one of the one or more third party applications, as taught by Jeong, for the benefit of updating the display of the installed applications.

As to claims 5 and 15, Dodson discloses the method of claim 1 and Dodson and Jeong disclose the system of claim 11. However, Dodson fails to disclose a method further comprising wherein the view is a master view, a collection view or a detail view. Jeong discloses a method further comprising wherein the view is a master view, a collection view or a detail view (application list may include an icon and a brief description of the application (wherein the view is a detail view), figure 15a, paragraph [0275]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Dodson to include wherein the view is a master view, a collection view or a detail view, as taught by Jeong, for the benefit of offering view options to the user.

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55542

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Previous Supplemental Box-***-

As to claim 6, Dodson discloses the method of claim 1. However, Dodson fails to disclose a method further comprising updating information in a panel. Jeong discloses a method further comprising updating information in a panel (a second display area (panel) is changed upon receiving a command to change (comprising updating information), paragraph [0010]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Dodson to include updating information in a panel, as taught by Jeong, for the benefit of updating the panel display.

As to claims 7 and 17, Dodson discloses the method of claim 1 and Dodson and Jeong disclose the system of claim 11. However, Dodson fails to disclose a method wherein an application framework supports the one or more third party applications. Jeong discloses a method wherein an application framework supports the one or more third party applications (the framework (wherein the application framework) includes programs on which applications are based and is compatible with any application (supports the one or more third party applications), paragraph [0240]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Dodson to include wherein an application framework supports the one or more third party applications, as taught by Jeong, for the benefit of allowing third party applications to be displayed and executed in the display apparatus.

As to claims 8 and 18, Dodson discloses the method of claim 1 and Dodson and Jeong disclose the system of claim 11. However, Dodson fails to disclose a method wherein a list of the one or more third party applications is dynamically updated. Jeong discloses a method wherein a list of the one or more third party applications is dynamically updated. (when the user selects the application list view, the list of applications stored in the image display apparatus is displayed (wherein a list of the one or more third party applications is dynamically updated), paragraph [0277]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Dodson to include wherein a list of the one or more third party applications is dynamically updated, as taught by Jeong, for the benefit of displaying the current updated list of third party applications.

As to claims 9 and 19, Dodson discloses the method of claim 1 and Dodson and Jeong disclose the system of claim 11. However, Dodson fails to disclose a method wherein a preference value persist at least two last installed third party applications or at least two last used applications or at least two most frequently used applications. Jeong discloses a method wherein a preference value persist at least two last installed third party applications or at least two last used applications or at least two most frequently used applications (the application items set by the user may be edited as frequently used application items (wherein a value persist at least two most frequently used applications), paragraph [0350]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Dodson to include wherein a preference value persist at least two last installed third party applications or at least two last used applications or at least two most frequently used applications, as taught by Jeong, for the benefit of displaying the applications based on frequency of use or newness.

As to claim 13, Dodson and Jeong disclose the system of claim 11. However Dodson fails to disclose a system further comprising an input event dispatcher that allows selection of an icon for execution of a third party application. Jeong discloses a system further comprising an input event dispatcher that allows selection of an icon for execution of a third party application (the middleware mad mediate between different hardware devices or different software programs (an input event dispatcher); upon selecting an application icon the selected third party application is executed (that allows selection of an icon for execution of a third party application), figure 16b, paragraphs [0231], [0275], [0278], [0423]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Dodson to include an input event dispatcher that allows selection of an icon for execution of a third party application, as taught by Jeong, for the benefit of launching the execution of an application after a user selects an icon.

As to claim 14, Dodson and Jeong disclose the system of claim 11. However, Dodson fails to disclose a system further comprising an application framework adapted to detect an uninstallation of one of the one or more third party applications. Jeong discloses a system further comprising an application framework adapted to detect an uninstallation of one of the one or more third party applications (the framework includes programs adapted to be displayed in the image display apparatus (wherein the application framework adapted to detect); applications can be deleted (uninstallation) an application list is displayed from the applications stored in the image display apparatus (detecting an uninstallation of one or more of the third party applications), paragraphs [0042], [0240], [0241], [0277]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Dodson to include an application framework adapted to detect an uninstallation of one of the one or more third party applications, as taught by Jeong, for the benefit of keeping the display of installed third party applications up to date.

As to claim 16, Dodson and Jeong disclose the system of claim 11. However, Dodson fails to disclose a system further comprising a panel manager adapted to update information in a panel. Jeong discloses a system further comprising a panel manager adapted to update information in a panel (the display manager apparatus (a panel manager) shows the screen in a first display of the application icons (panel); when the user selects the application list view, the list of applications stored in the image display apparatus is displayed (adapted to update information in a panel), paragraph [0277], paragraphs [0475]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Dodson to include a panel manager adapted to update information in a panel, as taught by Jeong, for the benefit of keeping the display of icons current.

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

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Scott Weitzel
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	24 JAN 2014
Applicant's or agent's file reference: 6583-502-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US13/55315	International filing date *(day/month/year)*: 16 August 2013 (16.08.2013)
Applicant: Flextronics AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-502-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55315	International filing date *(day/month/year)* 16 August 2013 (16.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

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

☒ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

PCT/US2013/055315 24.01.2014

International application No.
PCT/US13/55315

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 12/00, 3/48; H04N 5/00 (2014.01)
USPC - 715/ 838, 722, 825
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) Classification(s): G06F 12/00, 17/00, 3/00; H04N 5/00 (2014.01)
USPC Classification(s): 711/118; 707/740; 715/ 838, 722, 825

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US Granted, US Applications, EP-A, EP-B, WO, JP, DE-G, DE-A, DE-T, DE-U, GB-A, FR-A); ProQuest (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; IEEE.com; Google Scholar, DVR, playlist, thumbnail generator, time stamp, video, expire, delete, unwatched recording

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2006/0280449 A1 (OGAWA, H. et al.) December 14, 2006; Abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147].	1-3, 5-6, 8, 12-14, 17-19 --- 4, 7, 9-11, 15-16, 20
Y	US 2012/0002951 A1 (REISMAN, R.) January 5, 2012; Figures 4 and 5, paragraphs [0022]-[0031], [0046]-[0048], [0094]-[0100], [0136]-[0166].	4, 7, 9, 15-16, 20
Y	US 8,006,201 B2 (BHATTACHARYA, S.) August 23, 2011; Abstract, figure 2A, column 1, line 40- column 2, line 25; column 4, line 20- column 6, line 34.	10-11

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
6 January 2014 (06.01.2014)	24 JAN 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Scott Weitzel
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	24 JAN 2014
Applicant's or agent's file reference 6583-502-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55315	16 August 2013 (16.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 12/00, 3/48; H04N 5/00 (2014.01)
USPC - 715/ 838, 722, 825

Applicant Flextronics AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	6 January 2014 (06.01.2014)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55315

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55315

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

1. Statement

Novelty (N)	Claims	4, 7, 9-11, 15-16, 20	YES
	Claims	1-3, 5-6, 8, 12-14, 17-19	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-3, 5-6, 8, 12-14, and 17-19 lack novelty under PCT Article 33(2) as being anticipated by US 2006/0280449 A1 to Ogawa, et al. (Hereinafter Ogawa).

As for claim 1, Ogawa discloses the method of operation of a thumbnail engine of an electronic device (thumbnail forming unit 118 within video display device 100, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]), comprising: accessing, by a processor associated with the electronic device (central processing unit 102 or 204 in the video display device 100, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]), a thumbnail image in a storage (thumbnails are stored in thumbnail storage unit 112, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]), the thumbnail image being associated with a media file (the thumbnail in storage unit 112 has related content in storage unit 110, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]); and upon the occurrence of a thumbnail expiration event, marking the thumbnail image for deletion (at step S416, when there is no user operation for the prescribed time period (occurrence of a thumbnail expiration event), then at step S418, the thumbnails are deleted, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]); and upon the occurrence of a delete event and determining the thumbnail image is identified for deletion, deleting the thumbnail image from the storage (at step S416, when there is no user operation for the prescribed time period (occurrence of a thumbnail expiration event), then at step S418, the thumbnails are deleted, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 2, Ogawa discloses the method of claim 1, further comprising retrieving a stored thumbnail image by a thumbnail identifier (at step S300 the central processing unit 204 determines whether a thumbnail request signal from the video display device has been received or not, and at S302 transmits the list of contents to the video display device with the content identification at step S306, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 3, Ogawa discloses the method of claim 2, further comprising: receiving requests for the thumbnail image; storing a timestamp of the receive request associated with the thumbnail image; and returning the thumbnail image (when the data and content identification is received on the side of the video display device 100 at step 406 (receiving requests for the thumbnail image), then at step S408 the thumbnail image is formed including the time point recorded at S410, at step S416 (storing a timestamp of the receive request associated with the thumbnail image), (returning the thumbnail image), when there is no user operation for the prescribed time period, then at step S418, the thumbnails are deleted, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 5, Ogawa discloses the method of claim 1, wherein the expiration event occurs upon determining the last access of the thumbnail image was prior to a threshold expiration value (at step S416, when there is no user operation for the prescribed time period (last access of the thumbnail image was prior to a threshold expiration value), then at step S418, the thumbnails are deleted, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 6, Ogawa discloses the method of claim 1, wherein the expiration event further comprises determining that the time the thumbnail was last accessed prior to the time another thumbnail was accessed at step S416, when there is no user operation for the prescribed time period (last accessed prior to the time another thumbnail was accessed), then at step S418, the thumbnails are deleted, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 8, Ogawa discloses the method of claim 1, further comprising: associating the thumbnail image with a media type in accord with a category associated with the media; and wherein marking the thumbnail image for deletion, further comprises, marking the thumbnail image for deletion upon determining the thumbnail image in accord with the media type (thumbnails for copy-never contents (media type) can be considered part of the contents (associated in accord with a category associated with the media) are deleted when a predetermined condition is satisfied, such as time passing from the last user operation within a prescribed time period (marketing the thumbnail image for deletion upon determining the thumbnail image in accord with the media), abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55315

Supplemental Box

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

-***-Continued from Box V: Citations and Explanations-***-

As for claim 12, Ogawa discloses an electronic device (thumbnail forming unit 118 within video display device 100, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]), comprising: a storage (central processing unit 102 or 204 in the video display device 100, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]); a processor (central processing unit 102 or 204 in the video display device 100, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]); wherein the storage contains a thumbnail associated with the media file (the thumbnail in storage unit 112 has related content in storage unit 110, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]); and wherein the processor automatically marks the thumbnail for deletion upon the determination of an expiration event (at step S416, when there is no user operation for the prescribed time period (occurrence of a thumbnail expiration event), then at step S418, the thumbnails are deleted, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 13, Ogawa discloses the device of claim 12, wherein the processor retrieves the thumbnail upon receiving a request associated with an identifier associated with the thumbnail (at step S300 the central processing unit 204 determines whether a thumbnail request signal from the video display device has been received or not, and at S302 transmits the list of contents to the video display device with the content identification at step S306, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 14, Ogawa discloses the device of claim 12, wherein the processor automatically marks the thumbnail for deletion upon the determination of an expiration event associated with a category of the media (for no-copy media (category of the media) at step S416, when there is no user operation for the prescribed time period (occurrence of a thumbnail expiration event), then at step S418, the thumbnails are deleted, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 17, Ogawa discloses a non-transitory computer readable medium with instructions thereon to cause a computer to perform: creating a thumbnail image associated with a media (thumbnail forming unit 118 within video display device 100 forms thumbnails associated with content received thru transmission unit 108, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147); storing a thumbnail image in a storage associated with the electronic device (thumbnails are stored in thumbnail storage unit 112, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]); associating the thumbnail image with the media (the thumbnail in storage unit 112 has related content in storage unit 110, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]); and upon the occurrence of a thumbnail expiration event marking the thumbnail image for deletion (at step S416, when there is no user operation for the prescribed time period (occurrence of a thumbnail expiration event), then at step S418, the thumbnails are deleted, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 18, Ogawa discloses the medium of claim 17, further comprising instructions to retrieve a stored thumbnail image by a thumbnail identifier (at step S300 the central processing unit 204 determines whether a thumbnail request signal from the video display device has been received or not, and at S302 transmits the list of contents to the video display device with the content identification at step S306, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

As for claim 19, Ogawa discloses the medium of claim 17, further comprising instructions to: receive a request for the thumbnail image; store a timestamp of the receive request associated with the thumbnail image; and return the thumbnail image (when the data and content identification is received on the side of the video display device 100 at step 406 (receiving requests for the thumbnail image), then at step S408 the thumbnail image is formed including the time point recorded at S410, at step S416 (storing a timestamp of the receive request associated with the thumbnail image), (returning the thumbnail image), when there is no user operation for the prescribed time period, then at step S418, the thumbnails are deleted, abstract, figures 9-12, paragraphs [0012]-[0035], [0058]-[0063], [0110]-[0147]).

Claims 4, 7, 9, 15-16, and 20 lack an inventive step under PCT Article 33(3) as being obvious over Ogawa in view of US 2012/0002951 A1 to Reisman (Hereinafter Reisman).

As for claim 4, Ogawa discloses the method of claim 1, but Ogawa fails to disclose wherein the expiration event occurs upon determining the amount of free space in the storage is below a threshold free space value. However, Reisman discloses wherein the expiration event occurs upon determining the amount of free space in the storage is below a threshold free space value (progression deletion for media content to manage storage space and choose which content is deleted to managed the storage space, including deleting part of a cache or degrading quality of media to free storage space, the storage can be managed by profiles to specify the decay rate and endpoints based off the content such as time sensitive TV broadcasts such as the news, versus routine TV broadcasts or movies, figures 4 and 5, paragraphs [0022]-[0031], [0046]-[0048], [0136]-[0166]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Ogawa to include the free space determination of Reisman for the advantage of adaptively freeing space as needed based on the content desire and need to erase the content to get the maximum use out of storage space.

As for claim 7, Ogawa discloses the method of claim 1, but Ogawa fails to disclose wherein the expiration event further comprises determining the thumbnail image is associated with a media that has been deleted. However, Reisman discloses wherein the expiration event further comprises determining the thumbnail image is associated with a media that has been deleted (the media may be deleted layer by layer until the metadata, such as the thumbnail, is marked for deletion, with the content being progressively deleted as needed, figures 4 and 5, paragraphs [0022]-[0031], [0046]-[0048], [0094]-[0100], [0136]-[0166]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Ogawa to include the free space determination of Reisman for the advantage of adaptively freeing space as needed based on the content desire and need to erase the content to get the maximum use out of storage space.

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55315

Supplemental Box

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

-***-Continued from Previous Supplemental Box-***-

As for claim 9, Ogawa discloses the method of claim 8, but Ogawa fails to disclose wherein the category associated with the media is at least one of text, audio, video frame, a plurality of video frames, live programming, media provider, media creator, still image and interactive content. However, Reisman discloses wherein the category associated with the media is at least one of text, audio, video frame, a plurality of video frames, live programming, media provider, media creator, still image and interactive content (progression deletion for media content to manage storage space and choose which content is deleted to managed the storage space, including deleting part of a cache or degrading quality of media to free storage space, the storage can be managed by profiles to specify the decay rate and endpoints based off the content such as time sensitive TV broadcasts such as the news, versus routine TV broadcasts or movies, figures 4 and 5, paragraphs [0022]-[0031], [0046]-[0048], [0136]-[0166]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Ogawa to include the free space determination of Reisman for the advantage of adaptively freeing space as needed based on the content desire and need to erase the content to get the maximum use out of storage space.

As for claim 15, Ogawa discloses the device of claim 12, but Ogawa fails to disclose wherein the processor automatically marks the thumbnail for deletion upon the determination that the associated media has been deleted. However, Reisman discloses wherein the processor automatically marks the thumbnail for deletion upon the determination that the associated media has been deleted (the media may be deleted layer by layer until the metadata, such as the thumbnail, is marked for deletion, with the content being progressively deleted as needed, figures 4 and 5, paragraphs [0022]-[0031], [0046]-[0048], [0094]-[0100], [0136]-[0166]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Ogawa to include the free space determination of Reisman for the advantage of adaptively freeing space as needed based on the content desire and need to erase the content to get the maximum use out of storage space.

As for claim 16, Ogawa discloses the device of claim 12, but Ogawa fails to disclose wherein the processor deletes the thumbnail upon determining that the thumbnail is marked for deletion and the free space in the storage is below a threshold. However, Reisman discloses wherein the processor deletes the thumbnail upon determining that the thumbnail is marked for deletion and the free space in the storage is below a threshold (progression deletion for media content to manage storage space and choose which content is deleted to managed the storage space, marking the files for deletion but not deleting until the data is actually reassigned and overwritten, including deleting part of a cache or degrading quality of media to free storage space, the storage can be managed by profiles to specify the decay rate and endpoints based off the content such as time sensitive TV broadcasts such as the news, versus routine TV broadcasts or movies, figures 4 and 5, paragraphs [0022]-[0031], [0046]-[0048], [0136]-[0166]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Ogawa to include the free space determination of Reisman for the advantage of adaptively freeing space as needed based on the content desire and need to erase the content to get the maximum use out of storage space.

As for claim 20, Ogawa discloses the medium of claim 17, but Ogawa fails to disclose further comprising instructions to cause the deletion of the thumbnail image upon determining the thumbnail image is marked for deletion and amount of free space in the storage is below a threshold free space value. However, Reisman discloses wherein the processor deletes the thumbnail upon determining that the thumbnail is marked for deletion and the free space in the storage is below a threshold (progression deletion for media content to manage storage space and choose which content is deleted to managed the storage space, marking the files for deletion but not deleting until the data is actually reassigned and overwritten, including deleting part of a cache or degrading quality of media to free storage space, the storage can be managed by profiles to specify the decay rate and endpoints based off the content such as time sensitive TV broadcasts such as the news, versus routine TV broadcasts or movies, figures 4 and 5, paragraphs [0022]-[0031], [0046]-[0048], [0136]-[0166]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the medium of Ogawa to include the free space determination of Reisman for the advantage of adaptively freeing space as needed based on the content desire and need to erase the content to get the maximum use out of storage space.

Claims 10 and 11 lack an inventive step under PCT Article 33(3) as being obvious over Ogawa in view of US 8,006,201 B2 to Bhattacharya (Hereinafter Bhattacharya).

As for claim 10, Ogawa discloses the method of claim 1, but Ogawa fails to disclose further comprising: scanning the media; extracting a raw thumbnail image from the scanned media; processing the raw thumbnail image; and performing the creating of the thumbnail image from the processed raw thumbnail image. However, Bhattacharya discloses scanning the media (at step 210 one or more parameters for thumbnails are displayed and the user starts the generation of thumbnails from a video file or files, then at step 215 the frames are extracted from the video for the thumbnails, abstract, figure 2A, column 1, line 40- column 2, line 25; column 4, line 20- column 6, line 34); extracting a raw thumbnail image from the scanned media (at step 215 the frames are extracted from the video for the thumbnails, abstract, figure 2A, column 1, line 40- column 2, line 25; column 4, line 20- column 6, line 34); processing the raw thumbnail image (one or more parses and decoders can be used for extracting the frames for each thumbnail, abstract, figure 2A, column 1, line 40- column 2, line 25; column 4, line 20- column 6, line 34); and performing the creating of the thumbnail image from the processed raw thumbnail image (at step 220 or step 255 the thumbnails are stored in a buffer for the video files, abstract, figure 2A, column 1, line 40- column 2, line 25; column 4, line 20- column 6, line 34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Ogawa to include the thumbnail processing of Bhattacharya for the advantage of being able to automate the thumbnail process to extract raw images from a video or media clip and create a thumbnail without human intervention.

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

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55315

Supplemental Box

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

-***-Continued from Previous Supplemental Box-***-

As for claim 11, Ogawa, in view of Bhattacharya, discloses the method of claim 10, wherein the processing of the raw thumbnail image comprises at least one of scaling, cropping and rotating. However, Bhattacharya discloses processing of the raw thumbnail image comprises at least one of scaling, cropping and rotating (the size of the thumbnail and the screen size can be configured for example the X and Y coordinates can be varied for the screen and thumbnail (cropping), abstract, figure 2A, column 1, line 40- column 2, line 25; column 4, line 20- column 6, line 34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Ogawa to include the thumbnail processing of Bhattacharya for the advantage of being able to automate the thumbnail process to extract raw images from a video or media clip and create a thumbnail without human intervention.

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

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: SCOTT WEITZEL
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	02 DEC 2013
Applicant's or agent's file reference 6583-503-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/055317	International filing date *(day/month/year)* 16 August 2013
Applicant FLEXTRONICS AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-503-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055317	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

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

☒ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055317

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 7/00 (2013.01)
USPC - 725/46
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04N 7/00, 7/025, 7/10 (2013.01)
USPC -725/37, 46, 50

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - H04N 7/00, 7/025, 7/10 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Orbit, Google Patents, Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2008/0022309 A1 (BEGEJA et al) 24 January 2008 (24.01.2008) entire document	1-20
Y	EP 1 770 956 A1 (BRITISH TELECOMMUNICATIONS) 04 April 2007 (04.04.2007) entire document	1-20
Y	US 2010/0161506 A1 (BOSENICK et al) 24 June 2010 (24.06.2010) entire document	6, 8, 14, 20
A	US 2005/0188318 A1 (TAMIR et al) 25 August 2005 (25.08.2005) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
17 November 2013	02 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: SCOTT WEITZEL
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	02 DEC 2013

Applicant's or agent's file reference	FOR FURTHER ACTION
6583-503-PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055317	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 7/00 (2013.01)
USPC - 725/46

Applicant FLEXTRONICS AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	17 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055317

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055317

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

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-5, 7, 9-13, 15-19 lack an inventive step under PCT Article 33(3) as being obvious over Begeja et al., hereinafter referred to as Begeja and in view of British Telecommunications, hereinafter referred to as British Telecom.

Regarding claim 1, Begeja discloses a method (a method for providing a personalized channel, abstract, fig. 1, 3), comprising:
a time period value, of a television (personalized TV channel for a customer using a TV 236 with a set-top box 332, para 0041, see fig. 3 [server 243 indirectly coupled to the TV 236, see fig. 3]; the broadcast server 243 will begin to track the viewing habit of the viewer, over a period of time [configurable reporting period value], para 0044);
recording indicia of a number of events associated with the television (viewing habit tracks the channels the customer dwells at, para 0044);
formatting indicia of the number of events (developing a predictive model for the specific viewer, para 0044);
storing the information (storing the predictive model in the profile database 350 [user activity information], para 0044).
Begeja lacks the teaching of setting a configurable reporting period value; setting a period value to an initial value for formatting a report; upon determining the reporting period has ended, sending the report to a server.
British Telecom is in the field of context aware computing and provides activity based information (abstract) and teaches setting a configurable period value to an initial value for formatting a report; upon determining the reporting period has ended, sending the report to a server (the activity related data is accumulated over a period and forwarded to the server after a period [that is end of period is detected and then start of next period i.e. initial is detected], device 301 storing activity related data and then uploading the data to the central server 304 at the end of the day [configurable data as its end of day or when a process is triggered], para 0052).
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

Regarding claim 12, Begeja discloses a system for reporting television activity (system for providing a personalized channel [channel is personalized based on customer preferences so reporting television activity], abstract, fig. 1), comprising:
a television (personalized TV channel for a customer using a TV 236 with a set-top box 332, para 0041, see fig. 3);
a server (broadcast server 243, para 0044);
a network, operable to enable data communication between the television and the server (server 243 indirectly coupled to the TV 236, see fig. 3);
the television, further comprising (the TV 236 along with the whole set top box and server comprise, see fig. 3):
an activity monitor (service provider gathers sufficient channel selection information, para 0044);
a information generator (service provider develops a predictive e model for the specific viewer, para 0044); and
a storage (profile database 350, para 0044);
wherein the activity monitor collects activity data associated with the television (service provider gathers sufficient channel selection information [associated with the television), para 0044);
wherein the information generator generates information, each information being associated with collected activity data during a activity tracking period (predictive model developed based on the sufficient channel selection to determine user interest in variety of programs, para 0044);
wherein the storage is operable to store information (storing the predictive model in the profile database 350, para 0044).
Begeja lacks the teaching of a report generation, wherein the television is operable to send stored reports to the server.
British Telecom is in the field of context aware computing and provides activity based information (abstract) and teaches storing multiple reports (the device 301 store activity related data for multiple locations [different reports for different locations], para 0052), sending the report to a server (the activity related data is accumulated over a period and forwarded to the server after a period [that is end of period is detected and then start of next period i.e. initial is detected], device 301 storing activity related data and then uploading the data to the central server 304 at the end of the day, para 0052).
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055317

Supplemental Box

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

Regarding claim 16, Begeja teaches a television device (TV 236 with set top box, broadcast server, see fig. 1, 3), comprising:
a processor (set top box has a processor, para 0039);
a storage (profile database 350, para 0044);
a network connection (IP/MPLS core network 210, see fig. 3);
wherein the processor is operable to detect a number of user activities and cause an indicia of the user activities to be stored (personalized TV channel for a customer using a TV 236 with a set-top box 332, para 0041, see fig. 3; the broadcast server 243 will begin to track the viewing habit of the viewer, over a period of time [configurable reporting period value], para 0044);
wherein the processor is further operable to generate information of the stored user activities determined to be associated with a activity period (the broadcast server 243 will begin to track the viewing habit of the viewer, over a period of time and a predictive model is generated, para 0044); and
wherein the network connection is operable to connect to a network (server 243 indirectly coupled to the TV 236, see fig. 3; IP/MPLS core network 210, see fig. 3).
Begeja lacks the teaching of transmitting a report to a server.
British Telecom teaches sending a report to a server (the activity related data is accumulated over a period and forwarded to the server after a period [that is end of period is detected and then start of next period i.e. initial is detected], device 301 storing activity related data and then uploading the data to the central server 304 at the end of the day, para 0052).
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

Regarding claim 2, Begeja lacks the teaching upon determining the reporting period has ended, performing the formatting of the report and then performing the sending of the report.
British Telecom teaches upon determining the reporting period has ended, performing the sending of the report (the activity related data is accumulated over a period and forwarded to the server after a period [that is end of period is detected and then start of next period i.e. initial is detected], device 301 storing activity related data and then uploading the data to the central server 304 at the end of the day, para 0052) and also teaches formatting the report (updating [formatting] the standard template periodically, para 0052). Furthermore, defining the formatting to occur in a specific way would have been a matter of design choice. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

Regarding claim 3, Begeja lacks the teaching wherein determining the reporting period has ended occurs upon startup of the television.
However, Begeja teaches determining the reporting occurs on a television (personalized TV channel for a customer using a TV 236 with a set-top box 332, para 0041, see fig. 3; the broadcast server 243 will begin to track the viewing habit of the viewer, over a period of time, para 0044). Further, British Telecom teaches determining the reporting period has ended based on the start of a new process (new process activated on the device triggers a report to be sent to the server [every time a new process starts, a report is sent i.e. a new report or an older report being ended], para 0052). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

Regarding claim 4, Begeja lacks the teaching of receiving, by the television, a new reporting period value; and setting the configurable reporting period value in accord with the updated reporting period value.
However, Begeja teaches period value, of a television (personalized TV channel for a customer using a TV 236 with a set-top box 332, para 0041, see fig. 3; the broadcast server 243 will begin to track the viewing habit of the viewer, over a period of time [configurable reporting period value], para 0044).
Further, British Telecom teaches setting a configurable reporting period value and updating the reporting period value (new process activated may trigger the report this to the server 304 [based on the time duration of the new process being triggered, the report is real-time so the reporting period is variable and configurable]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate updated reporting features in the invention of Begeja for real time reporting.

Regarding claim 5, Begeja teaches storing of information in a database (storing the predictive model in the profile database 350, para 0044). Begeja lacks the teaching wherein the storing of the report, further comprises, the storing of the report in a database along with an additional report associated with an additional reporting period that is different from the reporting period.
British Telecom teaches storing of multiple reports with different reporting periods (standard template is updated periodically and forwarded to a server after a period, each report is sent for every time a process is triggered [all these are periodic updates so each is reporting at a different period], para 0052). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

Regarding claim 7, Begeja lacks the teaching wherein sending further comprises sending the report and the additional report. British Telecom teaches sending the report and additional report (the recorded processes are time stamped sending to the server [multiple reports], para 0052). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

Regarding claim 9, Begeja lacks the teaching of adding a sequential number to the report.
British Telecom teaches adding a sequential number to each report (the recorded processes are time stamped [time stamped is that they are in a sequential order] sending to the server [multiple reports], para 0052). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055317

Supplemental Box

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

Regarding claim 10, Begeja lacks the teaching of determining a timestamp of the report based on at least one of (i) the time the report was sent to the server, (ii) the sequential number and (iii) the configurable reporting period value.
British Telecom teaches time stamping the report based on the time the report was sent to the server (the report is time stamped in order to aid processing by the central server, and the data sent includes the length of time the process was active, para 0052). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the timestamp feature in the invention of Begeja for the purpose of aiding the processing by the central server (British Telecom, para 0052).

Regarding claim 11, Begeja lacks the teaching of determining a timestamp of the report based on at the difference between the sequential number of the report and the sequential number of another report. British Telecom teaches time stamping the report based on the time the report was sent to the server (the report is time stamped in order to aid processing by the central server, and the data sent includes the length of time the process was active, para 0052). Furthermore, defining a timestamp based on a specific condition would have been a matter of design choice. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the timestamp feature in the invention of Begeja for the purpose of aiding the processing by the central server (British Telecom, para 0052).

Regarding claim 13, Begeja lacks the teaching wherein the report generator is further operable to generate ones of the number of reports with a sequential report number.
British Telecom teaches adding a sequential number to each report (the recorded processes are time stamped [time stamped is that they are in a sequential order] sending to the server [multiple reports], para 0052). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

Regarding claim 15, Begeja lacks the teaching of a receiver, operable to receive a new reporting period value from the server; and the generator is further operable to set the reporting period in accord with the new reporting period.
However, Begeja teaches period value, of a television (personalized TV channel for a customer using a TV 236 with a set-top box 332, para 0041, see fig. 3; the broadcast server 243 will begin to track the viewing habit of the viewer, over a period of time [configurable reporting period value], para 0044).
Further, British Telecom teaches setting a configurable reporting period value and updating the reporting period value (new process activated may trigger the report this to the server 304 [based on the time duration of the new process being triggered, the report is real-time so the reporting period is variable and configurable]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate updated reporting features in the invention of Begeja for real time reporting.

Regarding claim 17, Begeja lacks the teaching of a receiver, operable to receive a new reporting period and causing the reporting period to be set to a value in accord with the new reporting period.
However, Begeja teaches a period value, of a television (personalized TV channel for a customer using a TV 236 with a set-top box 332, para 0041, see fig. 3; the broadcast server 243 will begin to track the viewing habit of the viewer, over a period of time [configurable reporting period value], para 0044).
Further, British Telecom teaches setting a configurable reporting period value and updating the reporting period value (new process activated may trigger the report this to the server 304 [based on the time duration of the new process being triggered, the report is real-time so the reporting period is variable and configurable]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate updated reporting features in the invention of Begeja for real time reporting.

Regarding claim 18, Begeja lacks the teaching wherein the processor is further operable to generate a report incremented from the last report generated.
British Telecom teaches generate a report incremented from the last report generated (the report is time stamped in order to aid processing by the central server [timestamped is a report incremented from last report], and the data sent includes the length of time the process was active, para 0052). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the timestamp feature in the invention of Begeja for the purpose of aiding the processing by the central server (British Telecom, para 0052).

Regarding claim 19, Begeja teaches wherein the storage is operable to store the information (storing the predictive model in the profile database 350, para 0044).
Begeja lacks the teaching of a report generation.
British Telecom is in the field of context aware computing and provides activity based information (abstract) and teaches sending the report to a server (the activity related data is accumulated over a period and forwarded to the server after a period [that is end of period is detected and then start of next period i.e. initial is detected], device 301 storing activity related data and then uploading the data to the central server 304 at the end of the day, para 0052).
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055317

Supplemental Box

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

Claims 6, 8, 14, 20 lack an inventive step under PCT Article 33(3) as being obvious over Begeja and in view of British Telecom and further in view of Bosenick et al., hereinafter referred to as Bosenick.

Regarding claim 6, Begeja lacks the teaching upon determining the available storage is below a threshold, deleting at least one report in the database.
Bosenick is in the field of providing logging and reporting of user-device interaction (abstract, title) and teaches deleting logfiles after determining the server successfully received the logfiles (all existing logfiles are deleted on the mobile device after uploading the logfiles on the mobile device to the server, para 0051). Furthermore, deleting a file based on low storage space was well known in the art and the specifics would have been a matter of design choice. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Bosenick to incorporate the deleting features in the invention of Begeja for the purpose of installing new application program or configuration files on the mobile device (Bosenick, para 0051).

Regarding claim 8, Begeja lacks the teaching wherein upon determining the server has successfully received the report, deleting the report.
British Telecom teaches sending the report to a server (the activity related data is accumulated over a period and forwarded to the server after a period [that is end of period is detected and then start of next period i.e. initial is detected], device 301 storing activity related data and then uploading the data to the central server 304 at the end of the day, para 0052).
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).
Further, Bosenick is in the field of providing logging and reporting of user-device interaction (abstract, title) and teaches deleting logfiles after determining the server successfully received the logfiles (all existing logfiles are deleted on the mobile device after uploading the logfiles on the mobile device to the server, para 0051). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Bosenick to incorporate the deleting features in the invention of Begeja for the purpose of installing new application program or configuration files on the mobile device (Bosenick, para 0051).

Regarding claim 14, Begeja lacks the teaching wherein the television is further operable to delete from storage any of the stored reports successfully sent to the server.
British Telecom teaches sending the report to a server (the activity related data is accumulated over a period and forwarded to the server after a period [that is end of period is detected and then start of next period i.e. initial is detected], device 301 storing activity related data and then uploading the data to the central server 304 at the end of the day, para 0052).
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).
Further, Bosenick is in the field of providing logging and reporting of user-device interaction (abstract, title) and teaches deleting logfiles after determining the server successfully received the logfiles (all existing logfiles are deleted on the mobile device after uploading the logfiles on the mobile device to the server, para 0051). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Bosenick to incorporate the deleting features in the invention of Begeja for the purpose of installing new application program or configuration files on the mobile device (Bosenick, para 0051).

Regarding claim 20, Begeja lacks the teaching wherein the report is deleted from the storage upon the network connection successfully transmitting the report to the server.
British Telecom teaches sending the report to a server (the activity related data is accumulated over a period and forwarded to the server after a period [that is end of period is detected and then start of next period i.e. initial is detected], device 301 storing activity related data and then uploading the data to the central server 304 at the end of the day, para 0052).
Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of British Telecom to incorporate the reporting features in the invention of Begeja for the purpose of uploading activity related data to the central server periodically (British Telecom, para 0052).
Further, Bosenick is in the field of providing logging and reporting of user-device interaction (abstract, title) and teaches deleting logfiles after determining the server successfully received the logfiles (all existing logfiles are deleted on the mobile device after uploading the logfiles on the mobile device to the server, para 0051). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Bosenick to incorporate the deleting features in the invention of Begeja for the purpose of installing new application program or configuration files on the mobile device (Bosenick, para 0051).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: SCOTT WEITZEL
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	09 JAN 2014
Applicant's or agent's file reference: 6583-504-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US2013/055318	International filing date *(day/month/year)*: 16 August 2013
Applicant: FLEXTRONICS AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-504-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055318	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

   ☒ the text is approved as submitted by the applicant.

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

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

   ☒ the text is approved as submitted by the applicant.

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

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

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

   ☒ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055318

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 17/00 (2013.01)
USPC - 725/9
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04L 67/22; H04N 7/16, 7/173, 17/00, 21/20, 21/23, 21/47 (2013.01)
USPC - 348/180; 725/9, 14, 39, 61

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - H04L 41/509, 67/22; H04N 21/4667 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase, Google Patents, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	WO 01/06784 A2 (KNEE et al) 25 January 2001 (25.01.2001) entire document	1-20
Y	US 7,822,716 B2 (LEE et al) 26 October 2010 (26.10.2010) entire document	1-20
Y	US 2007/0028282 A1 (KOOIJMANS et al) 01 February 2007 (01.02.2007) entire document	2, 3, 11, 12
Y	US 2005/0232210 A1 (KARAOGUZ et al) 20 October 2005 (20.10.2005) entire document	4, 5, 13, 14

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
19 December 2013	09 JAN 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: SCOTT WEITZEL
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	09 JAN 2014
Applicant's or agent's file reference 6583-504-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055318	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 17/00 (2013.01)
USPC - 725/9

Applicant FLEXTRONICS AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	19 December 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055318

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055318

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

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1, 6-10, 15-20 lack an inventive step under PCT Article 33(3) as being obvious over Knee et al. (hereafter Knee) in view of Lee et al. (hereafter Lee).

Regarding claim 1, Knee discloses a method of reporting status of a television (display 100 in Fig. 6 can be a television as described on pg. 20, lns. 1-8; pg. 10, ln. 30 – pg. 11, ln. 28 describes collecting data on the user's activities with respect to the interactive television applications, which is part of the monitoring of Fig. 10, step 134, described in pg. 25, lns. 7-10), comprising:
formatting a report having at least one attribute of the television (Fig. 10, step 136; pg. 25, lns. 11-21 regarding a report containing information on the user's interactions with the interactive television program guide and other user activities; one television attribute is the user's interaction with it);
storing the report in a non-volatile memory (control circuitry 94 can include memory or other storage devices, such as a hard disk or random-access memory, both of which are types of non-volatile memory, described on pg. 19, lns. 11-32) associated with the television (100; Fig. 6; pg. 19, lns. 11-32 describes using the control circuitry 92 for monitoring the interactive television applications, where the information may be stored on the storage control circuitry 94);
transmitting the report to a receiver (data collection facility 13; Fig. 10, step 138 shows a transmission of the report where it is received by a data collection facility, described on pg. 25, lns. 5-21).
Knee fails to explicitly disclose upon successfully transmitting the report to the receiver, deleting the report from the non-volatile memory.
Lee teaches of a method for deleting user metadata for a TV-Anytime system, upon successfully transmitting a report to a receiver, deleting the report from a non-volatile memory (Fig. 1 shows metadata related to the usage of a TV-Anytime system, described in col. 3, lns. 27-34, where a user has the ability to delete transmitted data; Fig. 2 shows the transmission for data between the metadata service and a user client, while Fig. 8 shows code for deleting user information that has been already transmitted to a server as described in col. 5, lns. 26-39; the metadata is the report, the receiver is the client, and the metadata service includes memory to store the data; common memory is a hard disk or flash memory as part of a server, where these types of memory are considered nonvolatile).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include deleting a successfully transmitted report as taught by Lee as this frees up the memory by removing the report data. Furthermore, once the data is successfully transmitted, there is generally no reason to keep it within the TV memory, especially since the receiver is generally backed up in case of data loss.

Regarding claim 6, Knee as modified discloses the method of claim 1, and Knee further discloses wherein the report comprises one or more sets of data (Fig. 10, step 136; pg. 25, lns. 11-21 regarding a report containing information on the user's interactions with the interactive television program guide and other user activities),
the sets of data selected from network information (pg. 7, lns. 17-27 describes the communication network 34 can be formed from different suitable types, such as the internet, the public switched telephone network, and a packet-based network; pg. 11, lns. 17-28 describes collecting the information on the user's equipment and reporting it back for processing; as is common with data reports, the settings of the user's equipment has generally included in data sets, so that the processing facility knows what equipment and settings the data was gathered),
running application information (pg. 11, lns. 9-12 regarding information may also be gathered on which selectable on-screen interactive television application options the user selects when interacting with interactive television applications; this information can go into the report of Fig. 10, step 136 as described on pg. 25, lns. 11-21), and
media consumption information (pg. 25, lns. 5-10 regarding the user's interactions with the interactive television program guide and other activities (e.g., television watching activities) may be monitored; this information can go into the report of Fig. 10, step 136 as described on pg. 25, lns. 11-21).

Regarding claim 7, Knee as modified discloses the method of claim 6, and Knee further discloses wherein network information, further comprises, one or more of connection type, connection sub-type, and IP address of the television (pg. 7, lns. 17-27 describes the communication network 34 can be formed from different suitable connection types, such as the internet, the public switched telephone network, and a packet-based network; pg. 11, lns. 17-28 describes collecting the information on the user's equipment and reporting it back for processing; as is common with data reports, the settings of the user's equipment has generally included in data sets, so that the processing facility knows what equipment and settings the data was gathered).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055318

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Claims 11-15 and 17-20 are objected to under PCT Rule 66.2(a)(v) as lacking clarity under PCT Article 6 because claims 11-15 and 17-20 are indefinite for the following reason(s):

Claims 11-15 are directed to a "method", but depend upon claim 10, which recites a "television", while "method" claims 17-20 depend upon claim 16, which is directed to a "non-transitory computer medium". In this written opinion, claims 11-15 are corrected by replacing "method" with --television--, while claims 17-20 are corrected by replacing "method" with --computer medium--.

VIZIO Ex. 1002, Page 2876 of 3573
VIZIO v. MMT, IPR2024-00722

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055318

Supplemental Box

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

Regarding claim 8, Knee as modified discloses the method of claim 6, and Knee further discloses wherein the running application information, further comprises, one or more of package name, application name, application version, last used information, last used duration, cumulative use, installed timestamp, uninstalled timestamp, last updated timestamp, storage size of the application, and storage size of user data associated with the application (pg. 11, lns. 9-12 describes information may also be gathered on which selectable on-screen interactive television application options the user selects when interacting with interactive television applications; some examples of application names are shown in Fig. 7).

Regarding claim 9, Knee as modified discloses the method of claim 6, and Knee further discloses wherein the media consumption information, further comprises, one or more of cumulative channel viewing time, last watched events, last watched videos, and cumulative usage (pg. 25, lns. 5-10 regarding the user's interactions with the interactive television program guide and other activities (e.g., television watching activities) may be monitored; pg. 11, lns. 1-9 describes information may be gathered regarding which television channels the user tunes to and the times at which the user watches each television channel to monitor the user's viewing habits).

Regarding claim 10, Knee discloses a television (display 100; Fig. 6; pg. 20, lns. 1-8 describes the display 100 may be a television), comprising:
a processor (control circuitry 94; Fig. 6; pg. 19, lns. 11-13 regarding control circuitry 94 may be based on any suitable processor such as a microprocessor, microcontroller, etc);
a non-volatile memory (control circuitry 94 can include memory or other storage devices, such as a hard disk or random-access memory, both of which are types of non-volatile memory, described on pg. 19, lns. 11-32);
a network connection (communications network 34; pg. 7, lns. 17-27);
whereby the processor (94) is operable to format a report having at least one attribute of the television (100; Fig. 10, step 136; pg. 25, lns. 11-21 regarding a report containing information on the user's interactions with the interactive television program guide and other user activities; one television attribute is the user's interaction with it) and store the report in a non-volatile memory (94) associated with the television (100; Fig. 6; pg. 19, lns. 11-32 describes using the control circuitry 92 for monitoring the interactive television applications, where the information may be stored on the storage control circuitry 94);
the network connection (34) is operable to transmit the report to a server (data collection facility 13 in Fig. 1; Fig. 10, step 138 shows a means for transmitting the report to the data collection facility, described on pg. 25, lns. 5-21).
Knee fails to explicitly disclose upon successfully transmitting the report to the receiver, the processor causes the report to be deleted from the non-volatile memory.
Lee teaches of a method for deleting user metadata for a TV-Anytime system, upon successfully transmitting a report to a receiver, deleting the report from a non-volatile memory (Fig. 1 shows metadata related to the usage of a TV-Anytime system, described in col. 3, lns. 27-34, where a user has the ability to delete transmitted data; Fig. 2 shows the transmission for data between the metadata service and a user client, while Fig. 8 shows code for deleting user information that has been already transmitted to a server as described in col. 5, lns. 26-39; the metadata is the report, the receiver is the client, and the metadata service includes memory to store the data; common memory is a hard disk or flash memory as part of a server, where these types of memory are considered nonvolatile).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include deleting a successfully transmitted report as taught by Lee as this frees up the memory by removing the report data. Furthermore, once the data is successfully transmitted, there is generally no reason to keep it within the TV memory, especially since the receiver is generally backed up in case of data loss.

Regarding claim 15, Knee as modified discloses the television of claim 10, and Knee further discloses wherein the report comprises one or more sets of data (Fig. 10, step 136; pg. 25, lns. 11-21 regarding a report containing information on the user's interactions with the interactive television program guide and other user activities),
the sets of data selected from network information (pg. 7, lns. 17-27 describes the communication network 34 can be formed from different suitable types, such as the internet, the public switched telephone network, and a packet-based network; pg. 11, lns. 17-28 describes collecting the information on the user's equipment and reporting it back for processing; as is common with data reports, the settings of the user's equipment has generally included in data sets, so that the processing facility knows what equipment and settings the data was gathered),
running application information (pg. 11, lns. 9-12 regarding information may also be gathered on which selectable on-screen interactive television application options the user selects when interacting with interactive television applications; this information can go into the report of Fig. 10, step 136 as described on pg. 25, lns. 11-21), and
media consumption information (pg. 25, lns. 5-10 regarding the user's interactions with the interactive television program guide and other activities (e.g., television watching activities) may be monitored; this information can go into the report of Fig. 10, step 136 as described on pg. 25, lns. 11-21).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055318

Supplemental Box

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

Regarding claim 16, Knee discloses a non-transitory computer medium with instructions thereof that when executed by a machine cause the machine to perform (pg. 19, lns. 11-19):
formatting a report having at least one attribute of the television (Fig. 10, step 136; pg. 25, lns. 11-21 regarding a report containing information on the user's interactions with the interactive television program guide and other user activities; one television attribute is the user's interaction with it);
storing the report in a non-volatile memory (control circuitry 94 can include memory or other storage devices, such as a hard disk or random-access memory, both of which are types of non-volatile memory, described on pg. 19, lns. 11-32) associated with the television (100; Fig. 6; pg. 19, lns. 11-32 describes using the control circuitry 92 for monitoring the interactive television applications, where the information may be stored on the storage control circuitry 94);
transmitting the report to a receiver (data collection facility 13; Fig. 10, step 138 shows a transmission of the report where it is received by a data collection facility, described on pg. 25, lns. 5-21).
Knee fails to explicitly disclose upon successfully transmitting the report to the receiver, deleting the report from the non-volatile memory.
Lee teaches of a method for deleting user metadata for a TV-Anytime system, upon successfully transmitting a report to a receiver, deleting the report from a non-volatile memory (Fig. 1 shows metadata related to the usage of a TV-Anytime system, described in col. 3, lns. 27-34, where a user has the ability to delete transmitted data; Fig. 2 shows the transmission for data between the metadata service and a user client, while Fig. 8 shows code for deleting user information that has been already transmitted to a server as described in col. 5, lns. 26-39; the metadata is the report, the receiver is the client, and the metadata service includes memory to store the data; common memory is a hard disk or flash memory as part of a server, where these types of memory are considered nonvolatile).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include deleting a successfully transmitted report as taught by Lee as this frees up the memory by removing the report data. Furthermore, once the data is successfully transmitted, there is generally no reason to keep it within the TV memory, especially since the receiver is generally backed up in case of data loss.

Regarding claims 17-20, it is noted that these claims have same limitations as claims 6-9, repectively. Therefore, Knee modified by Lee similarly disclose claims 17-20 as discussed for claims 6-9, respectively.

Claims 2, 3, 11, 12 lack an inventive step under PCT Article 33(3) as being obvious over Knee et al. (hereafter Knee) in view of Lee et al. (hereafter Lee) and in further view of Kooijmans et al. (hereafter Kooijmans).

Regarding claim 2, Knee as modified discloses the method of claim 1, but Knee fails to explicitly disclose formatting the report with one-time data, the first-time data being associated with an initial power-up of the television.
Kooijmans teaches of a startup method for a television apparatus, comprising formatting a report with one-time data (Fig. 2 shows a TV system with a processor 10, non-volatile memory 20, and memory 40; para. 0019 describes meta-data associated with the last channel played on the TV, where the meta-data is stored in memory 20 as described in para. 0025; the meta-data is the report), the first-time data being associated with an initial power-up of the television (Fig. 1B shows a startup sequence of a TV, where the meta-data is retrieved from the memory 20 as described in para. 0025).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include a report with data associated with the power-up of the TV as taught by Kooijmans as this allows the settings of the TV to be sent upon startup in order to start the TV correctly.

Regarding claim 3, Knee as modified discloses the method of claim 2, but Knee fails to explicitly disclose upon determining the report contains first-time data, omitting the deleting of the report from the non-volatile memory.
Kooijmans teaches of a startup method for a television apparatus, upon determining the report contains first-time data, omitting the deleting of the report from the non-volatile memory (Fig. 1B shows the Point B, where meta-data is retrieved form memory 20, which remains in memory for a period of time until Point C where the user gains full control of the TV; in essence, the meta-data remains in memory for the power-up period, and is not deleted until Point C, when the meta-data is no longer needed as part of the power-up).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include omitting a deletion of a report from memory during the power up as taught by Kooijmans as this data is needed during the initial power-up, therefore it does not make sense to delete the data until it is no longer needed.

Regarding claim 11, Knee as modified discloses the computer medium of claim 10, but Knee fails to explicitly disclose the processor formatting the report with one-time data, the first-time data being associated with an initial power-up of the television.
Kooijmans teaches of a startup method for a television apparatus, comprising a processor (10) formatting a report with one-time data (Fig. 2 shows a TV system with a processor 10, non-volatile memory 20, and memory 40; para. 0019 describes meta-data associated with the last channel played on the TV, where the meta-data is stored in memory 20 as described in para. 0025; the meta-data is the report), the first-time data being associated with an initial power-up of a television (Fig. 1B shows a startup sequence of a TV, where the meta-data is retrieved from the memory 20 as described in para. 0025).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include a report with data associated with the power-up of the TV as taught by Kooijmans as this allows the settings of the TV to be sent upon startup in order to start the TV correctly.

Regarding claim 12, Knee as modified discloses the computer medium of claim 11, but Knee fails to explicitly disclose upon the processor determining the report contains first-time data, the processor omits the deleting of the report from the non-volatile memory.
Kooijmans teaches of a startup method for a television apparatus, upon the processor (10) determining the report contains first-time data, the processor omits the deleting of the report from the non-volatile memory (Fig. 1B shows the Point B, where meta-data is retrieved form memory 20, which remains in memory for a period of time until Point C where the user gains full control of the TV; in essence, the meta-data remains in memory for the power-up period, and is not deleted until Point C, when the meta-data is no longer needed as part of the power-up).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include omitting a deletion of a report from memory during the power up as taught by Kooijmans as this data is needed during the initial power-up, therefore it does not make sense to delete the data until it is no longer needed.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055318

Supplemental Box

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

Claims 4, 5, 13, 14 lack an inventive step under PCT Article 33(3) as being obvious over Knee et al. (hereafter Knee) in view of Lee et al. (hereafter Lee) and in further view of Karaoguz et al. (hereafter Karaoguz).

Regarding claims 4, 5, Knee as modified discloses the method of claim 1, but Knee fails to explicitly disclose [claim 4] wherein the report further comprises a set core data associated with substantially static attributes of the television; and,
[claim 5] wherein the substantially static attributes of the television comprise one or more of software version, model, make, manufacturer, device identifier, and MAC address.
Karaoguz teaches of aggregation of multimedia storage, [claim 4] wherein a report further comprises a set core data associated with substantially static attributes of a television (Fig. 1; para. 0022 describes using a television over a broadband gateway for the aggregation of multimedia information storage; para. 0088 describes providing information identifying a storage resource such as a MAC address, manufacturer identifier, and model identifier; essentially, the information is the reported data, where information related to the storage can be the storage on different devices, including a television); and,
[claim 5] wherein the substantially static attributes of the television comprise one or more of software version, model, make, manufacturer, device identifier, and MAC address (Fig. 1; para. 0022 describes using a television over a broadband gateway for the aggregation of multimedia information storage; para. 0088 describes providing information identifying a storage resource such as a MAC address, manufacturer identifier, and model identifier; essentially, the information is the reported data, where information related to the storage can be the storage on different devices, including a television).
It would have been obvious to one of skill in the art at the time of invention to modify the invention of Knee to include report data that includes a MAC address, manufacturer and model as taught by Karaoguz as this allows the data to include a point of reference from which knowledge can be gained from analyzing the data. For instance, by knowing the basic data of the television being used, the analysis of data can determine bugs in the system, correlations between what type of programs are watched by purchasers of certain TVs, and so forth.

Regarding claims 13 and 14, it is noted that these claims have same limitations as claims 4 and 5, repectively. Therefore, Knee modified by Lee sand in further view of Karaoguz similarly disclose claims 13 and 14 as discussed for claims 4 and 5, respectively.

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: SCOTT WEITZEL
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	11 MAR 2014
Applicant's or agent's file reference: 6583-505-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US2013/055319	International filing date *(day/month/year)*: 16 August 2013
Applicant: FLEXTRONICS AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-505-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055319	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

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

☒ as suggested by the applicant.

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

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055319

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 7/00 (2014.01)
USPC - 725/115
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - G06F 11/14; G06Q 30/00; H04N 5/00, 7/00 (2014.01)
USPC - 386/291; 725/9, 37, 115

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G06F 11/14; H04N 5/00, 7/00 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
PatBase, Google Patents, Google Scholar

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X -- Y	US 2010/0086277 A1 (CRANER) 08 April 2010 (08.04.2010) entire document.	1, 2, 8, 9, 15, 16 ---- 3-7, 10-14, 17-20
Y	US 2012/0079096 A1 (COWAN et al) 29 March 2012 (29.03.2012) entire document.	3, 10, 17
Y	EP 1031929 A2 (LARNER et al) 30 August 2000 (30.08.2000) entire document.	4-7, 11-14, 18-20
Y	EP 1067458 A1 (BEUQUE et al) 10 January 2001 (10.01.2001) entire document.	6, 7, 13, 14, 20
A	US 2007/0143809 A1 (CHEN et al) 21 June 2007 (21.06.2007) entire document.	1-20
A	US 2009/0293078 A1 (PIRANI et al) 26 November 2009 (26.11.2009) entire document.	1-20
A	US 2010/0180292 A1 (EPSTEIN et al) 15 July 2010 (15.07.2010) entire document.	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
15 February 2014	11 MAR 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: SCOTT WEITZEL
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	11 MAR 2014
Applicant's or agent's file reference 6583-505-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055319	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 7/00 (2014.01)
USPC - 725/115

Applicant FLEXTRONICS AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	15 February 2014	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055319

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055319

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

1. Statement

Novelty (N)	Claims	2-7, 9-14, 16-20	YES
	Claims	1, 8, 15	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1, 8, 15 lack novelty under PCT Article 33(2) as being anticipated by Craner.

Regarding claims 1, 8, 15 Craner discloses a method of managing television usage reports (The present invention relates to managing recorded television programs [managing television programs is interpreted as managing television usage reports. Report includes data associated with use of TV, users, applications and other aspects, see PCT application, para.0155], and more particularly to deleting viewed portions of recorded programs, para.0001, 0002), comprising:
[Claim 8] A television (User equipment 110 includes television equipment such as a television, para.0036), comprising a processor (the user equipment 110 includes a control circuitry 116 comprising processors, para.0040, Fig.1); and a storage (the user equipment 110 includes a recording device 118 [interpreted as storage] for storing content, para.0041, Fig.1);
[Claim 15] A non-transitory computer readable medium with instructions that when executed by a machine (the control circuitry 116 includes memory storing instructions executed by the hardware, para.0040), cause the machine to perform:
storing a number of reports on a data storage device associated with a television (the user equipment 110 is a television which includes a recording device 118 [interpreted as data storage device] for storing television programs or video-on-demand content [i.e. storing reports associated with a television], para.0037, 0042, Fig.1);
determining the number of reports in the data storage device has reached a threshold (recorded programs are stored on recording device 118. A storage space indicator 532 shows the amount of storage space available for storing programs. It can be determined if the available storage space falls below a certain threshold, para.0064, 0123, Fig.5) and deleting an older report from the data storage device (if it is determined, that the background record causes the available storage space to fall below certain threshold, the media guidance application apply delete viewed portions settings and automatically identify and delete the viewed portions of one or more programs [i.e. deleting older programs i.e. older reports] stored on recording device, para.0123).

Claims 2, 9, 16 lack an inventive step under PCT Article 33(3) as being obvious over Craner.

Regarding claims 2, 9, 16 Craner teaches determining of the number of reports in the data storage device has reached the threshold (recorded programs are stored on recording device 118. A storage space indicator 532 shows the amount of storage space available for storing programs. It can be determined if the available storage space falls below a certain threshold, para.0064, 0123, Fig.5) and deleting an older report from the data storage device (if it is determined, that the background record causes the available storage space to fall below certain threshold, the media guidance application apply delete viewed portions settings and automatically identify and delete the viewed portions of one or more programs [i.e. deleting older programs i.e. older reports] stored on recording device, para.0123) but lacks the teaching of iteratively looping through the process. However, performing the process iteratively was a well-known practice in the art and the specifics would have been a matter of design choice.
It would have been obvious to one of ordinary skill in the art at the time of the invention to use perform the process iteratively in the invention of Craner.
The motivation would have been for performing operation continuously without requiring user command or intervention and thereby providing user convenience.

Claims 3, 10, 17 lack an inventive step under PCT Article 33(3) as being obvious over Craner in view of Cowan et al., hereinafter referred to as Cowan.

Regarding claims 3, 10, 17 Craner teaches retaining one of the number of reports associated with the television (the media guidance application maintains one of the recorded programs based on the interest of the user. The media guidance application maintain a portion of the recorded program that is of interest to the user and deletes the remaining portion of the recorded program, para.0143, 0146; user can select to delete viewed portions of the recorded program and retain a small portion of the recorded program, para.0106) but lacks the teaching of retaining first-time data.
Cowan discloses a method of managing information in utility monitoring system (Abstract) and teaches retaining first-time data (the system automatically deletes data fields when the storage space allocated for the memory platform is used up. The first time data such as commissioning and configuration data can be retained and held from deletion, by designating it as critical data field, para.0052).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Cowan for retaining first-time data in the invention of Craner.
The motivation would have been for retaining and saving first data as it provides more simplified and expeditious device restoration (para.0010, 0038, Cowan).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055319

Supplemental Box

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

Claims 4, 5, 11, 12, 18, 19 lack an inventive step under PCT Article 33(3) as being obvious over Craner in view of Larner et al., hereinafter referred to as Larner.

Regarding claims 4, 11, 18 Craner teaches writing a report to the data storage device (television programs or video-on-demand content is stored on the recording device [recording device is interpreted as data storage device and storing programs on recording device is interpreted writing reports on the storage device], para.0042) but lacks the teaching that the report comprises a serial number.
Larner discloses deleting old data for adding new data when a memory segment is full (Abstract) and teaches serial number associated with stored data (the data which is stored in the memory includes a serial number determined at the manufacturing time, para.0014).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Larner for associating a serial number with data to be stored in the invention of Craner.
The motivation would have been for providing efficient maintenance using stored serial number data (para.0014, Larner).

Regarding claims 5, 12, 19 Craner teaches deleting an older report from the data storage device (if it is determined, that the background record causes the available storage space to fall below certain threshold, the media guidance application apply delete viewed portions settings and automatically identify and delete the viewed portions of one or more programs [i.e. deleting older programs i.e. older reports] stored on recording device, para.0123) but lacks the teaching of deleting a report with an earlier serial number.
Larner teaches deleting data with earlier serial number (the data which is stored in the memory includes a serial number determined at the manufacturing time. New type of data is added by deleting old type of data [i.e. data with old or earlier serial number], para.0012, 0014; during adding new parameter, oldest segment having lower sequence number is selected and the old segment is erased [i.e. erasing or deleting segment with oldest or earlier serial number], para.0024, 0025, Fig.2B, 2D).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Larner for deleting data with an earlier serial number in the invention of Craner.
The motivation would have been for deleting oldest data for adding new data (para.0012, Larner).

Claims 6, 7, 13, 14, 20 lack an inventive step under PCT Article 33(3) as being obvious over Craner in view of Larner and in view of Beuque et al., hereinafter referred to as Beuque.

Regarding claims 6, 13 Craner lacks the teaching wherein the report further comprises testing data.
Beuque discloses testing and debugging an application for digital television (Abstract) and teaches testing data (once an application has been created, it can be tested by running it on processor. As a result of testing, changes are made to the application and the files are updated with the changes and stored in the directory [i.e. storing testing data], 0098, 0102).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Beuque for incorporating testing data in the invention of Craner.
The motivation would have been for storing results of tested application or data for efficient running or working of the created application (para.0098, 0102, Beuque).

Regarding claims 7, 14, 20 Craner lacks the teaching wherein the report further comprises debugging data.
Beuque teaches debugging data (a debugger 430 is provided for debugging applications running on receiver 226, para.0093; the debugger 430 monitors and modifies variable values in the application [i.e. debugging data], para.0129).
It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Beuque for incorporating debugging data in the invention of Craner.
The motivation would have been for giving the operator the ability to see what effect of setting variables to different values can have (para.0129, Beuque).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-506-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055321	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

   ☒ the text is approved as submitted by the applicant.

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

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

   ☒ the text is approved as submitted by the applicant.

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

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

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

   ☒ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055321

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06Q 30/00 (2013.01)
USPC - 705/14.52
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - G06Q 30/00, 30/02, H04N 21/472 (2013.01)
USPC - 705/14.52, 14.64, 26.1, 27.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G06Q 30/02, 30/0254, 30/0277 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Orbit, Google Patents, Google

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	WO 2012/073027 A2 (HUNTER) 07 June 2012 (07.06.2012) entire document	1-4, 7, and 12-16 --- 5-6, 8-11, and 17-20
Y	US 2011/0060661 A1 (CHAI et al) 10 March 2011 (10.03.2011) entire document	5-6 and 17
Y	US 2011/0213700 A1 (SANT'ANSELMO) 01 September 2011 (01.09.2011) entire document	8-11 and 18-20
A	US 2004/0103120 A1 (FICKLE et al) 27 May 2004 (27.05.2004) entire document	1-20
A	WO 01/06784 A2 (KNEE et al) 25 January 2001 (25.01.2001) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
21 November 2013	06 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: SCOTT WEITZEL
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	06 DEC 2013
Applicant's or agent's file reference: 6583-506-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055321	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06Q 30/00 (2013.01)
USPC - 705/14.52

Applicant FLEXTRONICS AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	21 November 2013	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055321

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055321

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

1. Statement

Novelty (N)	Claims	5-6, 8-11, and 17-20	YES
	Claims	1-4, 7, and 12-16	NO
Inventive step (IS)	Claims	1-20	YES
	Claims	None	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-4, 7, and 12-16 lack novelty under PCT Article 33(2) as being anticipated by Hunter.

Regarding Claim 1, Hunter teaches a method, comprising: executing a reporting function of a television (page 184, lines 1-20 for preparing a report with usage data and page 185, lines 1-10 for routing the usage reports to the correct content provider); querying (page 167, lines 25-35 for having means to query the metadata associated with a fragment), by the reporting function (figure 94 element a content provider application that has access the entitlements cache and the metadata element 232 and page 1-10 for reporting information on metadata such as usage), a statistics content provider of an application of the television for usage statistics (figure 94 for having a content provider application and page 38, lines 20-30 for logging usage for channels, along with claim 122 for using usage statistics); and creating, by the reporting function, a report incorporating the queried usage statistics (page 185, lines 1-10 for compiling or creating a usage report and sending the usage data to a content provider).

Regarding Claim 2, Hunter teaches wherein the querying the statistics content provider further comprises querying the statistics content provider via an application programming interface of the application (figure 94 for having an content provider application that interfaces with the content provider, and page 90, lines 25-40 for having an application programming interface that allows the application to query information from a cache).

Regarding Claim 3, Hunter teaches wherein the application is at least one of a live television application operable to present broadcast television content, an on-demand application operable to present on-demand television content and a media center application operable to present user provided content (page 39, lines 1-20 for having an on demand player element 270 that allows viewing of on demand content from different providers for universality between players).

Regarding Claim 4, Hunter teaches wherein the querying of the statistics content provider causes the application to return at least one of name of the application, package name comprising the application, last session timestamp, and cumulative usage (pages 10, lines 25-35 for having a search service that searches the electronic program guide along with all the metadata associated with the electronic program guide and figure 63 top right corner for getting package information and having product metadata that shows the Package with the price).

Regarding Claim 7, Hunter teaches wherein the querying of the statistics content provider causes the application to return (figure 94 element a content provider application that has access the entitlements cache and the metadata element 232) at least one of code version, version name, first install timestamp, last update timestamp (page 98, lines 1-25 for having a code version for the manufacturer's software, and page 55, lines 1-25 for means to look up information by time stamps for schedule).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/US2013/055321

Supplemental Box

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

Regarding Claim 12, Hunter discloses a television (page 185, lines 15-25 for having an IPTV service and lines 1-5 for using linear service on a television along with on-demand programming), comprising: a processor (page 18, lines 45-55 for having a means to process metadata); a data storage (page 73, lines 40-50 for having memory means such as flash memory and hard drive for storing the platform software); an application executable by the processor (page 185, lines 10-30 for having an IPTV service and having on demand portal service with figure 94 for having an content provider application on the device element 130); and wherein the processor is operable to (a) execute a reporting function of the television (page 184, lines 1-20 for preparing a report with usage data and page 185, lines 1-10 for routing the usage reports to the correct content provider), (b) query a statistics content provider of the application for usage statistics (figure 94 for having a content provider application and page 38, lines 20-30 for logging usage for channels, along with claim 122 for using usage statistics along with page 167, lines 25-35 for having means to query the metadata associated with a fragment), (c) create a report incorporating the queried usage statistics (page 185, lines 1-10 for creating a usage report and sending the usage data to a content provider), and (d) store the report in the data storage (paragraph 185, lines 1-10 for creating a usage report and claim 122 for having access to previous usage statistics or means to store the usage statistics).

Regarding Claim 13, Hunter discloses wherein the querying the statistics content provider further comprises querying the statistics content provider application programming interface (figure 94 for having an content provider application that interfaces with the content provider, and page 90, lines 25-40 for having an application programming interface that allows the application to query information from a cache).

Regarding Claim 14, Hunter discloses wherein the application is at least one of a live television application operable to present broadcast television content, an on-demand application operable to present on-demand television content, and a media center application operable to present user provided content (page 39, lines 1-20 for having an on demand player element 270 that allows viewing of on demand content from different providers for universality between players).

Regarding Claim 15, Hunter discloses wherein the query causes the application to return at least one of name, package name, last session timestamp, and cumulative usage (pages 10, lines 25-35 for having a search service that searches the electronic program guide along with all the metadata associated with the electronic program guide and figure 63 top right corner for getting package information and having product metadata that shows the Package with the price).

Regarding Claim 16, Hunter discloses wherein the query causes the application to return (figure 94 element a content provider application that has access the entitlements cache and the metadata element 232) at least one of code version, version name, first install timestamp, last update timestamp (page 98, lines 1-25 for having a code version for the manufacturer's software, and page 55, lines 1-25 for means to look up information by time stamps for schedule).

Claims 5-6 and 17, lack an inventive step under PCT Article 33(3) as being obvious over Hunter in view of Chai et al, hereinafter Chai.

Regarding Claim 5, Hunter teaches wherein the querying of the statistics content provider query the application (page 87, line 45 to page 88, line 15 for having available package data). Hunter does not explicitly teach to return the package size. Chai has method to provide gift media (abstract) and teaches to return the package size information (paragraph 51 for returning software or application package size information for a module associated with an ASIC for certain operations). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the size data as taught by Chai in the reporting method of Hunter in order to determine a composite score based on reach, influence, and engagement (Chai, paragraph 51).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055321

Supplemental Box

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

Regarding Claim 6, Hunter teaches wherein the querying of the statistics content provider causes the application to return the size of user data associated with the application (page 70, lines 35-45 for having a data and configuration repository that has setting for application data and tracks storage limits for applications using disk space based on user preferences). Hunter does not explicitly teach package size. Chai has method to provide gift media (abstract) and teaches the package size (paragraph 51 for returning software or application package size information for a module associated with an ASIC for certain operations). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the size data as taught by Chai in the reporting method of Hunter in order to determine a composite score based on reach, influence, and engagement (Chai, paragraph 51).

Regarding Claim 17, Hunter discloses wherein the query causes the application to return package data (page 87, line 45 to page 88, line 15 for having available package data). Hunter does not explicitly teach to return the at least one of the package size and the size of user data. Chai has method to provide gift media (abstract) and teaches to return the at least one of the package size and the size of user data (paragraph 51 for returning software or application package size information for a module associated with an ASIC for certain operations). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the size data as taught by Chai in the reporting method of Hunter in order to determine a composite score based on reach, influence, and engagement (Chai, paragraph 51).

Claims 8-11 and 18-20 lack an inventive step under PCT Article 33(3) as being obvious over Hunter in view of Sant' Anselmo.

Regarding Claim 8, Hunter teaches wherein creating the report (figure 94 element a content provider application that has access the entitlements cache and the metadata element 232 and page185, lines 1-10 for reporting information on metadata such as usage), further comprising: generating a serial number (page 186, lines 20-50 for having unique identifiers for accessing metadata); and storing the report in a data storage associated with the television (page 185 lines 1-10 for compiling a usage report and claim 122 for having previous usage statistics or means to store the usage statics for the media content as well as page 15, lines 20-26 for the media client device element 130 having local storage and an interface to the content provider element 1000). Hunter does not explicitly teach incorporating the serial number into the report. Sant' Anselmo has a computer having a time retrieval unit to connect to an official time provider (abstract) and teaches incorporating the serial number into the report (paragraph 243 for embedding a serial number into the machine readable data and paragraph 146 for printing the identifier into the body of the document). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifiers as taught by Sant' Anselmo in the reporting method of Hunter in order to electronically transmit the data by direct quick application (Sant' Anselmo, paragraph 146).

Regarding Claim 9, Hunter teaches retrieving the report from the storage (page 185 lines 1-10 for compiling a usage report and claim 122 for having previous usage statistics or means to store the usage statics for the media content as well as page 15, lines 20-26 for the media client device element 130 having local storage and a content provide application that interfaces with the content provider element 1000); and sending the report to a remote server (page 185 for sending the usage report that has been compiled to the content provider or a remote server and figure 94, element 130 connecting to the remote content provider element 1000).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055321

Supplemental Box

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

Regarding Claim 10, Hunter teaches upon successfully delivering the report to the remote server (page 185 for sending the usage report that has been compiled to the content provider or a remote server and figure 94, element 130 connecting to the remote content provider element 1000). Hunter does not explicitly teach deleting the report. Sant' Anselmo has a computer having a time retrieval unit to connect to an official time provider (abstract) and teaches deleting the report (paragraph 150 for using the method with both internet and non-internet document control systems that include file management processes, and paragraph 446 for shredding the document or deleting a document and using software to timestamp the document prior to ejection). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifiers as taught by Sant' Anselmo in the reporting method of Hunter in order to electronically transmit the data by direct quick application (Sant' Anselmo, paragraph 146).

Regarding Claim 11, Hunter teaches upon determining the free space of the storage is below a threshold (page 70, lines 10-25 for having an application manager that handles the lifecycle of applications by monitoring the amount of memory used and releasing memory after an application has terminated to ensure the stability of the device). Hunter does not explicitly teach deleting a first report stored in the storage with a prior serial number than a second report stored in the storage. Sant' Anselmo has a computer having a time retrieval unit to connect to an official time provider (abstract) and teaches deleting a first report stored in the storage (paragraph 150 for using the method with both internet and non-internet document control systems that include file management processes, and paragraph 446 for shredding the document or deleting a document and using software to timestamp the document prior to ejection) with a prior serial number than a second report stored in the storage (paragraph 472 for automatically activating time stamped documents it would be obvious to deavtivate or delete a document by the same process, and ordering documents and paragraphs 478-486 for ordering documents by indentifiers such as time stamps). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifiers as taught by Sant' Anselmo in the reporting method of Hunter in order to electronically transmit the data by direct quick application (Sant' Anselmo, paragraph 146).

Regarding Claim 18, Hunter teaches method, comprising: querying an application manager of a television (figure 94 for having a content provider application and page 38, lines 20-30 for logging usage for channels, along with claim 122 for using usage statistics along with page 167, lines 25-35 for having means to query the metadata associated with a fragment with figure 94 for having an content provider application with an interface to the content provider element 1000 on the user device element 130), the application manager having records of a number of applications of the television (page 70, lines 10-25 for having an application manager that handles the lifecycle of applications including priorities and reducing delays for launching the application or having records of the running applications); returning, by the application manager, indicia associated with currently installed applications (page 73 lines 10-25 for having software updates that include the Application Program Interface version number or indicia associated with the application interface). Hunter does not explicitly teach and returning, by the application manager, indicia associated with removed applications. Sant' Anselmo has a computer having a time retrieval unit to connect to an official time provider (abstract) and teaches and returning, by the application manager, indicia associated with removed applications (paragraph 490 for using the identifier process with internet applications for usage with, paragraph 492 for having the identifier expire after a certain period of time or be removed, paragraphs 481-486 for organizing and retrieving documents using identifiers). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifiers as taught by Sant' Anselmo in the reporting method of Hunter in order to time stamp the usage of applications (Sant' Anselmo, paragraph 480).

Regarding Claim 19, Hunter teaches the method as shown above. Hunter does not explicitly teach returning, by the application manager, a last used timestamp of the at least one application. Sant' Anselmo has a computer having a time retrieval unit to connect to an official time provider (abstract) and teaches teach returning, by the application manager, a last used timestamp of the at least one application (paragraph 490 for using the identifier process with internet applications for usage with, paragraph 492 for having the identifier expire after a certain period of time or be removed using the identifier of the time stamp, paragraphs 481-486 for organizing and retrieving documents using identifiers). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifiers as taught by Sant' Anselmo in the reporting method of Hunter in order to time stamp the usage of applications (Sant' Anselmo, paragraph 480).

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055321

Supplemental Box

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

Regarding Claim 20, Hunter teaches storing in a data storage of the television (page 185 lines 1-10 for compiling a usage report and claim 122 for having previous usage statistics or means to store the usage statics for the media content as well as page 15, lines 20-26 for the media client device element 130 having local storage and a content provide application that interfaces with the content provider element 1000). Hunter does not explicitly teach a report comprising the query results and a serial number of the report. Sant' Anselmo has a computer having a time retrieval unit to connect to an official time provider (abstract) and a report comprising the query results and a serial number of the report (paragraph 243 for embedding a serial number into the machine readable data and paragraph 146 for printing the identifier into the body of the document with paragraph 441 for using the system with searches). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the identifiers as taught by Sant' Anselmo in the reporting method of Hunter in order to electronically transmit the data by direct quick application (Sant' Anselmo, paragraph 146).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: **100101**

A0601,Huibin Building
No.8,Beichen Dong(East) Street Chao Yang District Beijing,China

LIU，SHEN&ASSOCIATES

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* **21 Nov. 2013 (21.11.2013)**
Applicant's or agent's file reference **F13W4861**	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. **PCT/CN2013/081630**	International filing date *(day/month/year)* **16 Aug. 2013(16.08.2013)**
Applicant **FLEXTRONICS AP, LLC et al.**	

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

Filing of amendments and statement under Article 19:

The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

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

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

For more detailed instructions, see the notes on the accompanying sheet.

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

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
   - ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
   - ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

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

The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. These comments would also be made available to the public but not before the expiration of 30 months from the priority date.

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

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

See the Annex to Form PCT/IB/301 and, for details about the applicable time limits, Office by Office, see the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/CN The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. (86-10)62019451	Authorized officer **KANG, Kai** Telephone No. (86-10)**62413998**

Form PCT/ISA/220 (July 2009) *(See notes on accompanying sheet)*

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NOTES TO FORM PCT/ISA/220

These Notes are intended to give the basic instructions concerning the filing of amendments under Article 19. The Notes are based on the requirements of the Patent Cooperation Treaty, the Regulations and the Administrative Instructions under that Treaty. In case of discrepancy between these Notes and those requirements, the latter are applicable. For more detailed information, see also the *PCT Applicant's Guide*.

In these Notes, "Article," "Rule" and "Section" refer to the provisions of the PCT, the PCT Regulations and the PCT Administrative Instructions, respectively.

INSTRUCTIONS CONCERNING AMENDMENTS UNDER ARTICLE 19

The applicant has, after having received the international search report and the written opinion of the International Searching Authority, one opportunity to amend the claims of the international application. It should however be emphasized that, since all parts of the international application (claims, description and drawings) may be amended during the international preliminary examination procedure, there is usually no need to file amendments of the claims under Article 19except where, e.g. the applicant wants the latter to be published for the purposes of provisional protection or has another reason for amending the claims before international publication. Furthermore, it should be emphasized that provisional protection is available in some States only (see *PCT Applicant's Guide*).

The attention of the applicant is drawn to the fact that amendments to the claims under Article 19 are not allowed where the International Searching Authority has declared, under Article 17(2), that no international search report would be established (see *PCT Applicant's Guide*, paragraph 296).

What parts of the international application may be amended ?

Under Article 19, only the claims may be amended.

During the international phase, the claims may also be amended (or further amended) under Article 34 before the International Preliminary Examining Authority. The description and drawings may only be amended under Article 34 before the International Preliminary Examining Authority.

Upon entry into the national phase, all parts of the international application may be amended under Article 28 or, where applicable, Article 41.

When ? Within 2 months from the date of transmittal of the international search report or 16 months from the priority date, whichever time limit expires later. It should be noted, however, that the amendments will be considered as having been received on time if they are received by the International Bureau after the expiration of the applicable time limit but before the completion of the technical preparations for international publication (Rule 46.1).

Where not to file the amendments ?

The amendments may only be filed with the International Bureau and not with the receiving Office or the International Searching Authority (Rule 46.2).

Where a demand for international preliminary examination has been/is filed, see below.

How ? Either by cancelling one or more entire claims, by adding one or more new claims or by amending the text of one or more of the claims as filed.

A replacement sheet or sheets containing a complete set of claims in replacement of all the claims previously filed must be submitted.

Where a claim is cancelled, no renumbering of the other claims is required. In all cases where claims are renumbered, they must be renumbered consecutively in Arabic numerals (Section 205(a)).

The amendments must be made in the language in which the international application is to be published.

What documents must/may accompany the amendments ?

Letter (Section 205(b)):

The amendments must be submitted with a letter.

The letter will not be published with the international application and the amended claims. It should not be confused with the "Statement under Article 19(1)" (see below, under "Statement under Article 19(1)").

The letter must be in English or French, at the choice of the applicant. However, if the language of the international application is English, the letter must be in English; if the language of the international application is French, the letter must be in French.

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VIZIO v. MMT, IPR2024-00722

NOTES TO FORM PCT/ISA/220 (continued)

The letter must indicate the differences between the claims as filed and the claims as amended. It must, in particular, indicate, in connection with each claim appearing in the international application (it being understood that identical indications concerning several claims may be grouped), whether

(i) the claim is unchanged;
(ii) the claim is cancelled;
(iii) the claim is new;
(iv) the claim replaces one or more claims as filed;
(v) the claim is the result of the division of a claim as filed.

The following examples illustrate the manner in which amendments must be explained in the accompanying letter:

1. [Where originally there were 48 claims and after amendment of some claims there are 51]:
   "Claims 1 to 29, 31, 32, 34, 35, 37 to 48 replaced by amended claims bearing the same numbers; claims 30, 33 and 36 unchanged; new claims 49 to 51 added."
2. [Where originally there were 15 claims and after amendment of all claims there are 11]:
   "Claims 1 to 15 replaced by amended claims 1 to 11."
3. [Where originally there were 14 claims and the amendments consist in cancelling some claims and in adding new claims]:
   "Claims 1 to 6 and 14 unchanged; claims 7 to 13 cancelled; new claims 15, 16 and 17 added." or
   "Claims 7 to 13 cancelled; new claims 15, 16 and 17 added; all other claims unchanged."
4. [Where various kinds of amendments are made]:
   "Claims 1-10 unchanged; claims 11 to 13, 18 and 19 cancelled; claims 14, 15 and 16 replaced by amended claim 14; claim 17 subdivided into amended claims 15, 16 and 17; new claims 20 and 21 added."

"Statement under Article 19(1)" (Rule 46.4)

The amendments may be accompanied by a statement explaining the amendments and indicating any impact that such amendments might have on the description and the drawings (which cannot be amended under Article 19(1)).

The statement will be published with the international application and the amended claims.

It must be in the language in which the international application is to be published.

It must be brief, not exceeding 500 words if in English or if translated into English.

It should not be confused with and does not replace the letter indicating the differences between the claims as filed and as amended. It must be filed on a separate sheet and must be identified as such by a heading, preferably by using the words "Statement under Article 19(1)."

It may not contain any disparaging comments on the international search report or the relevance of citations contained in that report. Reference to citations, relevant to a given claim, contained in the international search report may be made only in connection with an amendment of that claim.

Consequence if a demand for international preliminary examination has already been filed

If, at the time of filing any amendments and any accompanying statement, under Article 19, a demand for international preliminary examination has already been submitted, the applicant must preferably, at the time of filing the amendments (and any statement) with the International Bureau, also file with the International Preliminary Examining Authority a copy of such amendments (and of any statement) and, where required, a translation of such amendments for the procedure before that Authority (see Rules 55.3(a) and 62.2, first sentence). For further information, see the Notes to the demand form (PCT/IPEA/401).

If a demand for international preliminary examination is made, the written opinion of the International Searching Authority will, except in certain cases where the International Preliminary Examining Authority did not act as International Searching Authority and where it has notified the International Bureau under Rule 66.1*bis*(b), be considered to be a written opinion of the International Preliminary Examining Authority. If a demand is made, the applicant may submit to the International Preliminary Examining Authority a reply to the written opinion together, where appropriate, with amendments before the expiration of 3 months from the date of mailing of FormPCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later (Rule 43*bis*.1(c)).

Consequence with regard to translation of the international application for entry into the national phase

The applicant's attention is drawn to the fact that, upon entry into the national phase, a translation of the claims as amended under Article 19 may have to be furnished to the designated/elected Offices, instead of, or in addition to, the translation of the claims as filed.

For further details on the requirements of each designated/elected Office, see the *PCT Applicant's Guide* , National Chapters.

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PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
F13W4861		
International application No.	International filing date *(day/month/year)*	(Earliest)Priority date *(day/month/year)*
PCT/CN2013/081630	16 Aug. 2013(16.08.2013)	17 Aug. 2012(17.08.2012)
Applicant		
FLEXTRONICS AP, LLC et al.		

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

This international search report consists of a total of 4 sheets.

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

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

a. The figure of the **drawings** to be published with the abstract is Figure No. 16A

☐ as suggested by the applicant

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

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

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

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

中华人民共和国国家知识产权局 专利审查业务章

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VIZIO v. MMT, IPR2024-00722

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)

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VIZIO v. MMT, IPR2024-00722

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)

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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

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

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VIZIO v. MMT, IPR2024-00722

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

100101

A0601,Huibin Building No.8,Beichen Dong(East) Street Chao Yang District Beijing,China

LIU, SHEN&ASSOCIATES

PCT

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43 *bis*.1)

Date of mailing *(day/month/year)*	21 Nov. 2013 (21.11.2013)
Applicant's or agent's file reference	**FOR FURTHER ACTION**
F13W4861	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/CN2013/081630	16 Aug. 2013(16.08.2013)	17 Aug. 2012(17.08.2012)

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

See the Supplemental Box

Applicant

FLEXTRONICS AP, LLC et al.

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

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

2. **FURTHER ACTION**

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

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

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

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/CN	Date of completion of this opinion	Authorized officer
The State Intellectual Property Office, the P.R.China 6 Xitucheng Rd., Jimen Bridge, Haidian District, Beijing, China 100088 Facsimile No. 86-10-62019451	12 Nov. 2013 (12.11.2013)	KANG, Kai Telephone No. (86-10)62413998

Form PCT/ISA/237(cover sheet)(July 2009)

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VIZIO v. MMT, IPR2024-00722

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/CN2013/081630

Box No. I Basis of the opinion

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

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

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

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

   a. a sequence listing filed or furnished
      ☐ on paper
      ☐ in electronic form

   b. time of filing or furnishing
      ☐ contained in the applicant as filed
      ☐ filed together with the application in electronic form
      ☐ furnished subsequently to this Authority for the purposes of search

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

5. Additional comments:

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VIZIO v. MMT, IPR2024-00722

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/CN2013/081630

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

1. Statement:

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations

Reference is made to the following documents:

D1: CN 101472102 A, 01 July 2009(01.07.2009);

D2: CN 1832534 A, 13 September 2006(13.09.2006).

I. Novelty and Inventive step

Claim 1 claims a method of presenting EPG, the document D1 is regarded as the closest prior art to the subject-matter of claim 1, and discloses (see description, page 1, last three paragraphs, figure 2): analyzing the information in EPGs (displaying a EPG on TV means presenting live television content and programming guide, and the programming guide comprising channels and programs), indicating the favorite program of users; adding the favorite program to a remind list; displaying the remind to the user when the program will begin in a predetermined time. The document D1 also discloses (see description, page 2, paragraphs 8-9): searching the EPG by the name of a program. The subject-matter of claim 1 therefore differs from D1 in that: 1. receiving a selection from a user indicating a reminder or a favorite; 2. searching the programming guide by channel; 3. removing the reminder dialog. The subject-matter of claim 1 is therefore novel (Article 33(2) PCT). Claims 2-8 are dependent on claim 1, and as such are also novel (Article 33(2) PCT). However, the document D1 also discloses (see description, page 4, paragraphs 19-21): setting the reminder list automatically, so the users don't have to manually set, which implies the users need to select the reminder in the prior arts. Therefore, it would be obvious to the person skilled in the art to receiving a selection from a user indicating a reminder or a favorite before set the reminder list. Channel and name are common information of a program, searching a program by channel or name is widely used. At last, it's well-known that a dialog should be removed when the users had already seen it, and it would be obvious to the person skilled in the art to remove the dialog when the users select a future program, or the users cancel the dialog, or on user input occurrences with in a predetermined time. The solution proposed in claim 1 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

Claims 2-5 are dependent on claim 1, further comprises setting or clearing the favorite of programs already favorite or not favorite. The document D2 discloses (see abstract): the users can set or clear the favorite list conveniently. D2 discloses setting or clearing the favorite list to maintenance the favorite list. It would be obvious for the person skilled in the art to apply the teaching of D2 to D1. Therefore, the subject matter of claims 2-5 cannot be considered as involving an inventive step (Article 33(3) PCT).

Claim 6 is dependent on claim 1. Document D1 already discloses displaying a reminder dialog when the program will begin with a predetermined time (see description, page 1, last three paragraphs, figure 2), and searching the matched program by name (see description, page 2, paragraphs 8-9). Document D1 fail to disclose searching by channel; however, searching a program by channel or name is widely used. The solution proposed in claim 6 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

Claim 7 is dependent on claim 6. It would be obvious to the person skilled in the art to store the reminder in data storage and delete the past reminder. The solution proposed in claim 7 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

Claim 8 is dependent on claim 1. It would be obvious to the person skilled in the art to search a program by time of day. The solution proposed in claim 8 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

See the Supplemental Box

VIZIO Ex. 1002, Page 2905 of 3573
VIZIO v. MMT, IPR2024-00722

Supplemental Box

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

Continuation of : Citations and explanations

Claim 9 claims a television, the document D1 is regarded as the closest prior art to the subject-matter of claim 9, and discloses (see description, page 1, last three paragraphs, figure 2): analyzing the information in EPGs (displaying a EPG on TV means presenting live television content and programming guide, and the programming guide comprising channels and programs), indicating the favorite program of users; adding the favorite program to a remind list; displaying the remind to the user when the program will begin in a predetermined time. The document D1 also discloses (see description, page 2, paragraphs 8-9): searching the EPG by the name of a program. The subject-matter of claim 9 therefore differs from D1 in that: 1.processor and storage; 2. receiving a selection from a user indicating a reminder or a favorite; 3. searching the programming guide by channel; 4. removing the reminder dialog. The subject-matter of claim 9 is therefore novel (Article 33(2) PCT). Claims 10-15 are dependent on claim 9, and as such are also novel (Article 33(2) PCT). However, the document D1 also discloses (see description, page 4, paragraphs 19-21): setting the reminder list automatically, so the users don't have to manually set, which implies the users need to select the reminder in the prior arts. Therefore, it would be obvious to the person skilled in the art to receiving a selection from a user indicating a reminder or a favorite before set the reminder list. Channel and name are common information of a program, searching a program by channel or name is widely used. It's well-known that a dialog should be removed when the users had already seen it, and it would be obvious to the person skilled in the art to remove the dialog when the users select a future program, or the users cancel the dialog, or on user input occurrences with in a predetermined time. At last, processor and storage are common parts of a television. The solution proposed in claim 9 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

Claims 10-13 are dependent on claim 9, further comprises setting or clearing the favorite of programs already favorite or not favorite. The document D2 discloses (see abstract): the users can set or clear the favorite list conveniently. D2 discloses setting or clearing the favorite list to maintenance the favorite list. It would be obvious for the person skilled in the art to apply the teaching of D2 to D1. Therefore, the subject matter of claims 10-13 cannot be considered as involving an inventive step (Article 33(3) PCT).

Claim 14 is dependent on claim 9. Document D1 already discloses displaying a reminder dialog when the program will begin with a predetermined time (see description, page 1, last three paragraphs, figure 2), and searching the matched program by name (see description, page 2, paragraphs 8-9). Document D1 fail to disclose searching by channel; however, searching a program by channel or name is widely used. The solution proposed in claim 14 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

Claim 15 is dependent on claim 14. It would be obvious to the person skilled in the art to store the reminder in data storage and delete the past reminder. The solution proposed in claim 15 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

Claim 16 claims a non-transitory medium with instructions, the instructions are correspoding to the method of claim 1 when executed, based on the opinion of claim 1, claim 6 is also novel (Article 33(2) PCT). But cannot be considered as involving an inventive step (Article 33(3) PCT). Claims 17-20 are dependent on claim 16, and as such are also novel (Article 33(2) PCT).

Claims 17-18 are dependent on claim 16, further comprises setting or clearing the favorite of programs already favorite or not favorite. The document D2 discloses (see abstract): the users can set or clear the favorite list conveniently. D2 discloses setting or clearing the favorite list to maintenance the favorite list. It would be obvious for the person skilled in the art to apply the teaching of D2 to D1. Therefore, the subject matter of claims 17-18 cannot be considered as involving an inventive step (Article 33(3) PCT).

Claim 19 is dependent on claim 18. It would be obvious to the person skilled in the art to store the reminder in data storage and delete the past reminder. The solution proposed in claim 19 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

Claim 20 is dependent on claim 16. It would be obvious to the person skilled in the art to search a program by time of day. The solution proposed in claim 20 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT).

II. Industrial applicability

Claims 1-20 can find industrial applicability in the technical field of data printing, and thus meet the requirements of Article 33(4) PCT.

Continuation of : International Patent Classification (IPC) or both national classification and IPC

H04H 60/72 (2008.01) i

H04N 5/445 (2011.01) i

VIZIO Ex. 1002, Page 2906 of 3573
VIZIO v. MMT, IPR2024-00722

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-509-PCT	Date of mailing *(day/month/year)* 29 NOV 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/055298	International filing date *(day/month/year)* 16 August 2013
Applicant FLEXTRONICS AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-509-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055298	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

a. the figure of the **drawings** to be published with the abstract is Figure No. 34

☒ as suggested by the applicant.

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

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055298

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 7/173 (2013.01)
USPC - 725/27
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - G06F 3/00; H04N 7/16, 173 (2013.01)
USPC -715/ 709, 738, 760; 725/27

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G06F 3/00; H04N 7/16, 173 (2013.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Google, Orbit, Google Patents

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2008/0022309 A1 (BEGEJA et al) 24 January 2008 (24.01.2008) entire document	1-20
Y	US 2010/0180292 A1 (EPSTEIN e al) 15 July 2010 (15.07.2010) entire document	1-20
A	US 2011/0289419 A1 (YU et al) 24 November 2011 (24.11.2011) entire document	1-20
A	US 2012/0200574 A1 (HILL et al) 09 August 2012 (09.08.2012) entire document	1-20
A	WO 99/21308 A1 (MUGURA et al) 29 April 1999 (29.04.1999) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 November 2013	29 NOV 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: THAINE LENNOX-GENTLE
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	29 NOV 2013

Applicant's or agent's file reference	FOR FURTHER ACTION
6583-509-PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055298	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 7/173 (2013.01)
USPC - 725/27

Applicant FLEXTRONICS AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

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

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055298

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055298

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

1. Statement

Novelty (N)	Claims	1-20	YES
	Claims	None	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-20 lack an inventive step under PCT Article 33(3) as being obvious over Begeja et al., hereinafter referred to as Begeja in view of Epstein et al., hereinafter referred to as Epstein.

Regarding claims 1, 10, 19 Begeja discloses a method, comprising (a method for providing a personalized channel to a customer using a TV 236 and a set top box 332 to access broadcast channels over the network 230, abstract, fig.3, para 0041), a tangible, non-transitory computer readable medium having instructions stored thereon that, when executed by a processor, perform the method [claim 10] (fig.5 shows a processor element 502, a memory 504, [the memory includes instructions to be executed], para 0061, 0062)
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 [claim 19] (a method for providing a personalized channel to a customer using a TV 236 and a set top box 332 to access broadcast channels over the network 230, and a remote control to allow the user to click on the desired programs, abstract, fig.3, para 0039, 0047; fig.5 shows a processor element 502, a memory 504, [the memory includes instructions to be executed], and includes input devices keyboard, mouse, para 0061, 0062):
detecting a first signal source change made at an intelligent television (TV) (fig.4 shows the step 450 wherein the method determines if the user provides a feedback, the feedback is a change of program, if the customer indicates changing to a movie program at step 450 then the result is "yes" and the method goes to step 410 then the users profile of interest is updated, para 0059, 0051; a customer using a TV 236 and a set top box 332 to access broadcast channels over the network 230 [TV accessing set top box and further a user is provided with an option provide feedback through the TV it is interpreted as intelligent television], fig.3, para 0041);
sending a first notification of the first signal source change detected to a live TV application (fig.4 shows at step 450 when a change is detected then the method proceeds to step 410 to update the user preferences in the users profile [updating the user profile upon a change of channel detection is interpreted as sending a first notification of the first signal source change], para 0059, 0051, 0052; a customer clicks through a plurality of channels quickly and further dwells on a particular channel for some time and further upon seeing a commercial clicks through a plurality of channels [interpreted as live TV application], para 0044), wherein the first notification includes first viewing information associated with the first signal source change (fig.4 shows at step 450 when a change is detected then the method proceeds to step 410 to update the user preferences in the users profile [updating the user preferences is interpreted as first viewing information associated], para 0059, 0051, 0052; fig.4 shows in step 430 the user profile is updated , if a viewer is watching a basketball game and the user is presented with an option of changing to another basketball games through the program guide, further the users feedback [first viewing information associated with the first signal source change] is determined if the user has changed to another channel, if yes this information is then used to update the users profile of interest, para 0055, 0056);
storing, in a memory associated with the intelligent TV, the first viewing information associated with the first signal source change (fig.3 shows a profile data base 350 [storing in a memory] at the service provider which stores users profile, para 0044; fig.4 shows in step 430 the user profile is updated , if a viewer is watching a basketball game and the user is presented with an option of changing to another basketball games through the program guide, further the users feedback [first viewing information associated with the first signal source change] is determined if the user has changed to another channel, if yes this information is then used to update the users profile of interest [the profile database 350 which includes the users profile is updated], para 0055, 0056);
and associating the first viewing information with a user of the intelligent TV (fig.4 shows in step 430 the user profile is updated , if a viewer is watching a basketball game and the user is presented with an option of changing to another basketball games through the program guide, further the users feedback is determined if the user has changed to another channel, if yes this information is then used to update the users profile of interest [updating the profile of a user based on the users feedback is interpreted as associating the first viewing information with a user], para 0055, 0056), but lacks the teaching of storing, in a memory associated with the intelligent TV, the first viewing information.
Epstein is in the field of a television widget running on a processor providing video images and identifying an operating state of the television (abstract) and teaches storing, in a memory associated with the intelligent TV, the information (fig.1 shows a TV 20 which includes a processor 72, a RAM 78, ROM 80 and a storage disc 92 for mass storage for storing large program files, para 0025; relevant videos are stored within the memory 82 or 90 in the television which are accessed, para 0037). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Epstein to incorporate storing, in a memory associated with the intelligent TV, the first viewing information into the invention of Begeja. The motivation would have been to provide a simple and less complex functionality mechanism for a television device to optimize user experience (see Epstein para 0020).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055298

Supplemental Box

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

Regarding claims 2, 11, 20, Begeja further teaches wherein the first signal source change is made by the user (fig.4 shows the step 450 wherein the method determines if the user provides a feedback, the feedback is a change of program, if the customer indicates changing to a movie program at step 450 then the result is "yes" and the method goes to step 410 then the users profile of interest is updated, para 0059, 0051).

Regarding claims 3, 12, Begeja further teaches comprising: detecting a second signal source change made at the intelligent TV (a customer clicks through a plurality of channels and dwells for some time at a particular channel [first signal source change], and the again clicks through a plurality of channels quickly to another program channel [second signal source change], and the set top box gathers the information of the users viewing selections for each program channel for a period of time, para 0044; fig.4 shows the step 450 wherein the method determines if the user provides a feedback, the feedback is a change of program, if the customer indicates changing to a movie program at step 450 then the result is "yes" and the method goes to step 410 then the users profile of interest is updated, para 0059, 0051); sending a second notification of the second signal source change detected to the live TV application (fig.4 shows at step 450 when a change is detected then the method proceeds to step 410 to update the user preferences in the users profile [updating the user profile upon a change of channel detection is interpreted as sending a notification of the signal source change], para 0059, 0051, 0052; a customer clicks through a plurality of channels and dwells for some time at a particular channel [first signal source change], and the again clicks through a plurality of channels quickly to another program channel [second signal source change], and the set top box gathers the information of the users viewing selections [a second notification of the second signal source change] for each program channel for a period of time, para 0044), wherein the second notification includes second viewing information associated with the second signal source change (fig.4 shows at step 450 when a change is detected then the method proceeds to step 410 to update the user preferences in the users profile [updating the user preferences is interpreted as first viewing information associated], para 0059, 0051, 0052; a customer clicks through a plurality of channels and dwells for some time at a particular channel [first signal source change], and the again clicks through a plurality of channels quickly to another program channel [second signal source change], and the set top box gathers the information of the users viewing selections [second viewing information] for each program channel for a period of time, para 0044); storing, in the memory, the second viewing information associated with the second signal source change (a customer clicks through a plurality of channels and dwells for some time at a particular channel [first signal source change], and the again clicks through a plurality of channels quickly to another program channel [second signal source change], and the set top box gathers the information [storing, in the memory the second viewing] of the users viewing selections for each program channel for a period of time, para 0044;fig.3 shows a profile data base 350 [storing in a memory] at the service provider which stores users profile, para 0044; fig.4 shows in step 430 the user profile is updated , if a viewer is watching a basketball game and the user is presented with an option of changing to another basketball games through the program guide, para 0055, 0056); and associating the second viewing information with the user of the intelligent TV (a customer clicks through a plurality of channels and dwells for some time at a particular channel [first signal source change], and the again clicks through a plurality of channels quickly to another program channel [second signal source change], and the set top box gathers the information [storing, in the memory the second viewing] of the users viewing selections for each program channel for a period of time and is used to determine the users interest in variety of programs [interpreted as associating the second viewing information with the user], para 0044), but lacks the teaching of storing, in the memory associated with the intelligent TV.
Epstein is in the field of a television widget running on a processor providing video images and identifying an operating state of the television (abstract) and teaches storing, in a memory associated with the intelligent TV, the information (fig.1 shows a TV 20 which includes a processor 72, a RAM 78, ROM 80 and a storage disc 92 for mass storage for storing large program files, para 0025; relevant videos are stored within the memory 82 or 90 in the television which are accessed, para 0037). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the teachings of Epstein to incorporate storing, in a memory associated with the intelligent TV, the first viewing information into the invention of Begeja. The motivation would have been to provide a simple and less complex functionality mechanism for a television device to optimize user experience (see Epstein para 0020).

Regarding claims 4, 13, Begeja further teaches comprising: comparing, via a processor associated with the intelligent TV, the stored first viewing information with the stored second viewing information (a customer clicks through a plurality of channels and dwells for some time at a particular channel [first signal source change], and the again clicks through a plurality of channels quickly to another program channel [second signal source change], and the set top box gathers the information [storing, in the memory the second viewing] of the users viewing selections for each program channel for a period of time, para 0044; fig.4 shows a method 400 which at step 430 is presented with another program channel of interest to the user which the user may select, in step 450 the users feedback is noted, a feedback check is made and if the feedback is a change which is "yes" i.e. change in the current channel to another channel then the personalized user preferences data is updated [the step 450 to determine the feedback includes a new channel/change is interpreted as comparing], para 0055, 0056, 0059); and determining, via the processor, at least one match between the :first and second viewing information (fig.4 shows a method 400 which at step 430 is presented with another program channel of interest to the user which the user may select, in step 450 the users feedback is noted, a feedback check is made and if the feedback does not include a change which is "no" the process returns to step 460, further in step 450 the users feedback is noted, if the feedback is a change which is "yes" i.e. change in the current channel to another channel then the personalized user preferences data is updated [interpreted as a matching between first and second viewing information], para 0055, 0056, 0059).

Regarding claims 5, 14, Begeja further teaches comprising: determining, based at least partially on the determined at least one match, a user viewing behavior associated with the user (fig.4 shows a method 400 which at step 430 is presented with another program channel of interest to the user which the user may select, in step 450 the users feedback is noted, a feedback check is made and if the feedback does not include a change which is "no" the process returns to step 460, further in step 450 the users feedback is noted, if the feedback is a change which is "yes" i.e. change in the current channel to another channel then the personalized user preferences data is updated [interpreted as an user viewing behavior], para 0055, 0056, 0059).

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055298

Supplemental Box

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

Regarding claims 6, 15, Begeja further teaches wherein the at least one match is at least one of a time associated with the first and second signal source change, a channel associated with the first and second signal source change (fig.4 shows a method 400 which at step 430 is presented with another program channel of interest to the user which the user may select, in step 450 the users feedback is noted, a feedback check is made and if the feedback does not include a change which is "no" the process returns to step 460, further in step 450 the users feedback is noted, if the feedback is a change which is "yes" i.e. change in the current channel to another channel [channel associated with first and second signal source change] then the personalized user preferences data is updated, para 0055, 0056, 0059), TV content associated with the first and second signal source change, and a viewing time of the TV content associated with the first and second signal source.

Regarding claims 7, 16, Begeja further teaches wherein detecting the first signal source change further comprises: setting a listener associated with the live TV application of the intelligent TV (fig.4 shows a method 400 which at step 430 is presented with another program channel of interest to the user which the user may select, in step 450 the users feedback is noted, a feedback check [interpreted as setting a listener] is made and if the feedback does not include a change which is "no" the process returns to step 460, further in step 450 the users feedback is noted, if the feedback is a change which is "yes" i.e. change in the current channel to another channel then the personalized user preferences data is updated, para 0055, 0056, 0059; a customer clicks through a plurality of channels quickly and further dwells on a particular channel for some time and further upon seeing a commercial clicks through a plurality of channels [interpreted as live TV application], para 0044); monitoring, via the listener, an event associated with at least one signal source of the intelligent TV, wherein the event includes changing from a first signal source to a second signal source of the intelligent TV (fig.4 shows a method 400 which at step 430 is presented with another program channel of interest to the user which the user may select, in step 450 the users feedback is noted, a feedback check [interpreted as setting a listener] is made and if the feedback does not include a change which is "no" the process returns to step 460, further in step 450 the users feedback is noted, if the feedback is a change which is "yes" i.e. change in the current channel to another channel [changing from a first signal source to a second signal source] then the personalized user preferences data is updated, para 0055, 0056, 0059) and identifying, via the live TV application, an occurrence of the event associated with the at least one signal source of the intelligent TV (fig.4 shows a method 400 which at step 430 is presented with another program channel of interest to the user which the user may select, in step 450 the users feedback is noted, a feedback check [interpreted as setting a listener] is made and if the feedback does not include a change which is "no" the process returns to step 460, further in step 450 the users feedback is noted, if the feedback is a change which is "yes" [identifying an occurrence of the event] i.e. change in the current channel to another channel [changing from a first signal source to a second signal source] then the personalized user preferences data is updated, para 0055, 0056, 0059).

Regarding claims 8, 17, Begeja further teaches wherein the first signal source corresponds to a first live TV channel and the second signal source corresponds to a second live TV channel (a customer clicks through a plurality of channels and dwells for some time at a particular channel [first signal source change], and the again clicks through a plurality of channels quickly [interpreted as live TV channels] to another program channel [second signal source change], and the set top box gathers the information [storing, in the memory the second viewing] of the users viewing selections for each program channel for a period of time, para 0044) .

Regarding claims 9, 18, Begeja further teaches wherein the listener is set automatically via the live TV application (fig.4 shows a method 400 which at step 430 a viewer is watching a basketball game and is presented with another program channel of interest to the user which the user may select, in step 450 the users feedback is noted, a feedback check [interpreted as setting a listener] is made and if the feedback does not include a change which is "no" the process returns to step 460, further in step 450 the users feedback is noted, if the feedback is a change which is "yes" i.e. change in the current channel to another channel then the personalized user preferences data is updated [as the updating is performed based on the users feedback for the live channels it is interpreted as listener is set via the live TV application], para 0055, 0056, 0059).

Claims 1-20 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Yiu F. Au
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-519-PCT	Date of mailing *(day/month/year)* 20 DEC 2013 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/55567	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)
Applicant Flextronics AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-519-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55567	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 7 sheets.

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

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

☒ as suggested by the applicant.

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

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

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

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

International application No.
PCT/US13/55567

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/00, 13/00; H04N 5/445, 7/14 (2013.01)
USPC - 725/037, 39; 348/14.07
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8):G06T 15/00; G06F 3/00, 13/00; H04N 5/445, 7/14 (2013.01); USPC: 345/419; 725/037, 39; 348/14.03, 14.07

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); ProQuest/DialogPro (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; Google Scholar; intelligent, tv, television, smart, panel, display, detect, location, transparent, opaque, overlay, background, menu, electronic, program, guide, EPG, plugin, source, application

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2011/0276995 A1 (ALTEN, J et al.) November 10, 2011, paragraph [0022], paragraph [0099], paragraph [0084], paragraph [0081]	1-20
A	US 2006/0117337 A1 (SHIVAJI RAO, V et al.) June 1, 2006, entire document	1, 8 and 14
A	US 2012/0210355 A1 (KIM, U et al.) August 16, 2012, entire document	1, 8 and 14

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
2 November 2013 (02.11.2013)	20 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Yiu F. Au
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	20 DEC 2013
Applicant's or agent's file reference: 6583-519-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55567	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/00, 13/00; H04N 5/445, 7/14 (2013.01)
USPC - 725/037, 39; 348/14.07

Applicant FLEXTRONICS AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	2 November 2013 (02.11.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55567

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55567

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

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1-20	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-20 lack novelty under PCT Article 33(2) as being anticipated by US 2011/0276995 A1 to Alten et al. (hereinafter 'Alten').

As to claim 1, Alten discloses an EPG data service (electronic program guide to operate as a shell or window to provide the user with the capability to access other applications, paragraph [0022]) for an Intelligent TV (television receiver 27), comprising: a plurality of source plugins configured to receive EPG information from a plurality of respective EPG information sources (the electronic program guide (EPG) to operate as a shell or window to provide the user with the capability to access other applications (plugins) or information systems (information sources) which are not part of the electronic program guide application or data, paragraph [0022]); an EPG subservice configured to aggregate the EPG information received by the plurality of source plugins (Each of these keys indicates to the program schedule system a distinct user-created "Channel Preference" or "Favorite Channel" list, which is a listing of a specific subset (EPG subservice) of channels for a particular user, arranged in the sequential order that the user wishes to view during operation of the program schedule system, paragraph [0099]); an EPG database configured to store the aggregated EPG information from the EPG subservice (electronic program guide (EPG) application software updates, is stored in a read only memory (ROM) 17. The microcontroller 16 uses the received program schedule information to build a database (EPG database) by storing the data in appropriately organized records (aggregated EPG information), paragraph [0084]); and an EPG provider configured to provide a relevant portion of the aggregated EPG information to an application of the Intelligent TV (The data provider is a program information provider, the satellite uplink manager, a local cable operator, or a combination of these sources, and the data stream contains program schedule information for all television programs and other services available, paragraph [0081]).

As to claim 2, Alten discloses the EPG data service of claim 1, wherein the EPG database is configured to store the aggregated EPG information relevant to programs within a pre-defined time interval (The microcontroller 16 uses the received program schedule information to build a database by storing the data in appropriately organized records in dynamic random access memory (DRAM) 18. The stored schedule information can be updated on a periodic basis, such as hourly, daily or weekly, or at any time when changes in scheduling or other factors warrant an update, paragraph [0084]).

As to claim 3, Alten discloses the EPG data service of claim 1, wherein the aggregated EPG information comprises data fields that includes one or more of an identifier, a name description, a start date and/or time, and a duration (The schedule information presented includes the name of the program and program start/stop time, paragraph [0113]).

As to claim 4, Alten discloses the EPG data service of claim 1, further comprising a tag subservice configured to receive notification from a second application of the Intelligent TV to set or unset tags for programs or channels, store the tag in a database, and serve the EPG subservice with information regarding tagged programs or channels (The REMINDER message 130 (notification) queries the user as to whether the system should remind the user, at a predetermined time before the start of the selected program (tagged program), that he or she would like to view the selected program, as shown in FIG. 13. If the user responds affirmatively, the microcontroller 16 stores reminder data consisting of at least the channel, time and day of the selected program in a reminder buffer, which contains similar schedule information for all programs for which the user has set a reminder, paragraph [0115]).

As to claim 5, Alten discloses the EPG data service of claim 4, wherein, on startup of the Intelligent TV, the tag subservice is configured to reschedule alarms in an alarm manager of the Intelligent TV for programs or channels tagged as a reminder, wherein the alarm manager is configured to notify the tag subservice when a time for a scheduled reminder is reached, and wherein the tag subservice is configured to notify the second application regarding the scheduled reminder (The REMINDER message 130 (notification/alarm) queries the user as to whether the system should remind the user, at a predetermined time (time for a scheduled reminder) before the start of the selected program (tagged program), that he or she would like to view the selected program, as shown in FIG. 13. If the user responds affirmatively, the microcontroller 16 stores reminder data consisting of at least the channel, time and day of the selected program in a reminder buffer, which contains similar schedule information for all programs for which the user has set a reminder, paragraph [0115]).

As to claim 6, Alten discloses the EPG data service of claim 1, further comprising a thumbnail cache manager configured to store thumbnails in a database and serve the thumbnails to the application (All Listings icon (thumbnail) in the top horizontal bar 61 of FIG. 6 identifies a "Category Listing" mode in which program schedule information is displayed and categorized by program content, as shown in FIG. 19. The particular listing shown in FIG. 19 includes the categories of Movies, Sports, News and Children 190A-190D. The database record stored for each listing contains a content-specific identifier (icon/thumbnail) so the microcontroller can search the database and categorize the information by content for purposes of displaying it in the Category Listing mode, paragraph [0125]).

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

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55567

Box No. VII Certain defects in the international application

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

Claims 8, 12, and 18 contain the following defects in the form or contents thereof:

Claim 8, line 2, change "Intelligenttelevision" to "Intelligent Television".

Claim 12, line 2, delete "a".

Claim 18, line 3, delete "a".

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55567

Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fu lly supported by the description, are made:

Claim 4, 11-12, and 17 are objected to under PCT Article 6 as lacking clarity, because claim 4, 11-12, and 17 are indefinite for the following reason(s):

Claims 4, 11, and 17, lines 3, 3, and 5 respectively, "the tag" lacks antecedent basis. It is unclear which tag of the previously recited "tags" is intended.

Claim 12, lines 3-4, "the tag subservice" lacks antecedent basis.

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55567

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Box V: Citations and Explanations-***-

As to claim 7, Alten discloses the EPG data service of claim 6, wherein the EPG subservice is configured to serve to the application a uniform resource identifier (URI) for each thumbnail in the aggregated EPG information, and wherein the thumbnail cache manager is configured to serve a thumbnail to the application based on the URI (The particular listing shown in FIG. 19 includes the categories of Movies, Sports, News and Children 190A-190D (EPG subservice). The database record stored for each listing contains a content-specific identifier so the microcontroller can search the database and categorize the information by content for purposes of displaying it in the Category Listing mode, paragraph [0125]).

As to claim 8, Alten discloses a method of managing Electronic Programming Guide (EPG) information (electronic program guide to operate as a shell or window to provide the user with the capability to access other applications, paragraph [0022]) for an Intelligent television (TV) (television receiver 27), comprising: receiving EPG information from a plurality of EPG sources (the electronic program guide (EPG) to operate as a shell or window to provide the user with the capability to access other applications or information systems (information sources) which are not part of the electronic program guide application or data, paragraph [0022]); aggregating the EPG information from the plurality of EPG sources (Each of these keys indicates to the program schedule system a distinct user-created "Channel Preference" or "Favorite Channel" list, which is a listing of a specific subset (EPG subservice) of channels for a particular user, arranged in the sequential order that the user wishes to view during operation of the program schedule system, paragraph [0099]); storing the aggregated EPG information in a database (electronic program guide (EPG) application software updates, is stored in a read only memory (ROM) 17. The microcontroller 16 uses the received program schedule information to build a database (EPG database) by storing the data in appropriately organized records (aggregated EPG information), paragraph [0084]); and providing a relevant portion of the aggregated EPG information to an application of the Intelligent TV (The data provider is a program information provider, the satellite uplink manager, a local cable operator, or a combination of these sources, and the data stream contains program schedule information for all television programs and other services available, paragraph [0081]).

As to claim 9, Alten discloses the method of claim 8, wherein the storing step comprises storing the aggregated EPG information relevant to programs within a pre-defined time interval (The microcontroller 16 uses the received program schedule information to build a database by storing the data in appropriately organized records in dynamic random access memory (DRAM) 18. The stored schedule information can be updated on a periodic basis, such as hourly, daily or weekly, or at any time when changes in scheduling or other factors warrant an update, paragraph [0084]).

As to claim 10, Alten discloses the method of claim 8, the aggregated EPG information comprises data fields that include one or more of an identifier, a name description, a start date and/or time, and a duration (The schedule information presented includes the name of the program and program start/stop time, paragraph [0113]).

As to claim 11, Alten discloses the method of claim 8, further comprising receiving notification from a second application of the Intelligent TV to set or unset tags for programs or channels, storing the tag in a second database, and retrieving EPG information from the database based on information regarding tagged programs or channels (The REMINDER message 130 (notification/alarm) queries the user as to whether the system should remind the user, at a predetermined time (time for a scheduled reminder) before the start of the selected program (tagged program), that he or she would like to view the selected program, as shown in FIG. 13. If the user responds affirmatively, the microcontroller 16 stores reminder data consisting of at least the channel, time and day of the selected program in a reminder buffer, which contains similar schedule information for all programs for which the user has set a reminder, paragraph [0115]).

As to claim 12, Alten discloses the method of claim 11, further comprising, on a startup of the Intelligent TV, rescheduling alarms in an alarm manager of the Intelligent TV for programs or channels tagged as a reminder, wherein the alarm manager is configured to notify the tag subservice when a time for a scheduled reminder is reached; and notifying the second application regarding the scheduled reminder (The REMINDER message 130 (notification/alarm) queries the user as to whether the system should remind the user, at a predetermined time (time for a scheduled reminder) before the start of the selected program (tagged program), that he or she would like to view the selected program, as shown in FIG. 13. If the user responds affirmatively, the microcontroller 16 stores reminder data consisting of at least the channel, time and day of the selected program in a reminder buffer, which contains similar schedule information for all programs for which the user has set a reminder, paragraph [0115]).

As to claim 13, Alten discloses the method of claim 8, further comprising serving to the application a uniform resource identifier (URI) for each thumbnail in the aggregated EPG information; and serving a thumbnail to the application based on the URI (The particular listing shown in FIG. 19 includes the categories of Movies, Sports, News and Children 190A-190D (EPG subservice). The database record stored for each listing contains a content-specific identifier so the microcontroller can search the database and categorize the information by content for purposes of displaying it in the Category Listing mode, paragraph [0125]).

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55567

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:
-***-Continued from Previous Supplemental Box-***-

As to claim 14, Alten discloses an Intelligent TV comprising an application configured to display EPG information on the Intelligent TV and an EPG data service, the EPG data service comprising (the television receiver or display (intelligent TV) of schedule information in any of the operating modes of the electronic program guide (EPG), paragraph [0171]): a plurality of source plugins configured to receive EPG information from a plurality of respective EPG information sources (the electronic program guide (EPG) to operate as a shell or window to provide the user with the capability to access other applications (plugins) or information systems (information sources) which are not part of the electronic program guide application or data, paragraph [0022]); an EPG subservice configured to aggregate the EPG information received by the plurality of source plugins (Each of these keys indicates to the program schedule system a distinct user-created "Channel Preference" or "Favorite Channel" list, which is a listing of a specific subset (EPG subservice) of channels for a particular user, arranged in the sequential order that the user wishes to view during operation of the program schedule system, paragraph [0099]); an EPG database configured to store the aggregated EPG information from the EPG subservice (electronic program guide (EPG) application software updates, is stored in a read only memory (ROM) 17. The microcontroller 16 uses the received program schedule information to build a database (EPG database) by storing the data in appropriately organized records (aggregated EPG information), paragraph [0084]); and an EPG provider configured to provide a relevant portion of the aggregated EPG information to the application (The data provider is a program information provider, the satellite uplink manager, a local cable operator, or a combination of these sources, and the data stream contains program schedule information for all television programs and other services available, paragraph [0081]).

As to claim 15, Alten discloses the Intelligent TV of claim 14, wherein the EPG database is configured to store the aggregated EPG information relevant to programs within a pre-defined time interval (The microcontroller 16 uses the received program schedule information to build a database by storing the data in appropriately organized records in dynamic random access memory (DRAM) 18. The stored schedule information can be updated on a periodic basis, such as hourly, daily or weekly, or at any time when changes in scheduling or other factors warrant an update, paragraph [0084]).

As to claim 16, Alten discloses the Intelligent TV of claim 14, wherein the aggregated EPG information comprises data fields that includes one or more of an identifier, a name description, a start date and/or time, and a duration (The schedule information presented includes the name of the program and program start/stop time, paragraph [0113]).

As to claim 17, Alten discloses the Intelligent TV of claim 14, further comprising a second application configured to output and receive user input regarding tags for programs and channels, wherein the EPG data service further comprises a tag subservice configured to receive notification from the second application to set or unset tags for programs or channels, store the tag in a database, and serve the EPG subservice with information regarding tagged programs or channels (The REMINDER message 130 (notification) queries the user as to whether the system should remind the user, at a predetermined time before the start of the selected program (tagged program), that he or she would like to view the selected program, as shown in FIG. 13. If the user responds affirmatively, the microcontroller 16 stores reminder data consisting of at least the channel, time and day of the selected program in a reminder buffer, which contains similar schedule information for all programs for which the user has set a reminder, paragraph [0115]).

As to claim 18, Alten discloses the Intelligent TV of claim 17, further comprising an alarm manager, wherein, on startup of the Intelligent TV, the tag subservice is configured to reschedule alarms in an alarm manager of the Intelligent TV for programs or channels tagged as a reminder, wherein the alarm manager is configured to notify the tag subservice when a time for a scheduled reminder is reached, and wherein the tag subservice is configured to notify the second application regarding the scheduled reminder (The REMINDER message 130 (notification/alarm) queries the user as to whether the system should remind the user, at a predetermined time (time for a scheduled reminder) before the start of the selected program (tagged program), that he or she would like to view the selected program, as shown in FIG. 13. If the user responds affirmatively, the microcontroller 16 stores reminder data consisting of at least the channel, time and day of the selected program in a reminder buffer, which contains similar schedule information for all programs for which the user has set a reminder, paragraph [0115]).

As to claim 19, Alten discloses the Intelligent TV of claim 14, wherein the EPG data service further comprises a thumbnail cache manager configured to store thumbnails in a database and serve the thumbnails to the application (All Listings icon (thumbnail) in the top horizontal bar 61 of FIG. 6 identifies a "Category Listing" mode in which program schedule information is displayed and categorized by program content, as shown in FIG. 19. The particular listing shown in FIG. 19 includes the categories of Movies, Sports, News and Children 190A-190D. The database record stored for each listing contains a content-specific identifier (icon/thumbnail) so the microcontroller can search the database and categorize the information by content for purposes of displaying it in the Category Listing mode, paragraph [0125]).

As to claim 20, Alten discloses the Intelligent TV of claim 19, wherein the EPG subservice is configured to serve to the application a uniform resource identifier (URI) for each thumbnail in the aggregated EPG information, and wherein the thumbnail cache manager is configured to serve a thumbnail to the application based on the URI (The particular listing shown in FIG. 19 includes the categories of Movies, Sports, News and Children 190A-190D (EPG subservice). The database record stored for each listing contains a content-specific identifier so the microcontroller can search the database and categorize the information by content for purposes of displaying it in the Category Listing mode, paragraph [0125]).

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

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Yiu F. Au
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

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

(PCT Rule 44.1)

Date of mailing *(day/month/year)*	22 NOV 2013
Applicant's or agent's file reference: 6583-520-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US13/55570	International filing date *(day/month/year)*: 19 August 2013 (19.08.2013)
Applicant: Flextronics AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-520-PCT	FOR FURTHER ACTION	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55570	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

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

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

a. the figure of the **drawings** to be published with the abstract is Figure No. 17

☒ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55570

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/00, 13/00; H04N 5/445, 7/14 (2013.01)
USPC - 725/037, 39, 40; 348/14.07
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8): G06T 15/00; G06F 3/00, 13/00; H04N 5/445, 7/14 (2013.01); USPC: 345/419; 725/037, 39, 40; 348/14.03, 14.07

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); ProQuest/DialogPro (Derwent, INSPEC, NTIS, PASCAL, Current Contents Search, Dissertation Abstracts Online, Inside Conferences); IP.com; Google Scholar; intelligent, tv, television, smart, panel, display, detect, location, transparent, opaque, overlay, background, menu, electronic, program, guide, EPG, plugin, source, application, tag, favorite, shows, screen, channel

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 7174126 B2 (MCELHATTEN, D et al.) February 6, 2007, Figure 23, Figure 31, Figure 24, column 16, lines 30-32, column 14, lines 7-8, column 32, lines 42-43, column 26, line 64 through column 27, line 4, column 17, lines 3-10	1-20
A	US 2011/0276995 A1 (ALTEN, J et al.) November 10, 2011, Figure 11, paragraph [0029], paragraph [0099], paragraph [0110], paragraph [0099], paragraph [0024]	1, 10 and 11
A	US 2006/0117337 A1 (SHIVAJI RAO, V et al.) June 1, 2006, entire document	1, 10 and 11
A	US 2012/0210355 A1 (KIM, U et al.) August 16, 2012, entire document	1, 10 and 11

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
11 November 2013 (11.11.2013)	22 NOV 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Yiu F. Au
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	22 NOV 2013
Applicant's or agent's file reference 6583-520-PCT	FOR FURTHER ACTION See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55570	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/00, 13/00; H04N 5/445, 7/14 (2013.01)
USPC - 725/037, 39, 40; 348/14.07

Applicant Flextronics AP, LLC

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

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

2. FURTHER ACTION

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	11 November 2013 (11.11.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55570

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55570

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

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1-20	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-20 lack novelty under PCT Article 33(2) as being anticipated by US 7,174,126 B2 McElhatten et al. (hereinafter "McElhatten").

As to claim 1, McElhatten discloses a method of displaying Electronic Programming Guide (EPG) information on an Intelligent television (TV), comprising: (accessing and locating the desired program from the interactive program guide (electronic programming guide EPG) is a menu including different reservation options for selections is displayed on the TV screen (intelligent television), column 16, lines 30-32 and column 14, lines 7-8) displaying an in-use portion on a screen of the Intelligent TV (GUI 1900 comprises window 1903 which displays thereon an in-progress HBO program, Figure 31, column 32, lines 42-43); and displaying a partial portion on the screen, comprising displaying a favorite channel portion showing EPG information for a plurality of favorite tagged channels (A channel may be designated as a "Favorite Channel" by selecting "Favorite Channels" from the Favorites menu 1420 or by pressing FAV key 980 of remote control 900. Once a user has defined one or more Favorite channels, the user can toggle interactive program guide 1020 to display only Favorite channels and re-toggle back to the full list of channels, Figure 24, column 26, line 64 through column 27, line 4) and a favorite show portion showing EPG information for a plurality of favorite tagged shows (Reserve GUI 5520 is displayed, providing the user with two reserve options (5530): (1) reserve the program, and (2) select a season pass. The program reserve option which is highlighted as the default choice enables a user to select a program to be added to a user's Favorite Show list which becomes available for viewing after the program has broadcast. Program guide 5510b is then redisplayed, Figure 23, column 17, lines 3-10).

As to claim 2, McElhatten discloses the method of claim 1, wherein the partial portion overlays the in-use portion (GUI 1900 comprises window 1903 (overlays) which displays thereon an in-progress HBO program, Figure 31, column 32, lines 42-43).

As to claim 3, McElhatten discloses the method of claim 1, wherein the in-use portion comprises a currently playing TV program (GUI 1900 comprises window 1903 which displays thereon an in-progress HBO program (currently playing TV program), Figure 31, column 32, lines 42-43).

As to claim 4, McElhatten discloses the method of claim 1, wherein the partial portion resizes the in-use portion (GUI 1900 comprises window 1903 (resized into smaller corner window) which displays thereon an in-progress HBO program (currently playing TV program), Figure 31, column 32, lines 42-43).

As to claim 5, McElhatten discloses the method of claim 1, wherein the plurality of favorite tagged shows is a plurality of shows that are currently airing (Users can reserve programs that are currently being broadcast while they are watching the program or from an interactive program guide, Figure 23, column 15, lines 37-42).

As to claim 6, McElhatten discloses the method of claim 1, wherein the partial portion is generated by an EPG display application of the Intelligent TV (GUI 1900 comprises window 1903 (overlays) which displays thereon an in-progress HBO program, Figure 31, column 32, lines 42-43).

As to claim 7, McElhatten discloses the method of claim 6, wherein the EPG display application is configured to retrieve the EPG information for the plurality of favorite tagged channels and the plurality of favorite tagged shows through an EPG subservice, wherein the EPG subservice is configured to retrieve channels and shows tagged as favorite through a tag subservice (By accessing Home GUI 1030, a user is prompted to select one of the programming features listed in menu 1110. By selecting Favorites feature 1410 of menu 1110, the user accesses Favorites submenu 1420 on Favorites GUI 1400 which offers several choices concerning the Favorites feature. For example, in this instance the user can choose from: creating a new profile, deleting an existing profile, adding parameters to an existing profile, finding favorite channels or shows and excluding channels, Figure 23, column 25, line 64 through column 26, line 6).

As to claim 8, McElhatten discloses the method of claim 7, wherein a second application is configured to set and clear favorite tags for channels and shows through the tag subservice (By selecting Favorites feature 1410 of menu 1110, the user accesses Favorites submenu 1420 on Favorites GUI 1400 which offers several choices concerning the Favorites feature. For example, in this instance the user can choose from: creating (set) a new profile, deleting (clear) an existing profile, adding parameters to an existing profile, finding favorite channels or shows and excluding channels, Figure 23, column 25, line 65 through column 26, line 6).

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55570

Supplemental Box

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

-***-Continued from Previous Supplemental Box-***-

As to claim 9, McElhatten discloses the method of claim 6, wherein the EPG display is configured to retrieve and display thumbnails for channels and shows through a thumbnail cache manager, wherein uniform resource identifiers (URIs) for each thumbnail is in the EPG information retrieved through the EPG subservice, and wherein the thumbnail cache manager is configured to serve each thumbnail using the respective URI (Figure 31, What's Hot feature to reserve certain HBO programs (channel) through their promotional previews, the user may select a "What's Hot!" option, denoted 1925. Similar to a What's Hot preview, a thumbnail preview, denoted 1931, may be used to reserve the program (show) e.g., "The Gathering Storm" featured in the preview in advance of the broadcast of the program e.g., on April 27. To make such a reservation, the user may highlight and select preview 1931, Figure 31, column 32, line 63 through column 33, line 5).

As to claim 10, McElhatten discloses a display for an Intelligent television (TV), comprising a live TV display and an Electronic Programming Guide (EPG) display, the EPG display is positioned at a side of the live TV display (GUI 1900 comprises window 1903 which displays thereon an in-progress HBO program, Figure 31, column 32, lines 42-43) and comprising: a favorite channel portion showing EPG information for a plurality of favorite tagged channels (A channel may be designated as a "Favorite Channel" by selecting "Favorite Channels" from the Favorites menu 1420 or by pressing FAV key 980 of remote control 900. Once a user has defined one or more Favorite channels, the user can toggle interactive program guide 1020 to display only Favorite channels and re-toggle back to the full list of channels, Figure 24, column 26, line 64 through column 27, line 4); and a favorite show portion showing EPG information for a plurality of favorite tagged shows, wherein an EPG display application is configured to generate the EPG display portion and retrieve the EPG information for the plurality of favorite tagged channels and the plurality of favorite tagged shows through an EPG subservice, wherein the EPG subservice is configured to retrieve channels and shows tagged as favorite through a tag subservice (Reserve GUI 5520 is displayed, providing the user with two reserve options (5530): (1) reserve the program, and (2) select a season pass. The program reserve option which is highlighted as the default choice enables a user to select a program to be added to a user's Favorite Show list which becomes available for viewing after the program has broadcast. Program guide 5510b is then redisplayed, Figure 23, column 17, lines 3-10), and wherein a second application is configured to set and clear favorite tags for channels and shows through the tag subservice (By selecting Favorites feature 1410 of menu 1110, the user accesses Favorites submenu 1420 on Favorites GUI 1400 which offers several choices concerning the Favorites feature. For example, in this instance the user can choose from: creating (set) a new profile, deleting (clear) an existing profile, adding parameters to an existing profile, finding favorite channels or shows and excluding channels, column 25, line 65 through column 26, line 6).

As to claim 11, McElhatten discloses a display for an Intelligent television TV, comprising a partial-screen display on an in-use display of the Intelligent TV, the partial-screen display comprising a favorite channel portion showing Electronic Programming Guide EPG information for a plurality of favorite tagged channels (A channel may be designated as a "Favorite Channel" by selecting "Favorite Channels" from the Favorites menu 1420 or by pressing FAV key 980 of remote control 900. Once a user has defined one or more Favorite channels, the user can toggle interactive program guide 1020 to display only Favorite channels and re-toggle back to the full list of channels, Figure 24, column 26, line 64 through column 27, line 4) and a favorite show portion showing EPG information for a plurality of favorite tagged shows (Reserve GUI 5520 is displayed, providing the user with two reserve options (5530): (1) reserve the program, and (2) select a season pass. The program reserve option which is highlighted as the default choice enables a user to select a program to be added to a user's Favorite Show list which becomes available for viewing after the program has broadcast. Program guide 5510b is then redisplayed, Figure 23, column 17, lines 3-10).

As to claim 12, McElhatten discloses the EPG display of claim 11, wherein the partial-screen display overlays the in-use display of the Intelligent TV (GUI 1900 comprises window 1903 (overlays) which displays thereon an in-progress HBO program, Figure 31, column 32, lines 42-43).

As to claim 13, McElhatten discloses the EPG display of claim 11, wherein the in-use display comprises a currently playing TV program (GUI 1900 comprises window 1903 which displays thereon an in-progress HBO program (currently playing TV program), Figure 31, column 32, lines 42-43).

As to claim 14, McElhatten discloses the EPG display of claim 11, wherein the partial-screen display resizes the in-use display (GUI 1900 comprises window 1903 (resized into smaller corner window) which displays thereon an in-progress HBO program (currently playing TV program), Figure 31, column 32, lines 42-43).

As to claim 15, McElhatten discloses the EPG display of claim 11, wherein the plurality of favorite tagged shows is a plurality of shows that are currently airing (Users can reserve programs that are currently being broadcast while they are watching the program or from an interactive program guide, Figure 23, column 15, lines 37-42).

As to claim 16, McElhatten discloses the EPG display of claim 11, wherein an EPG display application is configured to generate the partial-screen display (GUI 1900 comprises window 1903 (overlays) which displays thereon an in-progress HBO program, Figure 31, column 32, lines 42-43).

As to claim 17, McElhatten discloses the EPG display of claim 16, wherein the EPG display application is configured to retrieve the EPG information for the plurality of favorite tagged channels and the plurality of favorite tagged shows through an EPG subservice, wherein the EPG subservice is configured to retrieve channels and shows tagged as favorite through a tag subservice (By accessing Home GUI 1030, a user is prompted to select one of the programming features listed in menu 1110. By selecting Favorites feature 1410 of menu 1110, the user accesses Favorites submenu 1420 on Favorites GUI 1400 which offers several choices concerning the Favorites feature. For example, in this instance the user can choose from: creating a new profile, deleting an existing profile, adding parameters to an existing profile, finding favorite channels or shows and excluding channels, Figure 23, column 25, line 64 through column 26, line 6).

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55570

Supplemental Box

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

-***-Continued from Previous Supplemental Box-***-

As to claim 18, McElhatten discloses the EPG display of claim 17, wherein a second application is configured to set and clear favorite tags for channels and shows through the tag subservice (By selecting Favorites feature 1410 of menu 1110, the user accesses Favorites submenu 1420 on Favorites GUI 1400 which offers several choices concerning the Favorites feature. For example, in this instance the user can choose from: creating (set) a new profile, deleting (clear) an existing profile, adding parameters to an existing profile, finding favorite channels or shows and excluding channels, Figure 23, column 25, line 65 through column 26, line 6).

As to claim 19, McElhatten discloses the EPG display of claim 16, wherein the EPG display application is configured to retrieve and display thumbnails for channels and shows through a thumbnail cache manager, wherein uniform resource identifiers (URIs) for each thumbnail is in the EPG information retrieved through the EPG subservice, and wherein the thumbnail cache manager is configured to serve each thumbnail using the respective URI (Figure 31, What's Hot feature to reserve certain HBO programs (channel) through their promotional previews, the user may select a "What's Hot!" option, denoted 1925. Similar to a What's Hot preview, a thumbnail preview, denoted 1931, may be used to reserve the program (show) e.g., "The Gathering Storm" featured in the preview in advance of the broadcast of the program e.g., on April 27. To make such a reservation, the user may highlight and select preview 1931, Figure 31, column 32, line 63 through column 33, line 5).

As to claim 20, McElhatten discloses a tangible and non-transient computer readable medium comprising microprocessor executable instructions that, when executed by the microprocessor, perform the steps of claim 1 (processor 109 while processing TV program 201 may locate the corresponding program guide data to create in real time the metadata file associated with TV program 201. The metadata file thus created includes such data as the title, rating, names of the producer, director, and actors, duration of the program, program type, etc, column 7, lines 5-12).

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

Electronic Acknowledgement Receipt

EFS ID:	18667902
Application Number:	13969857
International Application Number:	
Confirmation Number:	3306
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Sanjiv Sirpal
Customer Number:	111285
Filer:	Douglas W. Swartz/Robert Roe-Pachirat
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-427
Receipt Date:	03-APR-2014
Filing Date:	19-AUG-2013
Time Stamp:	16:56:48
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	6583-487-PCT_ISR-WO_11-28-2013.pdf	718366 0f8c12e1bfc5b984f265ef84092014983076 41cc	no	10

Warnings:	
Information:	

2	Non Patent Literature	6583-488-PCT_ISR-WO_12-05-2013.pdf	473518 91b44a82ee37b5649f34be13ebfe1ee67116f6fd	no	8
Warnings:					
Information:					
3	Non Patent Literature	6583-489-PCT_ISR-WO_01-10-2014.pdf	681319 0ae32d0ad33aea52f184c38b6dd2dfd7713f6ad5	no	10
Warnings:					
Information:					
4	Non Patent Literature	6583-490-PCT_ISR-WO_11-13-2013.pdf	397458 2c0682afb521907316c6ed00e3ed72f1804913a8	no	9
Warnings:					
Information:					
5	Non Patent Literature	6583-491-PCT_ISR-WO_03-11-2014.pdf	421827 4c1c782f2029304d1d64aebe489394e16a86107d	no	8
Warnings:					
Information:					
6	Non Patent Literature	6583-492-PCT_ISR-WO_12-06-2013.pdf	351402 d8cf8457583907262af8e1a2ed8bc782b8f761ef	no	7
Warnings:					
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7	Non Patent Literature	6583-493-PCT_ISR-WO_11-08-2013.pdf	352023 03b4bbbd531dccb6b0707e88f6f87ae4ea8f117e	no	7
Warnings:					
Information:					
8	Non Patent Literature	6583-494-PCT_ISR-WO_03-10-2014.pdf	604754 f0d1e6ef4e78b612a2156731302f486d1ad06f21	no	10
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9	Non Patent Literature	6583-495-PCT_ISR-WO_03-04-2014.pdf	438222 92d1047f8faf7958749f2e7cb5c952f1f39c0644	no	7
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10	Non Patent Literature	6583-496-PCT_ISR-WO_11-22-2013.pdf	389487 bf38477d820b0506c7175b18694166526 2dac91c	no	7
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11	Non Patent Literature	6583-497-PCT_ISR-WO_12-06-2013.pdf	410723 006584e78faa845c5e005a88c00b1ac14a5a1ac1	no	8
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Information:					
12	Non Patent Literature	6583-498-PCT_ISR-WO_11-29-2013.pdf	407950 d6f7c0e0bdb8bb57b74c0a429c9bec1ef1553dc1	no	7
Warnings:					
Information:					
13	Non Patent Literature	6583-499-PCT_ISR-WO_12-05-2013.pdf	532094 e1d29b1d3b0b4610159830ca125e72be8e20416c	no	8
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Information:					
14	Non Patent Literature	6583-500-PCT_ISR-WO_11-12-2013.pdf	388530 c7130d43624edfcde1b0e36bb25b22242328d648	no	8
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Information:					
15	Non Patent Literature	6583-501-PCT_ISR-WO_03-10-2014.pdf	555137 1f3f7909542f1161039b44dc1a68e716325c11ab	no	9
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16	Non Patent Literature	6583-502-PCT_ISR-WO_01-24-2014.pdf	601510 1f4cf6f58e52111f04894e2a240a6bcaca39694c	no	9
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17	Non Patent Literature	6583-503-PCT_ISR-WO_12-02-2013.pdf	645177 28adc34670d0db669c5b51151c5c9a91bbc3faf4	no	9
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Information:					
18	Non Patent Literature	6583-504-PCT_ISR-WO_01-09-2014.pdf	584401 ef6db3b749b8b040720204186927f86ec68bfdeb	no	10
Warnings:					
Information:					
19	Non Patent Literature	6583-505-PCT_ISR-WO_03-11-2014.pdf	388550 2db3e38c742eef6a92473398c0e3d4a38f0ab622	no	7
Warnings:					
Information:					

20	Non Patent Literature	6583-506-PCT_ISR-WO_12-06-2013.pdf	463348 49292447fb7427af1df28cf0723baf2a7fea069c	no	9
Warnings:					
Information:					
21	Non Patent Literature	6583-507-PCT_ISR-WO_11-21-2013.pdf	737114 cd71f9e52f933a1e8b44f943d41543580fcd928f	no	11
Warnings:					
Information:					
22	Non Patent Literature	6583-509-PCT_ISR-WO_11-29-2013.pdf	532190 4ce372f45cab0daab5ba84c30717fe69fc4cd965	no	8
Warnings:					
Information:					
23	Non Patent Literature	6583-519-PCT_ISR-WO_12-20-2013.pdf	591817 35f58988546c84333c13045c863896a9a13a1c2c	no	10
Warnings:					
Information:					
24	Non Patent Literature	6583-520-PCT_ISR-WO_11-22-2013.pdf	475124 737058906109c9a2da5214c4bcf2508a31c1c5ea	no	8
Warnings:					
Information:					
25	Non Patent Literature	6583-425_OA_11-27-2013.pdf	610346 35acd0b77bdff61f8404a41dff229a7f924b0c15	no	17
Warnings:					
Information:					
26	Non Patent Literature	6583-469_OA_03-12-2014.pdf	385794 3914dcbf106dbd95a61366c78770b3824d35cde7	no	12
Warnings:					
Information:					
			Total Files Size (in bytes):	13138181	

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	Group Art Unit: 2425
SIRPAL, Sanjiv	Confirmation No.: 3306
Serial No.: 13/969,857	Examiner: PENDLETON, Brian T.
Filed: August 19, 2013	
Atty. File No.: 6583-427	
Entitled: "SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION"	***Submitted Via EFS-Web***

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

STATEMENT FOR TRANSITIONAL APPLICATION AND SUBMISSION OF REPLACEMENT APPLICATION DATA SHEET

Dear Sir/Madam:

Pursuant to 37 C.F.R. 1.55 or 1.78, applicant states that this application claims priority to or the benefit of an application filed prior to March 16, 2013, and also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013. In addition, submitted herewith is a replacement Application Data Sheet that includes a Statement under 37 C.F.R. 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications.

Although Applicant believes that no fees are due in connection with this filing, please charge any fees deemed necessary to Deposit Account No. 19-1970.

Respectfully submitted,
SHERIDAN ROSS P.C.

By: /Tadd F. Wilson/
Tadd F. Wilson
Registration No. 54544
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: May 27, 2014

PTO/AIA/14 (03-13)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-427
	Application Number	13/969,857
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Inventor Information:

Inventor 1 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
	Sanjiv		Sirpal	

Residence Information (Select One) ○ US Residency ◉ Non US Residency ○ Active US Military Service

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Address 1	3264 Stocksbridge Avenue		
Address 2			
City	Oakville~~, Ontario~~	State/Province	ON
Postal Code	L6M 0E3	Country	CA

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	111285		
Email Address	flexpatents@sheridanross.com	Add Email	Remove Email

Application Information:

Title of the Invention	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION		
Attorney Docket Number	6583-427	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	60	Suggested Figure for Publication (if any)	

PTO/AIA/14 (03-13)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-427
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION	

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	**Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S.C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Either enter Customer Number or complete the Representative Name section below. If both sections are completed the customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	111285		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/684672	2012-08-17
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/702650	2012-09-18
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/697710	2012-09-06
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/700182	2012-09-12
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/736692	2012-12-13
Prior Application Status	Pending		Remove

VIZIO Ex. 1002, Page 2940 of 3573
VIZIO v. MMT, IPR2024-00722

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-427
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION	

Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/798821	2013-03-15
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/804942	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/804998	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/804971	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/804990	2013-03-25
Prior Application Status	Pending		Remove
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	non provisional of	61/805003	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/805053	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/805030	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/805027	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/805042	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	non provisional of	61/805038	2013-03-25

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-427
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION	

This section allows for the applicant to claim priority to a foreign application. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(d). When priority is claimed to a foreign application that is eligible for retrieval under the priority document exchange program (PDX)[i] the information will be used by the Office to automatically attempt retrieval pursuant to 37 CFR 1.55(h)(1) and (2). Under the PDX program, applicant bears the ultimate responsibility for ensuring that a copy of the foreign application is received by the Office from the participating foreign intellectual property office, or a certified copy of the foreign priority application is filed, within the time period specified in 37 CFR 1.55(g)(1).

Remove

Application Number	Country[i]	Filing Date (YYYY-MM-DD)	Access Code[i] (if applicable)

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications

☒ This application (1) claims priority to or the benefit of an application filed before March 16, 2013 and (2) also contains, or contained at any time, a claim to a claimed invention that has an effective filing date on or after March 16, 2013.

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

If checked, the undersigned hereby grants the USPTO authority to provide the European Patent Office (EPO), the Japan Patent Office (JPO), the Korean Intellectual Property Office (KIPO), the World Intellectual Property Office (WIPO), and any other intellectual property offices in which a foreign application claiming priority to the instant patent application is filed access to the instant patent application. See 37 CFR 1.14(c) and (h). This box should not be checked if the applicant does not wish the EPO, JPO, KIPO, WIPO, or other intellectual property office in which a foreign application claiming priority to the instant patent application is filed to have access to the instant patent application.

In accordance with 37 CFR 1.14(h)(3), access will be provided to a copy of the instant patent application with respect to: 1) the instant patent application-as-filed; 2) any foreign application to which the instant patent application claims priority under 35 U.S.C. 119(a)-(d) if a copy of the foreign application that satisfies the certified copy requirement of 37 CFR 1.55 has been filed in the instant patent application; and 3) any U.S. application-as-filed from which benefit is sought in the instant patent application.

In accordance with 37 CFR 1.14(c), access may be provided to information concerning the date o f filing this Authorization.

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VIZIO v. MMT, IPR2024-00722

PTO/AIA/14 (03-13)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-427
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION	

Applicant Information:

Providing assignment information in this section does not substitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

Applicant 1

If the applicant is the inventor (or the remaining joint inventor or inventors under 37 CFR 1.45), this section should not be completed. The information to be provided in this section is the name and address of the legal representative who is the applicant under 37 CFR 1.43; or the name and address of the assignee, person to whom the inventor is under an obligation to assign the invention, or person who otherwise shows sufficient proprietary interest in the matter who is the applicant under 37 CFR 1.46. If the applicant is an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest) together with one or more joint inventors, then the joint inventor or inventors who are also the applicant should be identified in this section.

Clear

◉ Assignee	○ Legal Representative under 35 U.S.C. 117	○ Joint Inventor
○ Person to whom the inventor is obligated to assign.	○ Person who shows sufficient proprietary interest	

If applicant is the legal representative, indicate the authority to file the patent application, the inventor is:

Name of the Deceased or Legally Incapacitated Inventor :

If the Applicant is an Organization check here. ☒

Organization Name	Flextronics AP, LLC		
Mailing Address Information For Applicant:			
Address 1	6201 America Center Drive		
Address 2			
City	San Jose	**State/Province**	CA
Country	US	Postal Code	~~95134~~ 95002
Phone Number		Fax Number	
Email Address			

Additional Applicant Data may be generated within this form by selecting the Add button.

Non-Applicant Assignee Information:

Providing assignment information in this section does not subsitute for compliance with any requirement of part 3 of Title 37 of CFR to have an assignment recorded by the Office.

PTO/AIA/14 (03-13)
Approved for use through 01/31/2014. OMB 0651-0032
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-427
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION	

Assignee 1

Complete this section only if non-applicant assignee information is desired to be included on the patent application publication in accordance with 37 CFR 1.215(b). Do not include in this section an applicant under 37 CFR 1.46 (assignee, person to whom the inventor is obligated to assign, or person who otherwise shows sufficient proprietary interest), as the patent application publication will include the name of the applicant(s).

If the Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Non-Applicant Assignee:

Address 1	
Address 2	

City		**State/Province**	
Country		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee Data may be generated within this form by selecting the Add button.

Signature:

NOTE: This form must be signed in accordance with 37 CFR 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Signature	/Tadd F. Wilson/			Date (YYYY-MM-DD)	2014-05-27
First Name	Tadd F.	Last Name	Wilson	Registration Number	54544

Additional Signature may be generated within this form by selecting the Add button.

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C. 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether the Freedom of Information Act requires disclosure of these records.

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3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.

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5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Co o p eration Treaty.

6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).

7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.

8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspections or an issued patent.

9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

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VIZIO v. MMT, IPR2024-00722

Electronic Acknowledgement Receipt

EFS ID:	19133361
Application Number:	13969857
International Application Number:	
Confirmation Number:	3306
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Sanjiv Sirpal
Customer Number:	111285
Filer:	Tadd Fjelp Wilson/Amy Duarte
Filer Authorized By:	Tadd Fjelp Wilson
Attorney Docket Number:	6583-427
Receipt Date:	27-MAY-2014
Filing Date:	19-AUG-2013
Time Stamp:	15:55:14
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Make/Rescind AIA (First Inventor to File) 1.55/1.78 Stmnt	Statement_for_Transitional_Application.pdf	111617 184671509924f65e922f12842383b514a296e4d8	no	1

Warnings:	
Information:	

2	Application Data Sheet	Replacement_ADS-FINAL.pdf	1479482 144a17938b596bbad612f2c2d74158aa5bbbf3c2	no	7

Warnings:	
Information:	
This is not an USPTO supplied ADS fillable form	
Total Files Size (in bytes):	1591099

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New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

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UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
13/969,857	08/19/2013	2425	2140	6583-427	20	3

CONFIRMATION NO. 3306

CORRECTED FILING RECEIPT

111285
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202



Date Mailed: 06/05/2014

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Inventor(s)

Sanjiv Sirpal, Oakville, CANADA;

Applicant(s)

Flextronics AP, LLC, San Jose, CA

Assignment For Published Patent Application

Flextronics AP, LLC, San Jose, CA

Power of Attorney: The patent practitioners associated with Customer Number 111285

Domestic Priority data as claimed by applicant

This appln claims benefit of 61/684,672 08/17/2012
and claims benefit of 61/702,650 09/18/2012
and claims benefit of 61/697,710 09/06/2012
and claims benefit of 61/700,182 09/12/2012
and claims benefit of 61/736,692 12/13/2012
and claims benefit of 61/798,821 03/15/2013
and claims benefit of 61/804,942 03/25/2013
and claims benefit of 61/804,998 03/25/2013
and claims benefit of 61/804,971 03/25/2013
and claims benefit of 61/804,990 03/25/2013
and claims benefit of 61/805,003 03/25/2013
and claims benefit of 61/805,053 03/25/2013
and claims benefit of 61/805,030 03/25/2013
and claims benefit of 61/805,027 03/25/2013
and claims benefit of 61/805,042 03/25/2013
and claims benefit of 61/805,038 03/25/2013

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VIZIO v. MMT, IPR2024-00722

Foreign Applications for which priority is claimed (You may be eligible to benefit from the **Patent Prosecution Highway** program at the USPTO. Please see http://www.uspto.gov for more information.) - None.
Foreign application information must be provided in an Application Data Sheet in order to constitute a claim to foreign priority. See 37 CFR 1.55 and 1.76.

If Required, Foreign Filing License Granted: 09/03/2013

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 13/969,857**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

Title

SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION

Preliminary Class

725

Statement under 37 CFR 1.55 or 1.78 for AIA (First Inventor to File) Transition Applications: Yes

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Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

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Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

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VIZIO v. MMT, IPR2024-00722

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VIZIO Ex. 1002, Page 2951 of 3573
VIZIO v. MMT, IPR2024-00722

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	1	of	5	Attorney Docket Number	6583-427

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	6008803	12/28/1999	Rowe et al.	
	2	6239794	05/29/2001	Yuen et al.	
	3	6563515	05/13/2003	Reynolds et al.	
	4	6564378	05/13/2003	Satterfield et al.	
	5	6971118	11/29/2005	Akhavan et al.	
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	7	7266726	09/04/2007	Ladd et al.	
	8	7506350	03/17/2009	Johnson	
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	10	8089455	01/03/2012	Wieder	
	11	8473976	06/25/2013	Udani	
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	14	2001/0001160	05/10/2001	Shoff et al.	
	15	2002/0188944	12/12/2002	Noble	
	16	2003/0003876	01/02/2003	Rumsey	
	17	2003/0118323	06/26/2003	Ismail et al.	
	18	2003/0182658	09/25/2003	Alexander	
	19	2003/0208763	11/06/2003	McElhatten et al.	
	20	2004/0148362	07/29/2004	Friedman	
	21	2005/0091596	04/28/2005	Anthony et al.	
	22	2005/0149964	07/07/2005	Thomas et al.	
	23	2005/0160452	07/21/2005	Lawler et al.	
	24	2006/0184972	08/17/2006	Rafey et al.	
	25	2006/0248557	11/02/2006	Stark et al.	
	26	2007/0011702	01/11/2007	Vaysman	
	27	2007/0154163	07/05/2007	Cordray	
	28	2008/0114794	05/15/2008	Craner	
	29	2008/0114861	05/15/2008	Gildred	
	30	2008/0120635	05/22/2008	Trimper et al.	
	31	2008/0133525	06/05/2008	Ott	
	32	2008/0276279	11/06/2008	Gossweiler et al.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	2	of	5	Attorney Docket Number	6583-427

	33	2008/0282294	11/13/2008	Carpenter et al.	
	34	2009/0013350	01/08/2009	Ohlfs et al.	
	35	2009/0158326	06/18/2009	Hunt et al.	
	36	2009/0158375	06/18/2009	Rodriguez et al.	
	37	2009/0199242	08/06/2009	Johnson et al.	
	38	2009/0213079	08/27/2009	Segal et al.	
	39	2009/0228919	09/10/2009	Zott et al.	
	40	2009/0271823	10/29/2009	Jung et al.	
	41	2009/0293079	11/26/2009	McKee et al.	
	42	2009/0300674	12/03/2009	Ratsch et al.	
	43	2010/0100512	04/22/2010	Brodin et al.	
	44	2010/0177252	07/15/2010	Larsen et al.	
	45	2010/0180300	07/15/2010	Carpenter et al.	
	46	2010/0241962	09/23/2010	Peterson et al.	
	47	2011/0055873	03/03/2011	Heo et al.	
	48	2011/0107376	05/05/2011	Lee et al.	
	49	2011/0119702	05/19/2011	Jang et al.	
	50	2011/0131506	06/02/2011	Callisendorff	
	51	2011/0154405	06/23/2011	Isaias	
	52	2011/0179453	07/21/2011	Poniatowski	
	53	2011/0179454	07/21/2011	Yates	
	54	2011/0246495	10/06/2011	Mallinson	
	55	2011/0273625	11/10/2011	McMahon et al.	
	56	2011/0321095	12/29/2011	Yao et al.	
	57	2012/0042334	02/16/2012	Choi et al.	
	58	2012/0072952	03/22/2012	Vaysman et al.	
	59	2012/0076473	03/29/2012	Kunkel et al.	
	60	2012/0090004	04/12/2012	Jeong	
	61	2012/0099024	04/26/2012	Ryu et al.	
	62	2012/0144416	06/07/2012	Wetzer et al.	
	63	2012/0147049	06/14/2012	Lee	
	64	2012/0147825	06/14/2012	Hassan et al.	
	65	2012/0154449	06/21/2012	Ramagem et al.	
	66	2012/0173979	07/05/2012	Lee	
	67	2012/0174157	07/05/2012	Stinson, III et al.	
	68	2012/0210375	08/16/2012	Wong et al.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [2] Applicant's unique citation designation number (optional). [3] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [4] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [5] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [6] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [7] Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
(Use as many sheets as necessary)				First Named Inventor	Sanjiv Sirpal
				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	3	of	5	Attorney Docket Number	6583-427

	69	2012/0210386	08/16/2012	Kim et al.	
	70	2012/0218203	08/30/2012	Kanki	
	71	2012/0229320	09/13/2012	Yu	
	72	2012/0229473	09/13/2012	Tam	
	73	2012/0291068	11/15/2012	Khushoo et al.	
	74	2012/0331505	12/27/2012	Chun et al.	
	75	2013/0014006	01/10/2013	Abellera et al.	
	76	2013/0097640	04/18/2013	Lemmons et al.	
	77	2013/0160065	06/20/2013	Aso et al.	
	78	2013/0238777	09/12/2013	Raleigh	
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	81	2013/0318553	11/28/2013	Yegorov et al.	
	82	2013/0326557	12/05/2013	Kang et al.	
	83	2014/0109143	04/17/2014	Craner	
	84	2014/0173660	06/19/2014	Correa et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	85	WO 2012/103121	08/02/2012	CYANDIA, INC		

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	86	International Search Report and Written Opinion for International (PCT) Patent Application No. PCT/US13/55494, mailed Apr. 16, 2014 (Attorney's Ref. No. 6583-426-PCT) 9 pages
	87	International Search Report and Written Opinion for International (PCT) Patent Application No. PCT/US2013/055342, mailed Apr. 17, 2014 (Attorney's Ref. No. 6583-434-PCT) 12 pages
	88	International Search Report and Written Opinion for International (PCT) Patent Application No. PCT/US13/55592, mailed Mar. 10, 2014 (Attorney's Ref. No. 6583-464-PCT) 11 pages
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Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
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Sheet	4	of	5	Attorney Docket Number	6583-427

	90	Official Action for U.S. Patent Application No. 13/970,409, mailed Jul. 21, 2014 (Attorney's Ref. No. 6583-438) 21 pages
	91	Official Action for U.S. Patent Application No. 13/970,442, mailed Jun. 4, 2014 (Attorney's Ref. No. 6583-441) 10 pages
	92	Official Action for U.S. Patent Application No. 13/970,450 mailed Jul. 09, 2014 (Attorney's Ref. No. 6583-442) 17 pages
	93	Official Action for U.S. Patent Application No. 13/970,453, mailed Jul. 21, 2014 (Attorney's Ref. No. 6583-443) 12 pages
	94	Official Action for U.S. Patent Application No. 13/968,858 mailed May 15, 2014 (Attorney's Ref. No. 6583-444) 6 pages
	95	Official Action for U.S. Patent Application No. 13/968,884, mailed Jun. 25, 2014 (Attorney's Ref. No. 6583-445) 23 pages
	96	Official Action for U.S. Patent Application No. 13/968,876 mailed Jun. 16, 2014 (Attorney's Ref. No. 6583-446) 10 pages
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	105	Official Action for U.S. Patent Application No. 13/970,374, mailed Jun. 6, 2014 (Attorney's Ref. No. 6583-481) 7 pages
	106	Official Action for U.S. Patent Application No. 13/968,903, mailed Jul. 18, 2014 (Attorney's Ref. No. 6583-495) 14 pages
	107	Official Action for U.S. Patent Application No. 13/968,969, mailed May 6, 2014 (Attorney's Ref. No. 6583-498) 12 pages
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	109	Official Action for U.S. Patent Application No. 13/968,732, mailed May 27, 2014 (Attorney's Ref. No. 6583-500) 12 pages
	110	Official Action for U.S. Patent Application No. 13/969,777, mailed Jun. 25, 2014 (Attorney's Ref. No. 6583-501) 9 pages
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[Continued on next page]

(54) Title: INFORMATION DELIVERY SYSTEM FOR, AND METHODS OF, INTERACTION WITH MULTIPLE INFORMATION FORMS ACROSS MULTIPLE TYPES AND/OR BRANDS OF ELECTRONIC DEVICES, SUCH AS TELEVISIONS, MOBILE PHONES, AND COMPUTING DEVICES

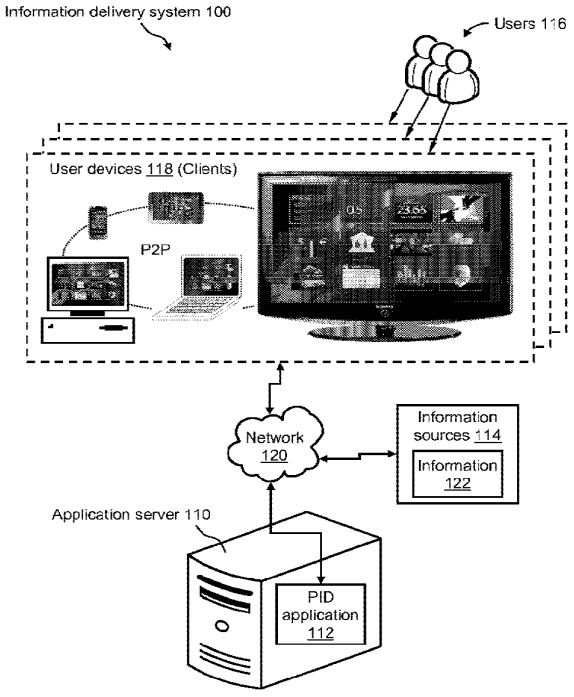


FIG. 1

(57) Abstract: An information delivery system for and methods of interaction with multiple information forms across multiple types, brands, and/or models of electronic devices, such as mobile devices, portable devices, desktop computers, and televisions is disclosed. The information delivery system for and methods of the invention provide the display of and access to secure user-centric information via the construct of a channel grid framework serving as a desktop on a user device. The channel grid framework includes multiple user-selectable items that provide access to corresponding "channels" by which respective portions of user-centric information are delivered to a user. The information delivery system of the invention may be suitable for consumer applications and/or enterprise applications. In one embodiment, the information delivery system of the invention supports a "Flex" presentation framework. In another embodiment, the information delivery system supports a "Web" presentation framework

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INFORMATION DELIVERY SYSTEM FOR, AND METHODS OF, INTERACTION WITH MULTIPLE INFORMATION FORMS ACROSS MULTIPLE TYPES AND/OR BRANDS OF ELECTRONIC DEVICES, SUCH AS TELEVISIONS, MOBILE PHONES, AND COMPUTING DEVICES

CROSS-REFERENCES TO RELATED APPLICATIONS

[0001] This application claims priority to the following U.S. applications:

[0002] U.S. provisional application serial no. 61/435,976, filed January 25, 2011, entitled "Information Delivery System for, and Methods of, Interaction with Multiple Information Forms Across Multiple Types and/or Brands of Electronic Devices, such as Televisions, Mobile Phones, and Computing Devices;"

[0003] U.S. provisional application serial no. 61/474,942, filed April 13, 2011, entitled "Information Delivery System for, and Methods of, Eventing and Alerting Using Multiple Information Forms and Sources Across Multiple Types and/or Brands of Electronic Devices;"

[0004] U.S. provisional application serial number 61/476,961, filed April 19, 2011, entitled "Information Delivery System for, and Methods of, Interaction with Multiple Information Forms Across Multiple Types and/or Brands of Electronic Devices, such as Televisions, Mobile Phones, and Computing Devices;" and

[0005] U.S. non-provisional application serial no. 13/273,894, filed October 14, 2011, entitled "Methods, Apparatus and Systems for Presenting Television Programming and Related Information."

[0006] Each of the foregoing applications is incorporated herein by reference in its entirety.

BACKGROUND

[0007] Consumer and business users want to access digital information such as broadcast TV; internet text, graphics, and video; and social networking media across different devices. These devices include laptop computers, smart phones, TVs, and tablets and each device has its own interface, content metaphor, format, and access method. Users' experience with digital content over different devices is poor for two reasons: 1) the quality of the information delivery is varied and, 2) users are required

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to learn how to use each device in order to receive their desired information. This learning process is time consuming and does not guarantee the users' success.

[0008] In addition, although certain technologies, such as Internet browsers and multimedia players, provide some centralized manner of accessing digital information, such technologies are largely static. As a result, these technologies cannot be customized for individual user preferences.

[0009] For example, in the broadcast TV environment, users select and receive information using traditional channel guides. With this technology, user interaction and information customization is extremely limited. The ability to combine broadcast TV content with other forms of information, such as social media, is restricted.

[0010] In other information areas such as healthcare, finance, and home security, users want to do more than just access information: users want to combine and interrogate information to produce more meaningful interactions with information and other users.

SUMMARY

[0011] Once embodiment of the disclosure relates to an apparatus to provide secure user-centric information via at least one user platform operated by a user. The apparatus includes at least one communication interface to facilitate wired and/or wireless communications with the at least one user platform via one or more transmission media and at least one memory to store processor-executable instructions. The apparatus further includes at least one processor communicatively coupled to the at least one communication interface and the at least one memory. Upon execution of the processor-executable instructions by the at least one processor, the at least one processor establishes a bidirectional, asynchronous user session to manage provision of and interaction with the secure user-centric information. The session is established by implementing a plurality of channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information, controlling the at least one communication interface to receive, from the at least one user platform, a user identity for the user and a platform identity for the at least one user platform, and authenticating the user and the user platform to receive the secure user-centric information based at least in part

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on the user identity and the platform identity. The session is further established by, if the user and the user platform are authenticated, controlling the at least one communication interface so as to cause the bidirectional, asynchronous user session to be established between the apparatus and a web browser of the at least one user platform and to transmit to the at least one user platform during the user session first authenticated channel information relating to at least one authorized channel of the plurality of channels, based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of channels, the user, and the user platform. The processor is configured to control the at least one communication interface to cause the bidirectional, asynchronous user session to be established without requiring a separate application other than the web browser to be installed on the user platform to establish the user session.

[0012] Another embodiment relates to a method for providing secure user-centric information via at least one user platform operated by a user. The method includes implementing a plurality of channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information, receiving, from the at least one user platform, a user identity for the user and a platform identity for the at least one user platform, and authenticating the user and the user platform to receive the secure user-centric information based at least in part on the user identity and the platform identity. The method further includes, if the user and the user platform are authenticated, causing a bidirectional, asynchronous user session to be established with a web browser of the at least one user platform and transmitting to the at least one user platform during the user session first authenticated channel information relating to at least one authorized channel of the plurality of channels, based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of channels, the user, and the user platform. The bidirectional, asynchronous user session is established without requiring a separate application other than the web browser to be installed on the user platform to establish the user session.

[0013] Another embodiment relates to at least one computer readable storage medium storing processor-executable instructions that, when executed by at least one processor, perform a method for providing secure user-centric information via at least

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one user platform operated by a user. The method includes implementing a plurality of channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information, receiving, from the at least one user platform, a user identity for the user and a platform identity for the at least one user platform, and authenticating the user and the user platform to receive the secure user-centric information based at least in part on the user identity and the platform identity. The method further includes, if the user and the user platform are authenticated, causing a bidirectional, asynchronous user session to be established with a web browser of the at least one user platform and transmitting to the at least one user platform during the user session first authenticated channel information relating to at least one authorized channel of the plurality of channels, based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of channels, the user, and the user platform. The bidirectional, asynchronous user session is established without requiring a separate application other than the web browser to be installed on the user platform to establish the user session.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] The skilled artisan will understand that the figures, described herein, are for illustration purposes only, and that the drawings are not intended to limit the scope of the disclosed teachings in any way. In some instances, various aspects or features may be shown exaggerated or enlarged to facilitate an understanding of the inventive concepts disclosed herein (the drawings are not necessarily to scale, emphasis instead being placed upon illustrating the principles of the teachings). In the drawings, like reference characters generally refer to like features, functionally similar and/or structurally similar elements throughout the various figures.

[0015] Figure 1 illustrates a high level block diagram of an example of an information delivery system that includes a personal information delivery application for interaction with multiple information forms across multiple types, brands, and/or models of electronic devices, according to the present invention;

[0016] Figure 2 illustrates a functional block diagram of an example of a channel of a personal information delivery application for providing users access to and interaction with information, according to the present invention;

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[0017] Figure 3 illustrates a screenshot of an example of a client GUI of the personal information delivery application and shows an example of a channel grid, according to the present invention;

[0018] Figure 4 illustrates various screenshots of certain components of an example of an "Around Me" channel of the personal information delivery application, according to the present invention;

[0019] Figure 5 illustrates a functional block diagram of an example of a client runtime environment, which is the runtime environment of the user devices of the information delivery system, according to the present invention;

[0020] Figure 6 illustrates a functional block diagram of an example of a personal information delivery application architecture for supporting the Flex presentation framework, according to the present invention;

[0021] Figure 7 illustrates a functional block diagram of an example of a client architecture of the personal information delivery application, according to the present invention;

[0022] Figure 8 illustrates a functional block diagram of an example of a communication flow between the client side and the server side of the personal information delivery application, according to the present invention;

[0023] Figure 9 illustrates a functional block diagram of an example of a communication flow between components at the server side of the personal information delivery application, according to the present invention;

[0024] Figure 10 illustrates a functional block diagram of a portion of the personal information delivery application architecture and a process of performing a user login operation, according to the present invention;

[0025] Figure 11 illustrates a functional block diagram of a portion of the personal information delivery application architecture and a process of performing data management and eventing and alerting, according to the present invention;

[0026] Figure 12 illustrates a screenshot of an example of the GUI of channel application catalog of the personal information delivery application by which users may acquire channels for use with their devices, according to the present invention;

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[0027] Figure 13 illustrates a screenshot of an example of the client GUI that includes another example of a channel grid, according to the present invention;

[0028] Figure 14 illustrates screenshots of certain components of an example of a "Stock Watch" channel of the personal information delivery application, according to the present invention;

[0029] Figures 15 through 18 illustrate screenshots of a client GUI of the personal information delivery application and an example of a process of eventing and alerting using the personal information delivery application, according to the present invention;

[0030] Figures 19 through 26 illustrate screenshots of certain channels of the personal information delivery application and an example of a process of combining two or more independent channels to create a new channel (and touchlet) and a process of eventing off of the combined data, according to the present invention;

[0031] Figures 27 through 40 illustrate screenshots of an example of a "Television" channel of the personal information delivery application, according to the present invention;

[0032] Figures 41 through 44 illustrate screenshots of certain components and operations of an example of a "Home Security" channel of the personal information delivery application and a process of alerting a user, according to the present invention;

[0033] Figure 45 illustrates screenshots of certain components of an example of a "NetFlix" channel of the personal information delivery application, according to the present invention;

[0034] Figures 46 and 47 illustrate screenshots of certain components of an example of a "Remote Healthcare" channel of the personal information delivery application, according to the present invention;

[0035] Figure 48 illustrates screenshots of certain components of an example of a "My Medicine Cabinet" channel of the personal information delivery application, according to the present invention;

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[0036] Figure 49 illustrates screenshots of certain components of an example of an "MS Word" channel of the personal information delivery application, according to the present invention;

[0037] Figure 50 illustrates screenshots of certain components of an example of an "Email" channel of the personal information delivery application, according to the present invention;

[0038] Figure 51 illustrates screenshots of certain components of an example of a "News Reader" channel of the personal information delivery application, according to the present invention;

[0039] Figure 52 illustrates a screenshot of an example of an enterprise client GUI that includes an example of a login window, according to the present invention;

[0040] Figures 53 and 54 illustrate screenshots of the enterprise client GUI showing two example channel grids that may be related to the enterprise, according to the present invention;

[0041] Figure 55 illustrates screenshots of certain components of an example of a "Personal Calendar" channel that is suitable for use in enterprise applications, according to the present invention;

[0042] Figure 56 illustrates screenshots of certain components of an example of a "myNet" channel that is suitable for use in enterprise applications, according to the present invention;

[0043] Figure 57 illustrates screenshots of certain components of an example of a "Sales Pipeline" channel that is suitable for use in enterprise applications, according to the present invention;

[0044] Figure 58 illustrates screenshots of certain components of an example of an "Open Room" channel that is suitable for use in enterprise applications, according to the present invention;

[0045] Figures 59, 60, and 61 illustrate screenshots of certain components of an example of a "Security Threat Trends" channel that is suitable for use in enterprise applications, according to the present invention;

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[0046] Figure 62 illustrates a block diagram of an example of an enterprise user hierarchy that shows individual users, roles assigned to users, and/or users assigned to groups within an enterprise, according to the present invention;

[0047] Figure 63 illustrates a screenshot of an analyst client GUI that includes an example of a channel grid for users (i.e., analysts) in an analysts group of the enterprise, according to the present invention;

[0048] Figure 64 illustrates a screenshot of a manager client GUI that includes an example of a channel grid for users (i.e., managers) in a managers group of the enterprise, according to the present invention;

[0049] Figure 65 illustrates a screenshot of an example of a channel application catalog that includes content that corresponds to users (i.e., managers) in the managers group of the enterprise, according to the present invention;

[0050] Figure 66 illustrates a screenshot of a director client GUI that includes an example of a channel grid for users (i.e., directors) in a directors group of the enterprise, according to the present invention;

[0051] Figure 67 illustrates a screenshot of an example of a channel application catalog that includes content that corresponds to users (i.e., directors) in the directors group of the enterprise, according to the present invention;

[0052] Figure 68 illustrates screenshots of certain components of an example of an "Alerts" channel that is suitable for use in enterprise applications, according to the present invention;

[0053] Figure 69 illustrates screenshots of certain components of an example of a "Personnel Activity" channel that is suitable for use in enterprise applications, according to the present invention;

[0054] Figure 70 illustrates screenshots of certain components of an example of a "Reports" channel that is suitable for use in enterprise applications, according to the present invention;

[0055] Figure 71 illustrates screenshots of certain components of an example of a "User Administration" channel that is suitable for use in enterprise applications, according to the present invention;

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[0056] Figure 72 illustrates screenshots of certain components of an example of a "Catalog Administration" channel that is suitable for use in enterprise applications, according to the present invention;

[0057] Figure 73 illustrates a functional block diagram of an example of a personal information delivery application architecture for supporting a web presentation framework of the information delivery system, according to the present invention;

[0058] Figure 74 illustrates a functional block diagram of an example of a client architecture of the personal information delivery application for supporting the web presentation framework, according to the present invention;

[0059] Figure 75 illustrates a screenshot of an example of a web browser, which is running on a user device, for displaying a web page of a channel grid to the user, according to the present invention;

[0060] Figure 76 illustrates a screenshot of the web browser displaying a web page of a "Home Security" channel that is operating in a substantially full-screen mode, according to the present invention;

[0061] Figure 77 illustrates another screenshot of the web browser, which is running on a user device, for displaying a web page of another channel grid to the user, according to the present invention; and

[0062] Figure 78 illustrates a screenshot of the web browser displaying a web page of a "Stock Watch" channel that is operating in a substantially full-screen mode, according to the present invention.

[0063] It should be appreciated that all combinations of the foregoing concepts and additional concepts discussed in greater detail below (provided such concepts are not mutually inconsistent) are contemplated as being part of the inventive subject matter disclosed herein. It should also be appreciated that terminology explicitly employed herein that also may appear in any disclosure incorporated by reference should be accorded a meaning most consistent with the particular concepts disclosed herein.

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DETAILED DESCRIPTION

[0064] Various embodiments of the present invention describe an information delivery system for, and methods of, interaction with multiple information forms across multiple types, brands, and/or models of electronic devices, such as mobile devices (e.g., cell phones), portable devices (e.g., tablets, laptop computers), desktop computers, and televisions (e.g., set top boxes, intelligent TVs). In one example, the invention provides a system for and methods of interfacing with televisions via a graphical user interface and secure receipt of information relating to television programming.

[0065] The information delivery system for and methods of the invention provide the display of and access to secure user-centric information via the construct of a channel grid framework serving as a desktop on a user device. The channel grid framework includes multiple user-selectable items that provide access to corresponding "channels" by which respective portions of user-centric information are delivered to a user. The user and the user device are first authenticated to receive the secure user-centric information, and the user-selectable items included in the channel grid framework on the desktop for the user device are based on information access rights and security protocols defined for the corresponding channels, the user, and the user device.

[0066] Referring to Figure 1, a high level block diagram of an example of an information delivery system 100 that includes a personal information delivery (PID) application 112 for interaction with multiple information forms across multiple types, brands, and/or models of electronic devices is presented. Information delivery system 100 may include an application server 110 upon which is installed the PID application 112 that has access to one or more information sources 114. One or more users 116 are associated with information delivery system 100. Users 116 may be, for example, individuals or groups of individuals. Each user 116 may have one or more user devices 118. Application server 110, the one or more information sources 114, and user devices 118 may be connected to a network 120 by any wired and/or wireless means. Network 120 may be, for example, any local area network (LAN) and/or wide area network (WAN) for connecting to the Internet.

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[0067] Application server 110 may be a networked computer, such as the networked server of the owner and/or provider of PID application 112. The one or more information sources 114 may be, for example, networked computers of the owners and/or providers of the information stored thereon. For example, certain information 122 may be stored on information sources 114. Information 122 may be any information that can be delivered electronically over network 120 and that is capable of being consumed by users 116 via their user devices 118. More particularly, information 122 of the one or more information sources 114 may include different types and/or forms of information, data, and/or content. Examples of information 122 may include, but are not limited to, text, graphics, pictures, 3D graphic visualization of objects, sound, sensor data, streaming media data (e.g., streaming video and audio data), web-services data, Really Simple Syndication (RSS) feeds, image data, eventing and alerting, raw data, any type of information, and the like.

[0068] Information 122 of information sources 114 may be any information that resides outside of the application server 110 environment. However, with regard to information to be consumed by users 116 via their user devices 118, the invention is not limited to "external" information sources, such as information sources 114. Users 116 may also consume information from "internal" information sources (not shown), which are any information sources that reside directly at application server 110 and/or directly at user devices and/or from sensors contained on or communicating with user devices 118.

[0069] PID application 112 is a software application that facilitates user interaction with multiple information forms across multiple types, brands, and/or models of electronic devices (e.g., user devices 118). Generally, PID application 112 is operating under a client-server model of computing in which application server 110 is the server and each user device 118 is the client.

[0070] Preferably, user devices 118 have a runtime environment that includes, but is not limited to, the following attributes.

1. capability to access multiple different operating systems,
2. capability to access any information that is exposed at the device level,

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3. capability to allow software and/or information updates without interrupting the device and/or service (i.e., "hot" updates),
4. capability to operate offline,
5. capability to maintain state information, and
6. any combinations thereof.

[0071] An example of such a runtime environment is the Adobe® AIR® 2.5 runtime (available from Adobe Systems Inc, San Jose, CA) and the HTML5 runtime. HTML5 is the next major revision of the HTML standard, which is currently under development.

[0072] SYSTEM ARCHITECTURE SUPPORTING THE "FLEX" PRESENTATION FRAMEWORK

[0073] For the purpose of illustration, Figures 1 through 11 describe the system architecture of information delivery system 100 of the present invention implemented for supporting the Flex presentation framework. In one example, the Flex presentation framework may be implemented using Adobe® Flex® from Adobe Systems Incorporated (San Jose, CA). Adobe® Flex® is an open source framework for building highly interactive, expressive web applications that deploy consistently on all major browsers, desktops, and operating systems by leveraging the Adobe Flash Player and Adobe AIR® runtimes. In this example, user devices 118 (i.e., client devices) are any Adobe AIR-enabled devices. Examples of user devices 118 may include, but are not limited to, any type, brand, and/or model of Adobe AIR-enabled desktop computer; Adobe AIR-enabled laptop computer; Adobe AIR-enabled tablet computer; Adobe AIR-enabled net-book computing device; Adobe AIR-enabled handheld computing device; Adobe AIR-enabled personal digital assistant; Adobe AIR-enabled enterprise digital assistant; Adobe AIR-enabled portable digital assistant; Adobe AIR-enabled telecommunications device including one of an Adobe AIR-enabled telephone, Adobe AIR-enabled cell phone, and Adobe AIR-enabled smart phone; Adobe AIR-enabled personal navigation device; Adobe AIR-enabled vehicle-based device; Adobe AIR-enabled optical disk player; Adobe AIR-enabled television; Adobe AIR-enabled game console; and the like.

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[0074] Therefore, an aspect of information delivery system 100 of the invention is that its operation is not limited to any particular type, brand, and/or model of client device and/or to any particular operating system (OS). That is, the operation of information delivery system 100 of the invention is substantially device-agnostic and/or OS-agnostic because it may operate, for example, on substantially any Adobe AIR-enabled client device. Additionally, information delivery system 100 of the invention is substantially information type-agnostic and/or information source-agnostic.

[0075] User devices 118 serve as a user platform operated by a user 116 to facilitate display of, and interaction with, secure user-centric information. Preferably, the set of user devices 118 belonging to each respective user 116 is connected in a peer-to-peer (P2P) fashion. In one example, the user devices 118 of a certain user 116 may include a mobile device (e.g., cell phone), a portable device (e.g., tablet, laptop computer), a desktop computer, and a television (e.g., set top box, intelligent TV). In this example, the user's cell phone, tablet, laptop computer, desktop computer, and television are connected (wired and/or wirelessly) in a P2P fashion.

[0076] PID application 112 of the invention provides a personalized information delivery utility that includes one or more sets of processor-executable instructions executing on one or more processors controlling various other hardware devices, with client-server system architecture, to facilitate delivery of a wide variety of information to a user, via one or more user devices or "platforms" (clients). Information is displayed on a graphical user interface (GUI) of a given user platform in a "presentation framework" that is customized based on a "user context." The presentation framework is homogenous amongst different user platforms so as to facilitate user familiarity and ease of interaction with displayed information. The presentation framework also facilitates the user's ability to take meaningful "real-time" action(s) in response to the displayed information.

[0077] The "user context" may be with respect to user attributes, such as, but not limited to, identity of the user, an identifier for one or more user devices associated with the user, location, activity, role, event, and any combinations thereof. Further, the "user context" may be with respect to user preferences, such as, but not limited to, source(s) of information of interest to the user, category/type of information of

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interest to the user, priority and/or importance of information, time (of day, week, month, year) at which information is displayed, and any combinations thereof.

[0078] The mechanism of PID application 112 for providing the user access to and interaction with, for example, information 122 and/or any other information is referred to as a "channel." That is, the channel is a conduit for delivering information to a user (e.g., providing access to and interaction with information), and is an elemental feature (basic building-block) of PID application 112. With respect to the PID application 112, the channel two pieces (1) a visualization piece that is presented on the client device (e.g., user devices 118) and (2) the integration piece residing at the server (e.g., application server 110). More details of the channel with respect to PID application 112 are described with reference to Figures 2, 3, 4, and 5.

[0079] Referring to Figure 2, a functional block diagram of an example of a channel 200 of PID application 112 for providing users access to and interaction with information is presented. PID application 112 may provide at least one channel 200. Preferably, PID application 112 provides one or more function-specific channels 200. There may be a server portion of channel 200 that is resident at application server 110 and a client portion of channel 200 that is resident at each user device 118. The client side portion of channel 200 is for presenting and interacting with content. There is a server side portion of channel 200 provides services and that are always running. More details of the client architecture and server architecture underlying the client and server portions of any channel 200 are described with reference to Figures 5 through 11.

[0080] Any channel 200 of PID application 112 provides a gateway to content, such as information 122 of information sources 114. Additionally, each channel 200 has a built in eventing and alerting feature, which will be described in subsequent text. Each channel 200 may include a visual component 210 that is formed of a touchlet 212 and a channel application 214. Additionally, channel 200 may include one or more service components 216 and a configuration component 218.

[0081] Visual component 210 may be any text and/or graphic element that may be presented to users 116 for viewing on the display, screen, and/or GUI of any user device 118. With respect to a certain function-specific channel 200, the design and implementation of visual component 210 may be channel-specific. That is, visual

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component 210 may be used to visually render at least some of the function-specific information on a GUI of a user device 118 via one or more text and/or graphic elements, and provide for interaction with the displayed channel information. The invention is not limited to presenting information to users 116 in a visual fashion only. Other ways (not shown) of conveying information to users 116 may be, for example, audible indicators (i.e., sound) and/or tactile indicators (e.g., vibration).

[0082] Channel application 214 may be any application software that is designed to perform singular and/or multiple related specific tasks and/or functions of a certain channel 200. Channel application 214 is used to manage the visual rendering of at least some of the channel-specific information on a GUI of a user device 118. Channel application 214 is also designed and used to manage user interaction with the displayed channel information.

[0083] Some channel applications 214 support implementation of the channel in a "full screen mode" on the GUI of a user device 118 once the channel 200 is deployed on the platform of PID application 112 and a channel 200 is invoked by a user (i.e., selected by the user to operate in substantially full-screen mode). A user invokes a certain channel 200 via its respective touchlet 212. Touchlet 212 includes a graphic element associated with its channel 200 that appears on a portion of the GUI of a user device 118, as part of the presentation framework, to provide a gateway/portal to its channel 200. A touchlet 212 has multiple behaviors as described with reference to Figure 3. Examples of function-specific channels 200 and their associated touchlets 212 are described with reference to Figure 3. Additionally, Figure 3 shows an example presentation framework of channels 200 on the GUI of a user device 118. More details of an example of a function-specific channel 200 with its visual components 210, touchlet 212, and channel application 214 are described with reference to Figure 4.

[0084] The one or more service components 216 of a channel 200 are used to access information from outside the environment of PID application 112. For example, service components 216 are used to retrieve the information 122 from the authorized information source(s) 114 and securely provide the retrieved information 122 to any visual components 210 of a channel 200 for display to user. Additionally, service components 216 may be used to monitor/process the channel information

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(e.g., via event processing and/or complex event processing (CEP)) to derive "secondary" information (e.g., events–particular changes in state or content of channel information), and provide secondary information to any visual components 210 for conveying to the user (e.g., alerts).

[0085] Every channel 200 has at least one service that is invokes via service components 216. For example, one service is an identity service. The identity service may be used for (1) authenticating and authorizing users 116 to use a channel 200 and (2) authenticating channels 200 to invoke one or more services (at the server) in order to access content from, for example, authorized information source(s) 114. Every service has identity. The authorization and authentication is by channel, in this way authorization and authentication does not have to occur for each information request.

[0086] Configuration component 218 of any channel 200 includes information that defines the behaviors and "personality" of the channel 200. Configuration component 218 also includes user preferences. Further, the information in configuration component 218 defines the services being used, the data being used, alerts, user preferences for the content and alerts, state information, synchronization information, versioning information, and the like.

[0087] There are additional authorization aspects of each channel 200. For example, user authorization may be based on user identity, user role, user device, user/device location, time, date, day of week, and the like. For example, a certain user 116 is authorized to access certain content at his/her workplace location between 8am and 8pm, and only with his/her laptop computer that has a certain MAC address. At application server 110, configuration queries the identity subsystem (shown in Figure 6) to understand any user permissions. The user may be generally authorized to use a channel 200, but there may be conditions.

[0088] Because there is two pieces to each channel 200, the client side visualization piece and the server side integration piece, an aspect of the invention is that there is operational persistence at the server. Client devices may be shut down, but the channels are still operating on the server and services are still being run. As client devices become available, content will begin to stream.

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[0089] A "presentation framework" is the manner in which information (generally multiple types or classes of information) is visually rendered (displayed to a user via a GUI of a user device 118) by PID application 112. The presentation framework is customized at least in part based on a user context (e.g., user attributes and/or preferences) and the presentation framework may sometimes purposefully constrain the scope and/or type of the information displayed on a GUI of a user device at any given time. The presentation framework thereby allows a user to interact with more limited information that may be particularly important to them in a given user context. This purposeful limitation on displayed information facilitates the user's ability to meaningfully absorb and respond to the information (e.g., take real-time action and/or make decisions in response to the displayed information).

[0090] PID application 112 provides a presentation framework that is homogenous amongst different user platforms so as to facilitate user familiarity and ease of interaction with available information; i.e., the presentation framework "follows a user around" from user device 118 to user device 118 and appears the same or substantially the same to the user on any GUI of any user device 118 on which the "client portion" of PID application 112 is installed.

[0091] A presentation framework includes one or more user-selectable items, or "touchlets" that are selectable by a user (e.g., via touch-screen and/or point and click, sound recognition, movement recognition or image recognition user interfaces) so as to invoke a "channel," through which one or more particular types of information are displayed to the user on the GUI of the user platform in a substantially full-screen mode. More details of one example of a presentation framework of PID application 112 are described with reference to Figure 3, as well as other Figures to follow.

[0092] Referring to Figure 3, a screenshot of an example of a client GUI 300 is presented that shows an example of a channel grid, which is one example of a presentation framework of PID application 112. Client GUI 300 may include, for example, a main viewing panel 310. Additionally, a taskbar 312 may be provided along the top of main viewing panel 310 and a navigation bar 314 may be provided along the bottom of main viewing panel 310.

[0093] Taskbar 312 may include, for example, standard calendar, time, window controls, and the like. Navigation bar 314 may include, for example, icons for

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launching other applications, icons of other user devices 118, and the like. For example, navigation bar 314 may include a developer icon 320, a catalog icon 322, and certain device icons 326. The developer icon 320 may be used to launch a "developer environment" that may be built into the framework of PID application 112. The catalog icon 322 may be used to launch an "application store" by which users 116 may acquire (e.g., purchase) and then install and synchronize specific channels 200. Device icons 326 may depict any types, brands, and/or models of user devices 118 in the user's P2P network, such as a mobile phone, a tablet device, any computing device, a television, and the like.

[0094] Once acquired from the application store, the user's preferences may cause the acquired channel(s) 200 to automatically load and synchronize across all user devices 118. Alternatively, a user 116 may drag and drop any channel 200 (e.g., drag and drop its touchlet 316) from the current user device 118 to, for example, the telephone device icon 326, the tablet device icon 326, the television device icon 326, and so on. Thereby, installing and synchronizing or copying the channel 200 on another user device 118. Therefore, an aspect of the invention is that any channel on any user device can be quickly replicated and synchronized on any other user devices.

[0095] Client GUI 300 shows an example of a presentation framework that is organized into a grid for presenting channels 200 to a user 116 on any user device 118. In this example, multiple touchlets 316 are presented in a 3x4 channel grid 318 in the main viewing panel 310 of client GUI 300. For example, 3x4 channel grid 318 includes touchlets 316A through 316L. Each touchlet 316 in the 3x4 channel grid 318 of client GUI 300 represents a channel 200 of a specific purpose and/or function. User 116 may have multiple channel grids of information, which are accessible via the navigation bar 314. For example, navigation bar 314 may include certain channel grid icons 324, which are icons of other channel grids of the user. In one example, channel grid icons 324 may include an "At Home" channel grid icon, a "My TV" channel grid icon, and an "At Work" channel grid icon. A user 116 may specify a certain default channel grid in his/her profile. Additionally, as defined in the user's profile, the default channel grid may change based upon, for example, device type, time, location, prior activities, and the like. Further, user 116 may be presented an option of several different channel girds from which to select. In one example, the

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channel grid 318 shown in main viewing panel 310 of client GUI 300 of Figure 3 may be the user's "At Work" channel grid.

[0096] Presentation of channel grids may change based upon user context or preferences. Generally, PID application 112 is capable to combine, screen, and/or synthesize information in any way to present information in an intelligent manner to the user. The invention is not limited to presenting content in a 3x4 or any other n x n channel grid. Other presentation styles are possible. For example, the touchlets of channels may be presented in a tiled fashion on a 3D cube, a tiled fashion on a 3D globe, a stacked tiled fashion, and the like.

[0097] Each touchlet 316 in the 3x4 channel grid 318 of client GUI 300 represents a channel 200 of a specific purpose and/or function. In one example, channel grid 318 includes a "News Reader" touchlet 316A, a "Stock Watch" touchlet 316B, another "Stock Watch" touchlet 316C, a "Business CRM" touchlet 316D, a "Currency" touchlet 316E, a "Banking" touchlet 316F, a "Live News" touchlet 316G, a "Business Calendar" touchlet 316H, an "Email" touchlet 316I, a "Personal Calendar" touchlet 316J, a "Business Finance" touchlet 316K, and an "Around Me" touchlet 316L. Further to the example, more details of the "Around Me" touchlet 316L and its associated channel application are described with reference to Figure 4.

[0098] Each touchlet 316 of client GUI 300 is an example of a touchlet 212 of channel 200 of Figure 2. Additionally, each touchlet 316 of client GUI 300 as well as the 3x4 channel grid 318 itself are examples of visual components 210 of channel 200 of Figure 2.

[0099] A touchlet 212 of channel 200 of Figure 2, such as touchlets 316A through 316L of Figure 3, has multiple behaviors – (1) a touchlet 212 may serve as an icon to launch its associated channel application 214 to full screen mode, (2) a touchlet 212 may receive dynamically streaming data, such as audio and video data, sensor data, any web-services data, RSS feeds, eventing and alerting, raw data, any type of information, and the like. Data may be pushed to the channel 200 and its touchlet 212 in near real time, and (3) a touchlet 212 may serve as a viewer for presenting information dynamically in near real time.

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[00100] Additionally, a touchlet 212 may include substantially all the functionality of a full channel application. The "touchlet information" typically is related to or derived from the channel information provided by the corresponding channel associated with the touchlet, so that when visually rendered, the touchlet information provides a more limited but nonetheless intuitive representation of the channel information. Therefore, an aspect of the invention is that the construct of a channel 200 includes two levels of presentation (1) information that is streaming and/or displayed at the touchlet level and (2) information that is streaming and/or displayed at the full screen level that is launched via the touchlet.

[00101] Unlike standard icons and windows that are static and have little or no built-in intelligence, touchlets 212 have both static and dynamic behaviors, as well as intelligence. For example, touchlets 212 can provide information in context (e.g., context based on certain relationships between different data sources, time of day, day of week, geographic location, devices, users, user's role, and the like). Therefore, an aspect of the invention is that touchlets may be designed to present only information that is most interesting and/or meaningful to the user, and with context. Another aspect of the invention is that touchlets provide mechanisms for taking action and/or making decisions on that information.

[00102] An aspect of the invention is that multiple touchlets in a channel grid may be displaying near real-time dynamic content to the user simultaneously. For example, the twelve touchlets 316 in 3x4 channel grid 318 of client GUI 300 may be displaying near real-time dynamic content simultaneously (e.g., 12 streaming videos) to the user 116. Again, the content presented in each touchlet is designed to present only what is important to the user without saturating the user with content he/she does not want or need.

[00103] Another purpose and/or function of a touchlet 212, such as touchlets 316A through 316L of Figure 3, is that a touchlet 212 is capable of visually presenting static and/or dynamic content to a user 116 in a small window, until such time that the user 116 launches the associated channel application 214 in full-screen mode. For example, in near real time, application server 110 is pushing dynamic information from any sources to one or more touchlets 316 in near real time.

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[00104] For example, in near real time, application server 110 is pushing dynamic information from a news web-service to "News Reader" touchlet 316A, dynamic stock information to "Stock Watch" touchlet 316B and "Stock Watch" touchlet 316C, streaming video data to "Live News" touchlet 316G, and so on. Further to the example and referring to Figure 4, various screenshots of certain components of an example of an "Around Me" channel 400 of PID application 112 are presented.

[00105] Figure 4 shows the "Around Me" touchlet 316L, which is an example of a visual component 210 of a channel 200. The "Around Me" touchlet 316L displays a pin marker on a map to visually represent to the user that "Around Me" channel 400 may be a mapping application. When a user touches, clicks on, or otherwise selects the "Around Me" touchlet 316L of channel grid 318, the underlying "Around Me" channel application 214 is launched and renders a substantially full-screen GUI of the "Around Me" channel 400. The "Around Me" channel 400 then presents substantially more information to the user than shown in the "Around Me" touchlet 316L alone.

[00106] The substantially full-screen display of any channel application, such as an "Around Me" channel application 214, may include, for example, a main viewing panel 410. Additionally, a taskbar 412 may be provided along the top of main viewing panel 410 and a navigation bar 414 may be provided along the bottom of main viewing panel 410. Navigation bar 414 may include, for example, a set of mini-touchlets 416, which are substantially the same as, for example, touchlets 316 of channel grid 318 of Figure 3 but presented in miniature form. A user may navigate directly to any channel application by selecting one of the mini-touchlets 416.

[00107] Main viewing panel 410 of "Around Me" channel 400 may include, for example, a visual mapping component 418 and a search component 420. The GUI itself, along with its visual mapping component 418 and search component 420 are all examples of visual components 210 of a channel 200. While contextually related to one another and able communicate to one another, the "Around Me" channel GUI and the "Around Me" touchlet 316L are two separate and distinct entities.

[00108] "Around Me" channel 400 first acquires geo-location information. In one example, current geo-location information is automatically acquired from a user device 118 (e.g., geo-location data of a cell phone). In another example, geo-location

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information is acquired by the user 116 manually entering an address. Once the "Around Me" channel 400 has acquired the geo-location information, a map of the user's location is presented via the visual mapping component 418. Additionally, search component 420 may be used for locating places of interest (restaurants, gas station, hospital, ATM, theater, etc) near this location. If the user selects certain places of interest using search component 420, these places of interest are highlighted or otherwise indicated on the map. Further, if the user selects a particular place of interest, driving directions may be indicated on the map. The driving directions may be presented in text form, image form (e.g., displayed pictures and/or videos), and/or audible form (e.g., spoken directions).

[00109] In order to accomplish the aforementioned functionality, certain services may be associated with "Around Me" channel 400. For example, associated with "Around Me" channel 400 may be an IP location service component 422, a destination service component 424, and a speech service component 426. Additionally, the operation of "Around Me" channel 400 is an example of using intra-client interactions as well as client-server interactions. Any interaction with the components of "Around Me" channel 400 is passing messages through what may be termed a "GUI conversation."

[00110] For example, when the user 116 pushes a "Find Me" button on the GUI a message is passed (via the GUI conversation) to the IP location service component 422. The IP location service component 422 then communicates with its related server channel component at application server 110. For example, IP location service component 422 passes the IP address to the server and requests the corresponding geographic location information. The related server channel component queries a mapping service (e.g., Bing) and returns a location (e.g., Syracuse, NY) to the IP location service component 422. The IP location service component 422 passes this Syracuse, NY mapping data (via the GUI conversation) back to the visual mapping component 418 of the "Around Me" channel 400.

[00111] Similarly, when the user requests driving directions, a message is passed (via the GUI Conversation) to the destination service component 424. The destination service component 424 then communicates with its related server channel component at application server 110. The related server channel component queries a mapping

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service (e.g., Bing) and returns turn-by-turn driving directions to the destination service component 424. The destination service component 424 passes the turn-by-turn driving directions data (via the GUI conversation) back to the visual mapping component 418 of the "Around Me" channel 400 and a driving route is indicated. Additionally, a text-to-speech conversion may be performed remotely at application server 110 and the results passed to speech service component 426 of the "Around Me" channel 400. The user then hears audible driving directions accordingly.

[00112] The "Around Me" channel 400 also illustrates the capability of performing updates without interrupting the device and/or service (i.e., "hot" updates). For example, the default visual mapping component 418 may be supported by the Bing Maps web-service. However, the visual mapping component 418 may include a selector that allows the user and/or developer to select from a list of map services, such as Google Maps, Yahoo Maps, MapQuest, and the like. If Google Maps is selected, the Google Maps data is automatically sent to the visual mapping component 418 with no client interaction. As a result, the visual mapping component 418 is updated with no device and/or service interruption.

[00113] Referring to Figure 5, a functional block diagram of an example of a client runtime environment 500 is presented, which is the runtime environment of user devices 118 of PID application 112. Client runtime environment 500 may include a cross-operating system application 510. In one example, when user devices 118 of PID application 112 are Adobe AIR-enabled devices, cross-operating system application 510 is based on Adobe® AIR®, which is described in Figure 1. Therefore, client runtime environment 500 of user devices 118 may take advantage of all the capabilities that come with Adobe AIR, such as, but not limited to, HTML, Flash, Adobe AIR APIs, messaging, and the like. For example, Flash allows access the Hulu website to play streaming videos and because Adobe AIR includes a web browser, it can run HTML. Further, the Adobe AIR runtime is suitable for use with many different operating systems. For example, the Adobe AIR runtime is suitable for use with desktop operating systems, such as Mac, Windows, and Linux; mobile operating systems, such as RIM, WebOS, Windows Phone7, Symbian, and Android; and TV-related operating systems, such as Internet Protocol Television (IPTV) operating systems.

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[00114] Referring to Figure 6, a functional block diagram of an example of a PID application architecture 600 for supporting the Flex presentation framework is presented. PID application architecture 600 is an example of the application architecture of the server side of PID application 112. PID application architecture 600 may include a facilitation layer 610 through which all messaging of user devices 118 (the clients) pass, an integration and process layer 612, and an integrated services and applications layer 614.

[00115] Facilitation layer 610 further includes a facilitation server 616 and certain other servers 628. Generally, facilitation server 616 manages the communication between the client (e.g., user devices 118) and the server (e.g., application server 110). Facilitation server 616 serves as the gate keeper. In a sense, facilitation server 616 introduces the client to the integration and process server 646 and then goes away. Facilitation server 616 serves as the client representative to the rest of the server stack. In one example, facilitation server 616 is implemented using a Java server component that provides a set of real-time data management and messaging capabilities. One example of this Java server component may be Adobe® LiveCycle® Data Services.

[00116] Facilitation server 616 of the facilitation layer 610 may include, for example, a client gateway 618, proxy services 620, invocation services 622, inter-client messaging/synchronization 624, and a facilitation processor 626.

[00117] Client gateway 618 may be the direct interface with the client (e.g., user devices 118) for handling messaging operations. In one example, client gateway 618 uses Action Message Format (AMF) and/or Java Message Service (JMS) for exchanging messages and/or data between the client and server and/or between one client and another client.

[00118] Servers 628 of the facilitation layer 610 may include, for example, a channel server 630, a content delivery server 632, a collaboration media server 634 (e.g., video conferencing server), a stream sync server 636, an analytics server 638, an advertising server 640, a transcoding server 642, and a media server 644.

[00119] Generally, channel server 630 is used for the creation and consumption of channels 200. Channel server 630 is not utilized in the operation of channels 200.

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For example, channel server 630 may include a repository of channels 200, a channel application catalog 631, and a developer module 633. Channel application catalog 631 may be an "application store" of available channels 200 from which users 116 may acquire (e.g., purchase), download, and install and synchronize specific channels 200. An example of channel application catalog 631 is shown in Figure 12.

[00120] Developer module 633 may be the "developer environment" that may be built into the framework of PID application 112. For example, developer module 633 may be used by software developers to design specific channels 200. In one example, the developer icon 320 of client GUI 300 of Figure 3 may be used to launch the developer module 633. Therefore, an aspect of the invention is that PID application 112 provides a developer environment (e.g., developer module 633) in the same framework as the user environment and without having to exit the user environment.

[00121] Content delivery server 632 may be a server for storing and/or managing any other content that is not managed by, for example, collaboration media server 634, advertising server 640, and media server 644. Collaboration media server 634 is used to facilitate video conferencing. Stream sync server 636 is the server that integrates with advertising and analytics as it relates to the client and content that is being presented. An example of using stream sync server 636 is synchronizing and/or relating ads on one user device 118 (e.g., TV) with ads on another user device 118 (e.g., tablet). Analytics server 638 is used to configure and administer analytics applications. Advertising server 640 may be a dedicated server for storing and/or managing advertising content. Media server 644 may be a dedicated server for storing and/or managing various digital media, such as digital videos/movies, audio/music, and picture files.

[00122] Transcoding server 642 may be a dedicated server for performing transcoding operations. Transcoding is the ability to adapt digital files so that content can be viewed on different playback devices. Working like an interpreter, a transcoder translates files to a suitable format for the end user. Transcoding servers (e.g., transcoding server 642) and services reformat material that would otherwise have to be developed separately for different platforms. Transcoding servers and services are commonly used for adapting content for mobile devices or serving video.

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[00123] Integration and process layer 612 may be organized in a standard service-oriented architecture (SOA). Integration and process layer 612 further includes an integration and process server 646 along with certain hosting applications 674, hosted communications applications 676, and integral identity provider SSO provider 678. Integration and process server 646 of integration and process layer 612 further includes certain platform service components 648 and certain server channel components 662.

[00124] Platform service components 648 may include, but are not limited to, a data management subsystem 650, an eventing and alerting subsystem 652, a configuration server 654, a session manager 656, an administration subsystem 658, and an identity subsystem 660.

[00125] Data management subsystem 650 performs the master data management operations of PID application architecture 600. Master data management may include, for example, correlating user ID (which user are you?) to content and/or correlating user devices (user has 6 phones, which phone are you?) to content. Associated with data management subsystem 650 may be an operational data store (ODS) (not shown) and/or a data warehouse (not shown) for storing temporary data or long term data. The ODS may serve two purposes (1) the ODS is used to store data for historical purposes, because data may not persist or be stored at the source. For example, a channel 200 may poll a service every few minutes and store the data in the ODS; and (2) the ODS is used in general application usage. For example, there is a background process of any channel 200 of PID application 112 that is retrieving data and pushing it to the ODS. Therefore, any data that is presented to the user at the user device 118 (i.e., at the client device) may be supplied by the ODS. This ensures good response time for the end-user because the network will not have to be continually interrogated for information.

[00126] Eventing and alerting subsystem 652 is used to collect and/or analyze information from any one or more disparate data sources with respect to certain predetermined or dynamic event conditions. Example of types of information that may be evaluated/monitored by eventing and alerting subsystem 652 may include, but are not limited to, text information, graphic information, one or more pictures, one or more videos, audio or digital sound, streaming data, audio or video, content associated

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with an executing computer application, voice-over-IP communication, instant messaging/SMS information, video-conferencing information, environmental monitoring information, financial services information, enterprise resource planning information, enterprise content management information, building information, project management information, product lifecycle management information, RSS reader information, remote device control/interaction information, a three-dimensional graphic visualization of one or more objects and/or immersive environments, one or more word processing documents, one or more spreadsheets, one or more presentation/slide shows, email, address book information, and any combinations thereof. CEP systems may also be utilized to evaluate/monitor event conditions.

[00127] Upon detecting the presence of an event condition, eventing and alerting subsystem 652 transmits alert notifications to users 116 via one or more user devices 118. Eventing and alerting subsystem 652 may include, for example, an event manager component, a notification manager, and a complex event processor. Further, events maybe stored for delivery at a later time or for use in a CEP system.

[00128] Once an event is registered in the event manager of the eventing and alerting subsystem 652, the event manager uses CEP (e.g., via complex query language (CQL) programming) to continually monitor the ODS of data management subsystem 650 based on event(s) that have been set and/or to perform a direct query of any external system and/or service.

[00129] Once the event manager recognizes that a certain event condition is present, the notification manager checks the user's configuration, which is at configuration server 654, as well as the user's session information at session manager 656 in order to determine how best to notify the end-user. Then, the alert notification is pushed through the client gateway 618 of the facilitation server 616 (e.g., via AMF) and to one or user devices 118 (client devices). As a result, the one or user devices 118 receive the alert notification and the alert presented to the user 116 via one or user devices 118.

[00130] Example of types of alerts that may be generated by eventing and alerting subsystem 652 may include, but are not limited to, visual alerts, auditory alerts, tactile

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alerts, email messages, SMS text messages, activation of at least one channel of a plurality of channels, and notifications to a law enforcement agency.

[00131] A main aspect of a channel 200 is that eventing and alerting subsystem 652 provides actionable eventing and alerting capability to the user 116. That is, channels 200 of PID application 112 provide users the ability to take action upon receiving an alert, in which the mechanism for user response to an alert may be conveniently built into the channel itself.

[00132] Configuration server 654 manages device configurations, user profiles, data configurations, application configurations, and the like. Configuration server 654 is the counterpart to configuration component 218 of any channel 200.

[00133] Session manager 656 performs session management and/or handles state. Session manager 656 may include, for example, a session module and a policy module. In one example of managing state, a user 116 is watching TV (one user device 118) and decides to pause the TV show and resume watching the TV show on his/her laptop computer (another user device 118). Session manager 656 stores state information and communicates this state information between user devices 118 so that the user 116 can resume watching the TV show at his/her laptop computer from the same point in the broadcast.

[00134] Administration subsystem 658 is used to perform standard system administration tasks. For example, when a channel 200 is accepted into the channel application catalog 631, the administration subsystem 658 associates what users 116 are allowed to access the channel. With respect to authorizations, channels are assigned to groups and users. For example, anyone working in the accounting department of a company has access to a certain channel or only a certain user's family members are allowed access to a certain channel.

[00135] Identity subsystem 660 manages the authorization of users, places, times, and things. Identity subsystem 660 may include, for example, an authorize module and an authenticate module. For example, users must be authorized for content and services must be authorized for content. Accordingly, services check to ensure that users are authorized to access their services.

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[00136] A main aspect of PID application 112 of the invention is single sign-on (or universal sign-on) capability, wherein once the user 116 is activated on the system, the user 116 is automatically authenticated when accessing any applications that normally require user login, i.e., unified access to all applications. That is, once the user 116 logs into information delivery system 100, the user will not be prompted for any other login operations when accessing information and/or services via PID application 112. For example, the user 116 may have one or more secure email services, one or more secure banking and/or financial accounts, one or more secure web-services accounts, and the like. Login information of all the user's secure accounts is stored, for example, identity subsystem 660. When a user access these secure accounts, identity subsystem 660 automatically provides the necessary login credentials to the requesting entity, thereby automatically logging in the user with no further action on the user's part. Because multiple user devices 118 may be associated with a user 116, PID application 112 requires that the user 116 login on each of his/her user devices 118 as they become available in order to ensure the identity of the user 116.

[00137] In a location-based example, a user 116 is authorized to use a certain user device 118 and/or service only when inside his/her place of business. Therefore, upon leaving the building the authorization is revoked. In a time-based example, a user 116 is authorized to use a certain user device 118 and/or service only at a certain time of day, perhaps during off-peak hours. Therefore, during off-peak hours the authorization is allowed, but during peak hours the authorization is revoked.

[00138] Generally, server channel components 662 are used to perform the integration. Server channel components 662 may include Java-based components, such as, but not limited to, a Camel server channel component 664, a Spring server channel component 666, a Java server channel component 668, a JavaScript server channel component 670, a business process execution language (BPEL) server channel component 672.

[00139] Camel server channel component 664 may be, for example, the Apache Camel server channel component (available from The Apache Software Foundation). Camel server channel component 664 is used for the orchestration and integration of services. Spring server channel component 666 is used for implementing Inversion of

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Control (IoC) and aspect-oriented programming (AOP). For example, when passing information from one component to another, the components involved have placeholders for data to be injected (or inserted). Spring server channel component 666 is used to manage this process. Java server channel component 668 may be implemented via (e.g., Java 2 Platform Standard Edition (J2SE)). JavaScript server channel component 670 is used for running JavaScript on the server side of PID application 112. BPEL server channel component 672 is used to export and import information by using web service interfaces.

[00140] With respect to integration and process layer 612, certain unique tasks are possible, independent of the source of the content. For example, sensor data and streaming media data are being normalized, which allows the capability to combine content. Therefore, a main aspect of the invention is that PID application 112 is agnostic to the source of the content and agnostic to the user device on which it is presented. From a client perspective, PID application 112 is agnostic to what content sources are connected.

[00141] The components of PID application architecture 600 communicate via an enterprise service bus 680 of integration and process server 646. Enterprise service bus 680 manages "calls" in and out of the PID application architecture 600. A set of adaptors 682 are connected to enterprise service bus 680 for interfacing with entities of integrated services and applications layer 614, which are outside of the environment of application server 110. That is, adaptors 682 are connected to enterprise service bus 680 for handling various communication protocols.

[00142] Integrated services and applications layer 614 may include, but is not limited to, one or more third-party services 684, one or more relational database management systems (RDBMS) 686, Parlay X 688 (i.e., a set of standard Web service APIs for the telephone network), one or more IP multimedia subsystem (IMS) servers 690, basic wireline telecommunication 692, one or more communications modules 694 (e.g., instant message, calendar, mail/SMS, address book), and one or more directory servers 696, which may be examples of information sources 114.

[00143] An aspect of the invention is that PID application 112 provides built in security at the application server 110, which inherently provides security at each user device 118. Any applications running in the PID application 112 environment are

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checked for viruses, spyware, and the like. In this way, it is ensure that users 116 are operating in a secure environment.

[00144] Referring to Figure 7, a functional block diagram of an example of client architecture 700 of PID application 112 for supporting the Flex presentation framework is presented. Client architecture 700 is an example of the application architecture of the client side of PID application 112. That is, client architecture 700 is the application architecture of any user device 118.

[00145] Figure 7 shows a channel 200, which includes visual component 210, touchlet 212, channel application 214, and service component 216. Associated with a channel 200 are certain sub-components, such as assets 710, code 712, models 714, conversations 716, as well as configuration 718.

[00146] Assets 710 may be, for example, images, descriptive language for the layout of the channel, and the like. Code 712 is the actual programming code for the channel 200. A channel service 720 on the client side communicates with the channel server 630 on the server side. Code 712 interacts with channel service 720 in the client. Additionally, code 712 is cached in client cache 750 and then transmitted via a client bus 760 to identity subsystem 660 (performing authentication and authorization) and then to channel server 630. Any channels 200 that are installed on a user device 118 originate from channel server 630 (e.g., from channel application catalog 631).

[00147] Models 714 may be the data models for the channel 200. A model system 730 on the client side may include user-defined models, persistent models, synchronized persistent models, synchronized models, and the like. Associated with model system 730 may be a persistence service 732 and a synchronization service 734. Models 714 interact with persistence service 732 and synchronization service 734 in the client. Persistence service 732 on the client side communicates with the data management subsystem 650 on the server side. Synchronization service 734 on the client side communicates with the inter-client messaging/synchronization 624 on the server side. Additionally, models 714 are cached in client cache 750 and then transmitted via client bus 760 to identity subsystem 660 (performing authentication and authorization) and then to inter-client messaging/synchronization 624.

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[00148] Conversations 716 may be any communication over the bus between client components and/or server components. Conversations 716 on the client side are transmitted via client bus 760 to the eventing and alerting subsystem 652 on the server side.

[00149] Configuration 718 may define, for example, the position of the touchlet on the channel grid, that the channel now monitoring a certain data stream, the user is receiving data and needs to be synchronized, the user has multiple devices that need to be synchronized, when any application is installed perform synchronization, location, ID, the channel is a synchronizable channel, the channel is an alertable channel, and the like. Configuration 718 includes any channel attributes that convey the "personality" or functionality of the channel. Certain information in configuration 718 may be selected by the user.

[00150] A configuration service 740 on the client side communicates with the configuration server 654 on the server side. Configuration 718 interacts with configuration service 740 in the client. Additionally, configuration 718 is transmitted via client bus 760 to identity subsystem 660 (performing authentication and authorization) and then to configuration server 654.

[00151] Client architecture 700 of the client side of PID application 112 is architected similar to an SOA for an enterprise stack. The client services use the idea of GUI conversations to exchange messages between client components and/or server components, all using the client bus and/or server bus. Therefore, an aspect of the invention is a sophisticated client architecture, similar to an SOA, that allows complex processing to occur locally at the client as well as at the server (yet without relying on the server), thereby enabling a rich user experience. Additionally, with respect to PID application architecture 600 and/or client architecture 700, more details of examples of certain process flows are described with reference to Figures 10 and 11.

[00152] Referring to Figure 8, a functional block diagram of an example of a communication flow 800 between the client side and the server side of PID application 112 is presented. For example, certain components may be bypassed in order to achieve efficiency. Communication flow 800 shows that components of client channels 200 may communicate directly with platform service components 648 (albeit through facilitation server 616). Additionally, components of client channels

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200 may communicate with platform service components 648 through the server channel components 662 (again through facilitation server 616). This is important because certain tasks do not require going through the server channel components 662. Therefore, it may be more efficient to communicate directly with platform service components 648. For example, maybe when a components requesting permission to do something, the client channel 200 may communicate directly with identity subsystem 660.

[00153] Referring to Figure 9, a functional block diagram of an example of a communication flow 900 between components at the server side of PID application 112 is presented. For example, in integration and process server 646, the server channel components 662 may bypass the platform service components 648 and communicate directly with enterprise service bus 680. This scenario may be called "performant direct calling."

[00154] Referring again to Figures 8 and 9, an aspect of the invention is that PID application 112 provides flexibility in the messaging operations.

[00155] Referring to Figure 10, illustrates a functional block diagram of a portion of PID application architecture 600 and a process of performing a user login operation is presented. In this example, the process of performing a user login operation may include, but is not limited to, the following steps.

[00156] At step 1, the client (user device 118) is activated, the application is launched at the client and, therefore, the channel grid is started at the client.

[00157] At step 2, the channel grid at the client connects via AMF to client gateway 618 of the facilitation server 616 at the server.

[00158] At step 3, client gateway 618 then authenticates. For example, client gateway 618 passes the credentials (user ID and password) to the authenticate module of identity subsystem 660.

[00159] At step 4, using a session module of session manager 656, the session is checked to see whether there is already an existing session. This is done because the user 116 may have multiple user devices 118.

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[00160] At step 5, using a personal profile module of configuration server 654, the user's personal profile is checked with respect to the user device 118. This is done to ensure that the presentation frame work (e.g., channel grid, tabs) that is delivered matches the user device 118. The user's personal profile is also checked with respect to the location.

[00161] At step 6, an event manager module of the eventing and alerting subsystem 652 checks to see whether the user has any alerts present in case any alerts have occurring during the transition state of the user device 118.

[00162] At step 7, the channel grid at the client checks to see whether the channels are cached locally at the client. If not cached, the channel grid at the client requests its channels from the channel server 630.

[00163] At step 8, using an authorize module of identity subsystem 660, the channel server 630 checks to see whether the user is authorized to have the requested channels.

[00164] At step 9, channel server 630 responds to the client with the allowed channels (sometimes updating, sometimes responding already up-to-date).

[00165] At step 10, the channel grid is populated with channels and presented at the client (user device 118).

[00166] An aspect of the invention is that PID application 112 provides a universal login feature. That is, once a user 116 is logged into PID application 112, no further login actions are required for accessing any information and/or services. For example, configuration server 654 and/or identity subsystem 660 may contain a record of all login information of every user 116, which is automatically applied upon accessing any information and/or services with no further action by the user 116.

[00167] Referring to Figure 11, illustrates a functional block diagram of a portion of PID application architecture 600 and a process of performing data management and eventing and alerting is presented. In this example, the process of performing data management and eventing and alerting may include, but is not limited to, the following steps.

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[00168] At step 1, a certain sensor channel is created and the ODS of the data management subsystem 650 begin to collect data.

[00169] At step 2, the source of the data is an entity at integrated services and application layer 614, therefore, the ODS collects the data through, for example, a REST adaptor, which is one of adaptors 682. In one example, a web-service call is issued.

[00170] At step 3, using, for example, the web-service call, an external sensor service (which is also REST) is interrogated. In one example, the external sensor service is a "temperature & humidity" service.

[00171] At step 4, in this example, the external sensor service collects the current temperature and humidity data, reports this data back to ODS of the data management subsystem 650, and this data is stored at the ODS for historical views. In the case of eventing, this data may be sent directly to the requesting service and/or channel, if no historical records needed.

[00172] At step 5, a CEP engine of the eventing and alerting subsystem 652, which is monitoring the data at the ODS, detects an event. For example, the CEP may be monitoring the temperature and humidity data for certain threshold values that may indicate a certain condition is present.

[00173] At step 6, the CEP of the eventing and alerting subsystem 652 queries the event manager of the eventing and alerting subsystem 652 to see whether any user 116 has set an alert that corresponds to the current temperature and humidity condition.

[00174] At step 7, it is determined that, yes, some user 116 has set an alert that corresponds to the current temperature and humidity condition. Therefore, the user's personal profile at configuration server 654 is checked to see the user's notification preferences.

[00175] At step 8, it is checked to determine whether the user 116 has an active session in order to determine the appropriate way(s) to alert the user by considering the user's connectivity, location, time, and the like. It may be determined that the user is connected via the client via a laptop computer.

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[00176] At step 9, the event manager of the eventing and alerting subsystem 652 is queried again to determine whether any other events are present in the event queue for this user. If yes, any other alerts may also be sent along with the temperature and humidity alert.

[00177] At step 10, the notification manager of the eventing and alerting subsystem 652 dispatches the notification through user's logical event queue which results in the client gateway 618 of the facilitation server 616 sending the information via JMS to the user's current channel grid.

[00178] At step 11, the message comes across the client bus of the user device 118, then a channel receives and displays the alert to the user. In this example, the alert may include information about the current temperature and humidity at some location.

[00179] With respect to the operation and/or use of PID application 112, this method may be summarized as follows. Certain services are written; certain complex query language is written; certain events and alerts are registered; sensor data at ODS is monitored as it related to events and alerts; if a match is detected, the event is correlated to a user; user profile and session information is queried; and the alert is transmitted to the user.

[00180] Referring to Figure 12, a screenshot of an example of the GUI of channel application catalog 631 of PID application 112 is presented, by which users may acquire channels for use with their devices. In this example, the GUI presents a selection of available function- and/or purpose-specific channels 200. For each channel 200, its title, category, and certain details about the channel may be displayed. A navigation bar 1210 may be presented along the bottom of the GUI, by which users may scroll from page to page of the catalog.

[00181] Referring to both Figure 3 and 12, examples of titles of channels 200 that may be found in channel application catalog 631 may be News Reader Channel, Stock Watch Channel, Business CRM Channel, Currency Channel, Banking Channel, Live News Channel, Business Calendar Channel, Email Channel, Personal Calendar Channel, Business Finance Channel, and Around Me Channel.

[00182] An aspect of the invention is that when the user 116 selects "install application" from channel application catalog 631, because the user's ID is known

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and authentication is already done, the purchase transaction is processed automatically and the selected channel 200 automatically installs and synchronizes on the user's channel grid.

[00183] NON-LIMITING EXAMPLES OF EVENTING AND ALERTING

[00184] Referring to Figure 13, another screenshot of client GUI 300 of Figure 3 that includes channel grid 318 is presented. However, in this view of client GUI 300, the touchlet 316L location of channel grid 318 is empty. Touchlet 316B is a "Stock Watch" touchlet that is associated with a "Stock Watch" channel (e.g., "Stock Watch" channel 1400 of Figure 14). The "Stock Watch" channel may provide a mechanism by which a user 116 may monitor a certain company's stock and/or financial information. In this example, the "Stock Watch" channel is monitoring the stock and/or financial information of Brocade Communications Systems, Inc (BRCD).

[00185] Referring to Figure 14, screenshots of certain components of an example of a "Stock Watch" channel 1400 of PID application 112 is presented. Figure 14 shows "Stock Watch" channel 1400 operating in a substantially full-screen mode. "Stock Watch" touchlet 316B is provided for presenting dynamic information of, interacting with, and/or launching "Stock Watch" channel 1400. "Stock Watch" channel 1400 provides a mechanism for monitoring and/or reporting certain stock and/or financial information of a company of interest. In this example, "Stock Watch" channel 1400 is monitoring Brocade Communications Systems, Inc (BRCD).

[00186] The main viewing panel 410 of the "Stock Watch" channel 1400 may include, for example, an overview window 1420, one or more information windows 1422, and a trading window 1424.

[00187] In this example, overview window 1420 shows a plot of the BRCD stock price over some selectable period of time (e.g., last hour, day, week, month, etc), as well as other statistical information about the BRCD stock. Figure 14 shows two information windows 1422. For example, one information window 1422 displays information about the latest news. The other information window 1422 displays stock information about certain other companies (i.e., companies related to BRCD in some manner). Trading window 1424 provides mechanisms by which the user 116 may perform stock trading transactions (e.g., buying and selling stock).

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[00188] The "Stock Watch" channel 1400 is a good example of a channel application that to the user is seemingly a single application, but is in fact pulling publicly available information from multiple disparate data sources. For example, the real-time stock price display information in "Stock Watch" touchlet 316B and in the overview window 1420 may originate from the "Yahoo! Finance" web service, the related companies display information in an information window 1422 may also originate from the "Yahoo! Finance" web service, the plot and other statistical information in the overview window 1420 may originate from the "The Motley Fool" web service, and the "Latest News" information in an information window 1422 may originate from the "Google Finance" web service, trading window 1424 may be supported by the "TD Ameritrade" web service, and the like.

[00189] Additionally, the functions of trading window 1424 is an example of using the single sign-on (or universal sign-on) capability of PID application 112. In this example, the user 116 is already authenticated at PID application 112. Therefore, the user 116 is not prompted for any further login credentials when using trading window 1424, which may be supported by an online trading web-service, such as, but not limited to, TD Ameritrade. In this example, the user's TD Ameritrade login information is already stored in the user's profile/configuration and is automatically provided as needed by any channel application of information delivery system 100. The capability of the single sign-on (or universal sign-on) feature is not limited to user login information, user banking and/or credit card information may also be stored in the user's profile/configuration. Additionally, the single sign-on (or universal sign-on) feature my include login credentials with respect to the user's different user devices 118. As a result, payments information may be automatically provided as needed. In the example of TD Ameritrade, any transactions performed via trading window 1424 are handled without prompting the user 116 for payments information. The aforementioned features of PID application 112 provide convenience to the user.

[00190] The "Stock Watch" channel 1400 may provide mechanisms by which the user 116 may wish to respond to the alert. For example, the trading window 1424 of "Stock Watch" channel 1400 may provide mechanisms by which the user 116 may perform stock transactions, such as buying and selling stock. This is yet another example of channels of PID application 112 providing users the ability to take action

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upon receiving an alert. That is, PID application 112 provides actionable eventing and alerting capability.

[00191] Information sources 114 that support "Stock Watch" channel 1400 may include, for example, one or more stocks and/or financial services, one or more news services, and the like. Any information sources 114 may be accessed through integrated services and applications layer 614 of PID application 112. Additionally, the servers of PID application 112 at application server 110 that support "Stock Watch" channel 1400 may include, but are not limited to, content delivery server 632, an analytics server 638, and a media server 644.

[00192] Referring to Figures 15 through 18, screenshots of client GUI 300 of PID application 112 and an example of a process of eventing and alerting using PID application 112 is presented. In this example, with respect to "Stock Watch" touchlet 316B and "Stock Watch" channel 1400, the user 116 sets an alert for when the BRCD share price rises above a certain value, as follows.

[00193] Figure 14 shows that by hovering the mouse over the "Stock Watch" touchlet 316B, helper window 330 is displayed to the user 116. To set an alert with respect to "Stock Watch" touchlet 316B, the user selects the "Alerts" button. As a result of selecting the "Alerts" button of helper window 330, an alerts window 334 is displayed to the user 116, as shown in Figure 16. Alerts window 334 provides a mechanism by which the user 116 may create an alert that is based, for example, on share price. As shown in Figure 16, alerts window 334 provides an entry field for entering a share price. The share price that the user enters is an example of a threshold condition or parameter for triggering an alert notification. Other controls are provided in alerts window 334 to generate the alert when the share price is "less than," "equal to," or "greater than" the share price that is entered. In one example, the user sets up an alert to occur when the share price is "less than" $9.23. To activate this eventing and alerting process, the user 116 may select an "Apply" button of alerts window 334, which closes the window and automatically registers the event in the event manager of the eventing and alerting subsystem 652 (see Figure 6).

[00194] Accordingly, the event manager of the eventing and alerting subsystem 652 begins monitoring the data stream associated, in this example, with the BRCD stock. Figures 17 and 18 show examples of the visual components for this eventing

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and alerting process. For example, the event manager of the eventing and alerting subsystem 652 monitors the BRCD data stream and when the BRCD share price is approaching the alert set point (e.g., near $9.23), Figure 16 shows that the "Stock Watch" touchlet 316B may display a warning state to the user 116. An example of the warning state is to change the color of the border of the "Stock Watch" touchlet 316B from, for example, black to yellow. The event manager of the eventing and alerting subsystem 652 continues to monitor the BRCD data stream and when the BRCD share price is "less than" $9.23, Figure 18 shows that the "Stock Watch" touchlet 316B may display an alert state to the user 116. An example of the alert state is to change the color of the border of the "Stock Watch" touchlet 316B to red.

[00195] In this example, the alert is delivered according to the user's configuration (notification preferences) and session. In summary, the event manager registers the event; the event manager monitors the bus, using CEP and CQL the event manager recognizes a certain condition is present; the notification manager checks the user's configuration and session; once it is determined how to notify the end-user the notification is pushed through the facilitation manager gateway (using AMF) and to the user device (client device); the client device is monitoring the client bus and receives the notification; and the notification is displayed to the user on the client device (e.g., yellow border, red border).

[00196] Referring to Figures 19 through 26, screenshots of certain channels of PID application 112 and an example of a process of combining two or more independent channels to create a new channel (and touchlet) and a process of eventing off of the combined data is presented. In this example, a user 116 may be a stock broker that hears that Cisco Systems, Inc is interested in buying Brocade Communications Systems, Inc. Therefore, there may be some very specific information that the user 116 wishes to be informed about regarding this potential transaction. Therefore, the user 116 may create a new channel and set up the desired alert notifications, as follows.

[00197] In this example, the process is using the "Latest News" touchlet 316A; the "Stock Watch" touchlet 316B, which is BRCD; and the "Stock Watch" touchlet 316C, which is Cisco Systems, Inc (CSCO); which are shown in Figure 18. That is, in this example the independent channels supporting "Latest News" touchlet 316A, "Stock

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Watch" touchlet 316B, and "Stock Watch" touchlet 316C are combined to create a new channel (and touchlet). Then, an eventing and alerting process with respect to the new channel is set up with respect to the combined data.

[00198] Referring to Figure 19, in order to create a new channel, the user 116 selects an icon 336 on taskbar 312, which causes a create channel window 338 to be displayed to the user 116. A channels portion 340 of the create channel window 338 shows a list of available channels from which to build an alert. For example, the available channels are from the current channel grid 318 or from any other channel grid of the user 116. A query builder portion 342 of the create channel window 338 provides a query builder function to the user 116, which is used to generate the CQL that interacts with the event manager of the eventing and alerting subsystem 652 (see Figure 6).

[00199] Figure 20 shows that the user 116 may select a first channel, such as the "Latest News" channel from the channels portion 340, which causes the "Latest News" channel to appear in the query builder portion 342 of the create channel window 338. When a channel is designed, the developer exposes certain things that may be useful to users 116. In the case of the "Latest News" channel, a "keywords" field is provided to the user. User 116 enters, for example, the words "Brocade" and "Cisco." Once the channel is deployed, the news information of the "Latest News" channel is monitored for the words "Brocade" and "Cisco" (together in the same news feed) by the event manager of the eventing and alerting subsystem 652.

[00200] Figure 21 shows that the user 116 may select a second channel, such as the BRCD "Stock Watch" channel from the channels portion 340, which causes the BRCD "Stock Watch" channel to also appear in the query builder portion 342 of the create channel window 338. Now two channels are present in the query builder portion 342. Again, when a channel is designed, the developer exposes certain things that may be useful to users 116. In the case of the "Stock Watch" channel, a "share price" field is provided to the user along with a qualifiers dropdown menu (greater than, equal to, less than). User 116 selects, for example, a share price "greater than $9.26." Once the channel is deployed, the share price information of the BRCD "Stock Watch" channel is monitored for this condition by the event manager of the eventing and alerting subsystem 652. The information that the user enters in the

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query builder portion 342 of the create channel window 338 is an example of threshold conditions or parameters for triggering an alert notification.

[00201] Figure 22 shows that the user 116 may select a third channel, such as the CSCO "Stock Watch" channel from the channels portion 340, which causes the CSCO "Stock Watch" channel to also appear in the query builder portion 342 of the create channel window 338. Now three channels are present in the query builder portion 342. User 116 selects, for example, a share price "greater than $23.63." Once the channel is deployed, the share price information of the CSCO "Stock Watch" channel is monitored for this condition by the event manager of the eventing and alerting subsystem 652.

[00202] The query builder portion 342 of the create channel window 338 allows Boolean operations between the selected channels. For example, the user 116 may be provided AND, OR, ANDNOT, and XOR functions. In this example, the user selects the "Latest News" channel AND the BRCD "Stock Watch" channel AND the CSCO "Stock Watch" channel. In this way, an alert is generated when the following condition is present: Both the words "Brocade" and "Cisco" are detected in the "Latest News" channel AND when a share price "greater than $9.26" is detected via the BRCD "Stock Watch" channel AND when a share price "greater than $$23.63" is detected via the CSCO "Stock Watch" channel.

[00203] The query builder portion 342 of the create channel window 338 also provides notification settings. For example, the user 116 may select notify by: Current Device, Email, IM, SMS, Mobile, and the like. The user 116 may select one or more. The query builder portion 342 of the create channel window 338 also provides channel name field. In one example, the user 116 enters "Custom Alert." When the setup is complete, the user 116 selects a "Create Channel" button to deploy the new "Custom Alert" channel. By pressing the "Create Channel" button, certain processes occur, such as, but not limited to, the channel server 630 is updated accordingly, a touchlet is created and loaded into the client, all events set up on the menu are registered with the event manager, the user's configuration is updated with the notification preferences for this channel, the event manager begins monitoring the data streams according to the query. The touchlet is updated in real time as to the status of the three variables.

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[00204] In this example and referring now to Figure 23, a "Custom Alert" touchlet 316L is created and presented in channel grid 318. The "Custom Alert" touchlet 316L displays the three components that the channel is eventing off. In this view, the "Custom Alert" touchlet 316L displays the three components (e.g., news, BRCD, and CSCO), which are all in a no alert condition. In one example, the no alert condition for each component is to display the component in a green color in the "Custom Alert" touchlet 316L. Therefore, Figure 23 shows all three components in green to indicate that no alert conditions are present.

[00205] Referring now to Figure 24, two of the three alert conditions are met and the "Custom Alert" touchlet 316L displays a warning state to the user 116. In this example, the BRCD and the CSCO conditions are met, but the news condition is not yet met. Therefore, the color of the BRCD and CSCO components may be changed from green to yellow, while the news component remains green. In this way, the user 116 may perceive a warning that, while the alert condition is not yet fully met, an alert may be eminent.

[00206] Referring now to Figure 25, all three alert conditions are met and the "Custom Alert" touchlet 316L displays an alert state to the user 116. In this example, the news, BRCD, and CSCO conditions are met. Therefore, the color of the news, BRCD, and CSCO components in the "Custom Alert" touchlet 316L may be changed to red. In this way, the user 116 may receive the notification that the alert condition is fully met.

[00207] Accordingly, an aspect of the invention is that PID application 112 provides the capability to combine information of two or more channels to create a another information channel, such as combining information associated with "Latest News" channel, the BRCD "Stock Watch" channel, and the CSCO "Stock Watch" channel to create a new channel that is represented by "Custom Alert" touchlet 316L. Additionally, upon the creation of this new channel, this new channel may be automatically installed and synchronized across all of the user's user devices 118 so that that the new channel appears on all user devices 118. Optionally, the user can manually update his/her user devices 118 (e.g., via drag and drop function).

[00208] Referring again to Figure 25, in this view other alerts are presented in certain touchlets 316 of channel grid 318. For example, touchlet 316H, which may be

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a business calendar channel, is displaying a "You have 4 scheduled meetings today" alert. Touchlet 316I, which may be an email channel, is displaying a "4 unread messages" alert. Both of these alerts are example of non-actionable alerts, as these are informational alerts that do not require user action. For example, the user may choose or not choose to launch the email channel and read his/her emails. However, if the user should choose to launch the email channel and read his/her emails, the "4 unread messages" alert is cleared.

[00209] Referring now to Figure 26, the "Custom Alert" channel provides an alert that is actionable. That is, upon receiving the alert via "Custom Alert" touchlet 316L, the user 116, who may be a stock broker, may take certain action. By clicking on the "Custom Alert" touchlet 316L, which may be in an alert state, the associated "Custom Alert" channel 2600 may be presented to the user 116. For example, Figure 26 shows an example of the GUI for the "Custom Alert" channel 2600. The GUI for the "Custom Alert" channel 2600 may include, for example, a query parameters portion 2610 and an actions portion 2612.

[00210] The query parameters portion 2610 allows the user 116 to, for example, adjust the query parameters, add more conditions, change conditions, remove conditions, and the like. The actions portion 2612 allows the user 116 to perform certain actions based on the alert. For example, the actions portion 2612 may provide mechanisms by which the user 116 may perform stock trading transactions (e.g., buying and selling stock), similar to trading window 1424 of "Stock Watch" channel 1400 of Figure 14, which may be supported by the "TD Ameritrade" web service.

[00211] The "Custom Alert" channel 2600 is used to generate an alert that is of particular importance to the user 116. The "Custom Alert" channel 2600 is an example of the user-centric aspect of PID application 112 in which only information that is of most importance to the user is processed and/or presented to the user 116. The aforementioned process of combining two or more independent channels to create a new channel (and touchlet) and a process of eventing off of the combined data is an example of the capability of PID application 112 to allow the user 116 to action based on disparate data that is of interest to the user and conditions set by the user.

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[00212] NON-LIMITING EXAMPLES OF CONSUMER APPLICATIONS

[00213] For the purpose of illustration, Figures 27 through 51 describe non-limiting examples of channels 200 that may be suitable for consumer use. However, these examples are not limited to consumer use only. The channels described in Figures 27 through 51 may also be suitable for enterprise applications (e.g., corporate environments).

[00214] Referring to Figures 27 through 40, screenshots of an example of a "Television" channel of PID application 112 is presented. In the discussion herein, let the reader beware that the meaning of the term "channel" within the context of PID application 112 is not to be confused with the standard consumer terminology of a TV channel. When referring to the standard terminology of a TV channel, the standard TV channel is hereafter referred to as a "traditional TV channel."

[00215] Figure 27 shows a screenshot of a "Television" channel GUI 2700 that is being displayed on a tablet device 2710, which is one example of a user device 118 (i.e., a client device). The "Television" channel GUI 2700 may have been launched using a "Television" touchlet (not shown) of a certain channel grid (not shown) of a certain user 116. Upon touching, clicking, or otherwise selecting the "Television" touchlet, the underlying "Television" channel (e.g., a "Television" channel 2720 shown in Figure 28) is launched, which in turn launches "Television" channel GUI 2700 to be presented to the user. "Television" channel GUI 2700 displays yet another television-specific channel grid, such as a channel grid 2712.

[00216] The "Television" channel is designed to impart certain capabilities to any user device 118, such as tablet device 2710, with respect to viewing and/or interacting with content on a television. For example, tablet device 2710 is capable to provide a TV remote control function, capable to display any dynamic content to the user 116, capable of allowing user interaction with the content, and the like.

[00217] For example, a set of TV controls 2714 that provide interfacing features are rendered on the display of tablet device 2710. Preferably, the display of tablet device 2710 is a touch screen. Therefore, TV controls 2714 are touch controls. TV controls 2714 may include, for example, pause and play controls, fast forward and

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rewind, volume up/down controls, mute, 50% mute, traditional TV channel up/down controls, and TV on/off controls. TV controls 2714 may be rendered in any position on the display that provide ease of use for the user. For example, TV controls 2714 may be arranged on one side of the display, on both sides of the display, along the top of the display, and the like.

[00218] Channel grid 2712 contains multiple touchlets for presenting dynamic information of, interacting with, and/or launching any content that a user 116 may be likely to watch on his/her TV set, which is itself another user device 118 (i.e., another client device). For example, channel grid 2712 may include, for example, touchlets for TV shows, touchlets for movies, touchlets for TV service providers, touchlets for movies providers, touchlets for any streaming video content, and the like. In one example, the user 116 may select a "Master Chef" touchlet 2730 (shown in Figure 28), which launches an underlying channel application in substantially full-screen mode, as shown in Figure 28, by which the user may watch the Master Chef TV show.

[00219] For example, Figure 28 shows "Television" channel 2720 operating in a substantially full-screen mode. "Television" channel 2720 is launched from channel grid 2712 by, for example, using the "Master Chef" touchlet 2730. Figure 28 also shows a TV 2740 by which the user 116 is able to watch the Master Chef TV show. While TV 2740 is displaying the Master Chef TV show itself, the user 116 may select a "What's On" button (not shown) in order to view episode information about the Master Chef TV show on tablet device 2710. The TV services provider's electronic programming guide (EPG) may be the source of this episode information. Additionally, an ad window 2750 is included in the display. Dynamic and/or static information from any source may be displayed in ad window 2750. While contextually related to one another, the main display showing the episode information and the ad window 2750 are two separate and distinct entities.

[00220] The user 116 may use any of the TV controls 2714 (e.g., pause/play, volume, traditional TV channel up/down) for controlling TV 2740 from tablet device 2710. Additionally, the user 116 may interact with the "Bon Appetit" magazine ad that is displayed in ad window 2750. Further, user 116 may select a certain "Simul-Stream" button 2760 to play the TV show on both TV 2740 and tablet device 2710.

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[00221] Figure 29 shows that the user 116 may decide to switch to another show. Therefore, the user 116 touches the channel up/down control to locate a TV show called Fringe.

[00222] Figure 30 shows that the user 116 may decide to watch Fringe instead. As a result, Fringe episode information is displayed on tablet device 2710, while the TV show is playing at TV 2740. Figure 30 also shows that a Coke Zero ad is playing on TV 2740. By querying the metadata associated with the digital TV broadcast, PID application 112 is able to detect (1) that a commercial is playing on TV 2740 and (2) that the ad content is about Coke Zero. Therefore, other Coke Zero ad information may be displayed in ad window 2750 at tablet device 2710 substantially concurrently to the Coke Zero ad running on TV 2740. This is an example of synchronization feature of PID application 112, which may be performed using stream sync server 636 of PID application architecture 600 of Figure 6.

[00223] Referring again to Figure 30, the user 116 may choose to pause the TV show from tablet device 2710 and interact with the Coke Zero ad in ad window 2750. For example, the user 116 touches the "Play the Coke Zero Football Challenge" text in ad window 2750 and the game is then launched and displayed as shown in Figure 31. This is an example of user interaction with information that is delivered by information delivery system 100 to the user 116 on a user device 118. More specifically, this is an example of interactive ads and games.

[00224] Figure 32 shows that the user 116 may finish playing the Coke Zero game and decide to resume watching the TV show Fringe on TV 2740. Again, Fringe episode information is displayed on tablet device 2710. Figure 32 also shows that a Ford ad is playing on TV 2740. Again, PID application 112 is able to detect (1) that a commercial is playing on TV 2740 and (2) that the ad content is about Ford. In this example, while a national Ford ad is playing on TV 2740, a local Ford dealer ad information may be displayed in ad window 2750 substantially concurrently to the Ford ad running on TV 2740. This is another example of synchronization feature of PID application 112, which may be performed using stream sync server 636 of PID application architecture 600 of Figure 6. More specifically, this is an example of synchronizing a local ad in the ad window 2750 at tablet device 2710 with a content-related national ad playing on TV 2740. Referring again to Figures 27 through 40,

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"Television" channel 2720 demonstrates that an aspect of the invention is that PID application 112 may facilitate presentation of synchronized ad information.

[00225] Figures 33 through 36 illustrate a social feature of "Television" channel 2720. For example, Figure 33 shows that an alert notification appears on the display of tablet device 2710. The alert notification is informing the user 116 that a friend is also watching Fringe. This is an example of the configuration server 654, eventing and alerting subsystem 652, and session manager 656 of PID application 112 working together to determine whether an event has occurred that may trigger an alert of the user 116, then to determine whether the user 116 has an active session and at what user device 118, and then to determine the preferred alert notification method. This is an example of the eventing and alerting features of PID application 112.

[00226] The user 116 may touch a "Chat" button 2764 to launch a "Social" component of "Television" channel 2720, as shown in Figure 34. For example, Figure 34 shows a chat window 2752 that may display a list of the friends of user 116. The one or more friends that are watching the same TV show as the user 116 may be indicated to the user 116 by, for example, a color bar. Additionally, a show discussion may appear in the chat window 2752.

[00227] Figure 35 shows that the user 116 may decide to look at a Social Guide that is displayed in social guide window 2754. For example, the social guide window 2754 may display what all of user 116's friends are watching as well as what everyone else is watching. Figure 36 shows that the user 116 may access the TV show as well as chat from the social guide window 2754. This is an example of channels of PID application 112 providing users the ability to take action upon receiving an alert. That is, PID application 112 provides actionable eventing and alerting capability. For example, the user 116 responds to the alert by selecting the Social Guide and chatting with his/her friend.

[00228] Figure 37 shows a search feature of "Television" channel 2720. For example, Figure 37 shows a search window 2756 by which the user 116 may enter the name of a TV show and the airing days and times for that TV show may be displayed at tablet device 2710.

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[00229] Figure 38 shows the electronic programming guide (EPG) feature of "Television" channel 2720. For example, the user may select the programming guide and the TV service provider appears in an EPG window 2758. The program listings for certain traditional TV channels for the current day and time slot are displayed. The user 116 may scroll to other pages of the programming guide.

[00230] Figure 39 shows that the user 116 may return to the Social Guide, which is displayed in social guide window 2754, and then decides to watch the TV show called The Mentalist.

[00231] Figure 40 shows that the user 116 is watching The Mentalist on TV 2740, while The Mentalist episode information is displayed on tablet device 2710. Figure 40 also shows an alert that another friend is also watching The Mentalist.

[00232] Referring again to Figures 27 through 40, "Television" channel 2720 demonstrates that an aspect of the invention is that PID application 112 may facilitate social interactions. That is, because of the system integration, PID application 112 knows what users are consuming what content and at what time.

[00233] Referring yet again to Figures 27 through 40, information sources 114 that support "Television" channel 2720 may include, but are not limited to, digital TV service providers, social networking providers, national and local advertising providers, and the like. Any information sources 114 may be accessed through integrated services and applications layer 614 of PID application 112. Additionally, the servers of PID application 112 at application server 110 that support "Television" channel 2720 may include, but are not limited to, content delivery server 632, stream sync server 636, analytics server 638, advertising server 640, transcoding server 642, and media server 644.

[00234] Referring to Figures 41 through 44, various screenshots of certain components and operations of an example of a "Home Security" channel 4300 of PID application 112 and a process of alerting a user is presented.

[00235] Figure 41 shows a screenshot of an example of a client GUI 4100 of PID application 112 that includes a set of touchlets 4110 in channel grid 318 of main viewing panel 310. Among the touchlets of channel grid 318 is a "Home Security" touchlet 4110J for presenting dynamic information of, interacting with, and/or

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launching the "Home Security" channel 4300 (shown in Figure 43). "Home Security" touchlet 4110J is shown in a "no alert present" state. In one example, in the "no alert present" state "Home Security" touchlet 4110J displays an image of a green shield. By contrast, Figure 42 shows "Home Security" touchlet 4110J in an "alert present" state. In one example, when the "alert present" state occurs, the color of the "Home Security" touchlet 4110J changes to red and displays information about the alerts, such as a "Motion Detected" message.

[00236] Figure 43 shows "Home Security" channel 4300 operating in a substantially full-screen mode. "Home Security" channel 4300 provides a mechanism for monitoring and/or reporting information about the user 116's home security system. Main viewing panel 410 of "Home Security" channel 4300 may include, for example, a status window 4310 and one or more video feed windows 4312. In this example, four video feeds from four cameras in four respective locations in the user's home are presented. The video feed that is related to a particular alert condition may be color coded to stand out the viewer. For example, Figure 43 shows the backyard video feed highlighted in red, while the others are not highlighted in red. The status window 4310 shows in text form any alert conditions that are present as well as any useful control buttons. For example, a keypad button 4314 may be provided for launching a keypad window 4316, as shown in Figure 44. The keypad window 4316 provides a mechanism by which the user may interact remotely with his/her home security system via any user device 118. This is another example of channels of PID application 112 providing users the ability to take action upon receiving an alert. That is, PID application 112 provides actionable eventing and alerting capability. For example, by viewing the video feed, the user 116 may determine that the motion detected was caused by an animal in his/her backyard. Therefore, the user 116 may use keypad window 4316 to clear the alert condition.

[00237] Information sources 114 that support "Home Security" channel 4300 may include, for example, one or more home security services. Any information sources 114 may be accessed through integrated services and applications layer 614 of PID application 112. Additionally, the servers of PID application 112 at application server 110 that support "Home Security" channel 4300 may include, but are not limited to, content delivery server 632 and media server 644.

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[00238] Referring to Figure 45, tablet device 2710 of Figure 27 and certain components of an example of a "NetFlix" channel 4500 of PID application 112 is presented. In this example, "NetFlix" touchlet 4510 may be used for presenting dynamic information of, interacting with, and/or launching the "NetFlix" channel 4500. In this example, "NetFlix" channel 4500 is designed simply to access NetFlix via its URL address (https://www.netflix.com/) on the Internet, then simply wrap the content that is returned in a web browser, and then present the content on the display of tablet device 2710 (i.e., a user device 118). The user may interact with the NetFlix web content as if interacting using any computer.

[00239] The use of "NetFlix" channel 4500 is an example of the user taking advantage of the single login (or universal login) capabilities of information delivery system 100. Outside of the PID application 112 environment, a user would be asked to login to the NetFlix website. However, in the PID application 112 environment, the login operation is performed automatically by the identity subsystem 660, with no user actions.

[00240] Information sources 114 that support "NetFlix" channel 4500 may include, for example, the NetFlix web service. Any information sources 114 may be accessed through integrated services and applications layer 614 of PID application 112. Additionally, the servers of PID application 112 at application server 110 that support "NetFlix" channel 4500 may include, but are not limited to, content delivery server 632, stream sync server 636, advertising server 640, and a media server 644.

[00241] Referring to Figures 46 and 47, screenshots of certain components of an example of a "Remote Healthcare" channel 4600 of PID application 112 is presented. Figures 46 and 47 show "Remote Healthcare" channel 4600 operating in a substantially full-screen mode. A "Remote Healthcare" touchlet 4610 is provided for presenting dynamic information of, interacting with, and/or launching "Remote Healthcare" channel 4600. "Remote Healthcare" channel 4600 provides a video conferencing service between any entities related to healthcare, such as, but not limited to, patients, patients' family members, doctors, nurses, pharmacists, and the like.

[00242] Main viewing panel 410 of "Remote Healthcare" channel 4600 may include, for example, a video feed window 4612, a health questions window 4614,

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and a health overview window 4616. Video feed window 4612 may display a video feed of any persons, for example, participating in a medical consultation session. For example, Figure 46 shows a video feed of the patient only, while Figure 47 shows both the patient and the doctor are conferenced in. In this example, the patient is one user 116 and the doctor is another user 116 of information delivery system 100.

[00243] Health questions window 4614 may contain a questionnaire. The patient may interact with the questionnaire, thereby providing important medical information for those joining the medical consultation session. Additionally, health overview window 4616 may provide various current, historical and trend sensor information related to the patient health (e.g., sensor data that is returned from certain devices that are used by the patent). One example is a USB-enabled blood pressure device. In this example, the patient's blood pressure, pulse rate, and oxygen levels are reported in health overview window 4616.

[00244] Via the video feed and audio feed capabilities of "Remote Healthcare" channel 4600, a patient may receive advice from his/her healthcare providers without an actual visit to the healthcare provider's office. Additionally, family members of the patient may also participate in the session remotely, again avoiding travel. As a result of the medical consultation using "Remote Healthcare" channel 4600, the doctor may wish to prescribe certain medication. Accordingly, a channel of PID application 112 for managing a patient's treatment regimen is described with reference to Figure 50.

[00245] Referring to Figure 48, screenshots of certain components of an example of a "My Medicine Cabinet" channel 4800 of PID application 112 is presented. Figure 48 shows "My Medicine Cabinet" channel 4800 operating in a substantially full-screen mode. A "My Medicine Cabinet" touchlet 4810 is provided for presenting dynamic information of, interacting with, and/or launching "My Medicine Cabinet" channel 4800. "My Medicine Cabinet" channel 4800 provides a mechanism for managing a treatment regimen of a patient and is suitable for use by, for example, patients, patients' family members, doctors, nurses, pharmacists, and the like.

[00246] Main viewing panel 410 of "My Medicine Cabinet" channel 4800 may include, for example, a treatment regimen window 4812 and a calendar window 4814. Treatment regimen window 4812 displays, for example, a daily view of any

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medications that have been prescribed to a certain user 116 and dosage information. Alerts may be generated base on the dosage information (e.g., as to when a patent is due to take a certain medication). Calendar window 4814 may display, for example, a monthly view of any medications that have been prescribed to a certain user 116. Alerts may be generated base on this information (e.g., as to when a certain prescription needs to be refilled).

[00247] Information sources 114 that support "Remote Healthcare" channel 4600 and/or "My Medicine Cabinet" channel 4800 may include any healthcare service provider databases, where the healthcare service providers may be, for example, doctors, hospitals, pharmaceutical companies, pharmacies, and the like. Any information sources 114 may be accessed through integrated services and applications layer 614 of PID application 112. Additionally, the servers of PID application 112 at application server 110 that support "Remote Healthcare" channel 4600 and/or "My Medicine Cabinet" channel 4800 may include, but are not limited to, content delivery server 632, collaboration media server 634, analytics server 638, and a media server 644.

[00248] Referring to Figure 49, screenshots of certain components of an example of an "MS Word" channel 4900 of PID application 112 is presented. Figure 49 shows "MS Word" channel 4900 operating in a substantially full-screen mode. A "MS Word" touchlet 4910 is provided for presenting dynamic information of, interacting with, and/or launching "MS Word" channel 4900. "MS Word" channel 4900 provides a mechanism for processing MS Word documents to users 116.

[00249] Main viewing panel 410 of "MS Word" channel 4900 may include, for example, a viewing/editing window 4912, in which a user 116 may open, view, and/or edit MS Word documents. "MS Word" channel 4900 is an example of accessing an application that may already be installed and running on a user device 118. For example, "MS Word" channel 4900 may launch the local MS Word application running as a native application on a laptop or desktop computer and then present the Word document to the user 116.

[00250] Referring to Figure 50, screenshots of certain components of an example of an "Email" channel 5000 of PID application 112 is presented. Figure 50 shows "Email" channel 5000 operating in a substantially full-screen mode. An "Email"

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touchlet 5010 is provided for presenting dynamic information of, interacting with, and/or launching "Email" channel 5000. "Email" channel 5000 provides an email service to the user 116.

[00251] Main viewing panel 410 of "Email" channel 5000 may include an inbox window 5012 and a folders window 5014. The inbox window 5012 displays emails in the user's inbox. Folders window 5014 may display various email folders including the user's address book. Figure 50 shows that the information about the sender of the email currently being viewed may be displayed, including a photo.

[00252] Information sources 114 that support "Email" channel 5000 may include at least one email provider or a combination of multiple email providers. Any information sources 114 may be accessed through integrated services and applications layer 614 of PID application 112. Additionally, the servers of PID application 112 at application server 110 that support "Email" channel 5000 may include, but are not limited to, content delivery server 632, analytics server 638, and media server 644.

[00253] Referring to Figure 51, screenshots of certain components of an example of a "News Reader" channel 5100 of PID application 112 is presented. Figure 51 shows "News Reader" channel 5100 operating in a substantially full-screen mode. A "News Reader" touchlet 5110 is provided for presenting dynamic information of, interacting with, and/or launching "News Reader" channel 5100. "News Reader" channel 5100 provides a news presentation service to users 116.

[00254] Main viewing panel 410 of "News Reader" channel 5100 may include, for example, a subscriptions window 5112 and a news story window 5114. Subscriptions window 5112 may display, for example, folders of any news feeds to which the user 116 is subscribed. News story window 5114 may display, for example, any news content of the day. Alerts may be set to notify the user, for example, when any subscriptions are due to expire. Upon receiving such an alert, "News Reader" channel 5100 may provide mechanism by which the user 116 may renew subscriptions. This is another example of channels of PID application 112 providing users the ability to take action upon receiving an alert. That is, PID application 112 provides actionable eventing and alerting capability.

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[00255] The use of "News Reader" channel 5100 may be an example of the user taking advantage of the single login (or universal login) capabilities of information delivery system 100. Outside of the PID application 112 environment, a user would be asked to login to the news service provider. However, in the PID application 112 environment, the login operation is performed automatically by the identity subsystem 660, with no user actions.

[00256] Information sources 114 that support "News Reader" channel 5100 may include, for example, any news web service. Any information sources 114 may be accessed through integrated services and applications layer 614 of PID application 112. Additionally, the servers of PID application 112 at application server 110 that support "News Reader" channel 5100 may include, but are not limited to, content delivery server 632, stream sync server 636, analytics server 638, advertising server 640, and a media server 644.

[00257] NON-LIMITING EXAMPLES OF ENTERPRISE APPLICATIONS

[00258] For the purpose of illustration, Figures 52 through 72 describe non-limiting examples of channel grids 318 and channels 200 that may be suitable for enterprise use (e.g., corporate and business environments and/or across business ecosystems, such as supplier and contractor networks). However, these examples are not limited to enterprise use only. The channels described in Figures 52 through 72 may also be suitable for consumer and/or other applications. A certain enterprise may provide a suite of channel grids 318 and channels 200 that may be useful for performing any tasks related to the enterprise. In one example, the suite of channels 200 may be arranged in a suite of channel grids 318 in which each channel grid 318 includes a unique set of related touchlets 316 for accessing the underlying channels 200. The availability and/or functionality of the channels 200 and/or touchlets 316 may vary based on groups, functions, roles, tasks and/or individuals in the enterprise.

[00259] Currently, the data associated with an enterprise may originate from legacy systems. Examples of legacy applications may include, but are not limited to Human Resource Management (HRM), Enterprise Resource Management (ERP), Product Life Cycle Management (PLM), Customer Relationship Management (CRM) systems and tools. However, these tools and systems are optimized for certain corporate uses and to serve internal corporate reporting needs and often work poorly for management

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decision making purposes. These legacy tools may work well for generating monthly corporate reports, but may not work well for performing real-time analysis for decision makers. For example in managing customer sales accounts, information may be required in real-time from the ERP, PLM and CRM systems. Additionally, useful information may be available from legacy systems, but may be very difficult to access and present in a way that is meaningful to the user to understand and take action on. As an example a sales account manager looking for a global weekly sales estimate, may spend a lot of time searching for customer sales information across different corporate systems instead of acting on the information and visiting customers who sales are trending downward. Further, there is typically more information available than a user can easily find, interpret, and organize in a meaningful way.

[00260] Therefore, an aspect of the invention is that PID application 112 of information delivery system 100 may be used in combination with legacy tools that are deployed to process data in the legacy enterprise environment. In this way, certain channels 200 may be created to provide user-centric content and insights in the enterprise environment. That is, the channels 200 may provide content and insights that are tailored to the needs of users116, by presenting content meaningful to the user. Additionally, PID application 112 of information delivery system 100 may be used to extract, aggregate or consolidate legacy data across multiple legacy systems and then organize and present the data in a meaningful way via a channel 200.

[00261] Enterprises may have analytic teams that produce useful analytical reports from legacy systems, but information available via these analytical reports may be very detailed, for a narrow audience, difficult to interpret, and may be out of date by the time the data is accessed. Therefore, an aspect of the invention is that PID application 112 of information delivery system 100 allows data to be readily consumed, with insights and with narrow windows, and allows users 116 to take rapid action, thereby adding value to this data. The system also allows for the user to interrogate data drawing further insights into the enterprise.

[00262] Referring to Figure 52, a screenshot of an example of an enterprise client GUI 5200 is presented that includes an example of a login window. In this example, the taskbar 312 of enterprise client GUI 5200 may include a company name field 313. In one example, the company name field 313 is populated with "PQR Corporation."

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In the corporate and/or business environment, users 116 may be, for example, employees, contractors, suppliers, regulators, government officials, and/or any other individuals authorized to access enterprise client GUI 5200. In order to gain access to the system, a user login window 5210 may be presented in main viewing panel 310 by which the user may enter his/her username and password. Once the user and and/or the device is authenticated, a suite of channels and/or channel grids may be presented to the user 116. Examples of channel grids that may be associated with an enterprise are shown in Figures 53 and 54.

[00263] Referring to Figures 53 and 54, screenshots of enterprise client GUI 5200 showing two example channel grids that may be related to the enterprise are presented. For example, Figure 53 shows a channel grid 318a that is displayed when the user 116 selects a channel grid icon 324a of the navigation bar 314. Figure 54 shows a channel grid 318b that is displayed when the user 116 selects a channel grid icon 324b of the navigation bar 314. Channel grid 318a of Figure 53 is used to display a first set of touchlets 316 (e.g., touchlets 316A through 316L) that are associated with a first set of channels 200 (not shown). Likewise, channel grid 318b of Figure 55 is used to display a second set of touchlets 316 (e.g., touchlets 316M through 316X) that are associated with a second set of channels 200 (not shown). In one example, channel grid 318a of Figure 53 may be used to display a set of touchlets 316 that are related to enterprise as a whole, such as to PQR Corporation as a whole. By contrast, channel grid 318b of Figure 54 may be used to display a set of touchlets 316 that are related to a certain division, group and/or sales account of the enterprise, such as a certain division, group and/or sales account of PQR Corporation.

[00264] Referring now to Figure 53, by way of example channel grid 318a may include an "Email" touchlet 316A, a "Personal Calendar" touchlet 316B, a "My Company in the Press" touchlet 316C, a "News Reader" touchlet 316D, a "New Technologies" touchlet 316E, a "What is Selling" touchlet 316F, an "Analytics Tool Set" touchlet 316G, a "myNet" touchlet 316H, a "Channel Catalog" touchlet 316I, a "My HR" touchlet 316J, a "My Performance" touchlet 316K, and a "Currency Converter" touchlet 316L.

[00265] "Email" touchlet 316A of channel grid 318a may be associated with an "Email" channel, such as, but not limited to, "Email" channel 5000 of Figure 50. The

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"Email" channel may be the users' corporate email application or a consolidation of various user email accounts. The "Email" channel may include additional features such as connecting an email address to an address book entry with a picture of the contact.

[00266] "Personal Calendar" touchlet 316B of channel grid 318a may be associated with a "Personal Calendar" channel, such as, but not limited to, a "Personal Calendar" channel 5500 of Figure 55. The "Personal Calendar" channel may, for example, provide a listing of all commitments, meetings, to do lists and the like. "Personal Calendar" channel may use active alerts to notify the user of upcoming events, such as a meeting.

[00267] "My Company in the Press" touchlet 316C of channel grid 318a may be associated with a "My Company in the Press" channel (not shown). The "My Company in the Press" channel may provide, for example, live videos; streaming news feeds; access to news archive by hour, day, week, and/or month; access to YouTube; and any combinations thereof. Examples of content on the "My Company in the Press" channel may include, but are not limited to, news interviews, company advertisements, product reviews, and annual shareholder meetings.

[00268] "News Reader" touchlet 316D of channel grid 318a may be associated with a "News Reader" channel, such as, but not limited to, the "News Reader" channel 5100 of Figure 51. For example, the "News Reader" channel 5100 may provide company RSS feeds (e.g., PQR Corporation RSS feeds) from multiple internal and external sources, such as from an internal Twitter account and the New York Times.

[00269] "New Technologies" touchlet 316E of channel grid 318a may be associated with a "New Technologies" channel (not shown). For example, the "New Technologies" channel may provide access to a forum for company product announcements, a recap of latest insights from the company research and development group, thought provoking concepts in the industry, promotional and training video, and the like.

[00270] "What is Selling" touchlet 316F of channel grid 318a may be associated with a "What is Selling" channel (not shown). For example, the "What is Selling"

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channel may provide information about certain products, for example, product orders by hour, day, week, month, and/or quarter, information about client wins or loses, information about top sales managers, sales recognitions, and the like.

[00271] "Analytics Tool Set" touchlet 316G of channel grid 318a may be associated with an "Analytics Tool Set" channel (not shown). For example, the "Analytics Tool Set" channel may provide a set of Statistical Analysis Software (SAS) products and/or related analytic products for users to analyze specific trends in data sets, access to business analytics services, drill down capability, report generation and the like.

[00272] "myNet" touchlet 316H of channel grid 318a may be associated with a "myNet" channel, such as, but not limited to, a "myNet" channel 5600 of Figure 56. For example, the "myNet" channel 5600 may provide a compilation of company-specific social sites (e.g., PQR Corporation-specific social sites). The "myNet" channel 5600 may provide simple tools to enable posting of a comment to multiple forums.

[00273] "Channel Catalog" touchlet 316I of channel grid 318a may be associated with a channel application catalog, such as, but not limited to, channel application catalog 631 of Figure 12, a channel application catalog 6500 of Figure 65, and a channel application catalog 6700 of Figure 67. The channel application catalog is accessed to download certain channel grids and/or channels. The catalog may provide free and for pay channels. Channel application catalogs may be sensitive to a user's role and rights within the enterprise. More details about user roles and user groups in an enterprise are described with reference to Figures 62 through 67.

[00274] "My HR" touchlet 316J of channel grid 318a may be associated with a "My HR" channel (not shown). For example, the "My HR" channel may provide access to all personal HR-related information, such as benefits, vacation time, savings account, required training, policies and procedures, and the like. The "My HR" channel has the capability to alert users to, for example, out of boundary conditions, such as expiring vacation or the need to take health and safety training. Also, the "My HR" channel may provide access to content based on user level and user identity.

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[00275] "My Performance" touchlet 316K of channel grid 318a may be associated with a "My Performance" channel (not shown). For example, the "My Performance" channel may provide a composite of all metrics (e.g., based on user level and user identity) that are translated into incentive compensation or related reward schema. Automatic alerts may be generated when HR-defined thresholds for performance are missed and/or exceeded.

[00276] The "My HR" channel and the "My Performance" channel may be an example of using data associated with an enterprise that may originate from legacy systems, such as from a legacy HR system and ERP system, and then tailoring the data to present information to users 116 in a meaningful way that is of particular interest. For example, for each employee, the legacy HR system may provide information about each employee's department, region, level, position, role, and the like. Using information delivery system 100 of the present invention, this information may be loaded into the user profiles. Accordingly, information delivery system 100 may be used to create and assign roles and/or groups from the information of the legacy HR system. For example, HR functions may have a management group that writes performance reviews, a director group that approves the reviews, a senior management group that audits the reviews, and the like. In one example, a director will not be asked to approve a review until the manager completed the final review. The ERP system may provide information about the employee's performance (e.g. customer orders booked for the year) from the "My Performance" channel to information delivery system 100 of the present invention in order to assist the manager in creating the review.

[00277] "Currency Converter" touchlet 316L of channel grid 318a may be associated with a "Currency Converter" channel (not shown). For example, the "Currency Converter" channel may provide a real-time conversion calculator set, for example, by user identity, user location, user role, and the like. The "Currency Converter" channel may be optimized per the company finance department for metrics important to the user, such as sales by division, group, and/or employee. For example, the "Currency Converter" channel may provide internal company estimates for future sales in every country in which the company does business and in the currency most commonly used in the user's location.

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[00278] Referring now to Figure 54, by way of example channel grid 318b may include a "Stock Watch" touchlet 316M, an "Account Calendar" touchlet 316N, a "News Reader" touchlet 316O, a "myNet" touchlet 316P, a "Real-time Profit & Loss" touchlet 316Q, an "Account Bookings" touchlet 316R, a "Sales Pipeline" touchlet 316S, a "Personnel Locator" touchlet 316T, a "Channel Catalog" touchlet 316U, an "Open Room" touchlet 316V, a "Security Threat Trends" touchlet 316W, and a "Room Finder" touchlet 316X.

[00279] "Stock Watch" touchlet 316M of channel grid 318b may be associated with a "Stock Watch" channel, such as, but not limited to, "Stock Watch" channel 1400 of Figure 14. For example, the "Stock Watch" channel may be configurable to deliver competitive industry performance, such as balance sheet ratios or other suitable indicators of financial health. The "Stock Watch" channel may provide real-time quotes and capability to set thresholds with alerts.

[00280] "Account Calendar" touchlet 316N of channel grid 318b may be associated with an "Account Calendar" channel (not shown). The "Account Calendar" channel may provide a sales account team calendar function that may be sales account-specific. The "Account Calendar" channel maybe used for tracking sales meetings, order entry deadlines, payment dates, quarterly close dates, any information that pertains to the sales account, and the like. Using the "Account Calendar" channel, the user may, for example, merge client sales demo events and trade show attendance dates into the "Account Calendar" channel, in order to build composite situational awareness for everything that is occurring in the sales account. The "Account Calendar" channel may provide alert mechanisms to push notifications when deadlines are approaching. The "Account Calendar" channel may also merge and/or combine with other channels. For example, the "Account Calendar" channel may merge and/or combine with the "Room Finder" channel in order to acquire information about sales meeting locations.

[00281] Similar to "News Reader" touchlet 316D of channel grid 318a, "News Reader" touchlet 316O of channel grid 318b may be associated with a "News Reader" channel, such as, but not limited to, the "News Reader" channel 5100 of Figure 51. For example, this "News Reader" channel may be a company division-, group- and/or account-specific "News Reader" channel. This "News Reader" channel may provide,

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for example, specific news that is sortable by sales account, by location, and/or by any other important attributes. This "News Reader" channel may provide company division-, group- and/or account-specific news, external reports or internal intelligence insights on client events in the news.

[00282] "myNet" touchlet 316P of channel grid 318b may be associated with a "myNet" channel, such as, but not limited to, the "myNet" channel 5600 of Figure 56. For example, the "myNet" channel 5600 may provide a compilation of company, division, group and/or account-specific social sites (e.g., divisions of and/or groups within PQR Corporation). The "myNet" channel 5600 may provide simple tools to enable posting of a comment to multiple forums. The "myNet" channel 5600 may also provide the capability to set alerts (e.g., monitoring channel information for London office AND management change) to users.

[00283] "Real-time Profit & Loss" touchlet 316Q of channel grid 318b may be associated with a "Real-time Profit & Loss" channel (not shown) that is company division- and/or group-specific. For example, the "Real-time Profit & Loss" channel may be used to create a composite of actual performance, adjusted for currency, indicating net margin contribution in real time.

[00284] "Account Bookings" touchlet 316R of channel grid 318b may be associated with a "Account Bookings" channel (not shown). For example, the "Account Bookings" channel may be a company division-, group- and/or account-specific channel that provides composite sales bookings by category, such as hardware, software, and/or services. This "Account Bookings" channel may provide timelines of booking to shipment to payment. This "Account Bookings" channel may also be merged and/or combined with the "Currency Converter" channel to analyze net booking margin – alerts may be set to thresholds.

[00285] "Sales Pipeline" touchlet 316S of channel grid 318b may be associated with a "Sales Pipeline" channel, such as, but not limited to, a "Sales Pipeline" channel 5700 of Figure 57. For example, the "Sales Pipeline" channel may provide a forecast of total account revenue by month, probability, and category, such as hardware, software, and/or services. The "Sales Pipeline" channel may provide a mean to interrogate sales pipeline information, for example, if a user wanted to understand the

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composition of the hardware pipeline, an interrogation might launch the "Account Bookings" channel.

[00286] "Personnel Locator" touchlet 316T of channel grid 318b may be associated with a "Personnel Locator" channel (not shown). For example, the "Personnel Locator" channel may provide an account team and client locator function. That is, the "Personnel Locator" channel may provide a look-up utility for all company personnel associated with the client, with pictures and groupings. Additional information may also include assigned activities, deal prospects, current location, and the like. The "Personnel Locator" channel may provide a similar utility for client contacts with links to company counterparts. The "Personnel Locator" channel may provide the capability to link names and activate messaging services, such as email, SMS, and the like.

[00287] "Channel Catalog" touchlet 316U of channel grid 318b may be associated with a channel application catalog, such as, but not limited to, channel application catalog 631 of Figure 12, channel application catalog 6500 of Figure 65, and channel application catalog 6700 of Figure 67. Again, the channel application catalog is accessed to download certain channel grids and/or channels.

[00288] "Open Room" touchlet 316V of channel grid 318b may be associated with an "Open Room" channel, such as, but not limited to, an "Open Room" channel 5800 of Figure 58. For example, the "Open Room" channel may provide a mechanism for real-time collaboration and video conferencing. The "Open Room" channel may provide direct access to initiate a conference and provide relevant content. The "Open Room" channel may provide access to other channels to begin collaboration For example, the "Open Room" channel may provide assess to the "Sales Pipeline" channel or "Personal Calendar" channel to help facilitate collaboration.

[00289] "Security Threat Trends" touchlet 316W of channel grid 318b may be associated with a "Security Threat Trends" channel, such as, but not limited to, a "Security Threat Trends" channel 5900 of Figures 59, 60, and 61. For example, the "Security Threat Trends" channel may provide company intelligence service tools on security threats to the company, such as attempts to circumvent firewalls or unauthorized entry into a building facility. The "Security Threat Trends" channel may include an advanced set of utilities to set alerts relating to threats facing the

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company. The "Security Threat Trends" channel may be linked to, combined with, and/or merged into other channels, such as a "News Reader" channel to provide external information relating to threats facing the company including, for example, fire and power outage information.

[00290] "Room Finder" touchlet 316X of channel grid 318b may be associated with a "Room Finder" channel (not shown). For example, the "Room Finder" channel may provide a utility to input a sales meeting location or company campus location and find a meeting room. The "Room Finder" channel may include an access-enabled room scheduling tool to set up meetings or launch "Just-In-Time" workspace software applications that may be used to schedule meeting space appropriate for the requestor (e.g., by identity/level) and may send notification to others. The "Room Finder" channel may be used to generate a visual and/or audible map to the room location using the geo-location capability of, for example, the user's client device, such as their cell phone.

[00291] Referring to Figure 55, screenshots of certain components of an example of a "Personal Calendar" channel 5500 that is suitable for use in enterprise applications is presented. Figure 55 shows "Personal Calendar" channel 5500 operating in a substantially full-screen mode. A "Personal Calendar" touchlet 316B is provided for presenting dynamic information of, interacting with, and/or launching "Personal Calendar" channel 5500. The "Personal Calendar" channel may, for example, provide a listing of the user's commitments, meetings, and the like. "Personal Calendar" channel may use active alerts to notify the user of upcoming events.

[00292] Main viewing panel 410 of "Personal Calendar" channel 5500 may include, for example, a daily view window 5512 and a monthly view window 5514. The daily view window 5512 may display, for example, a list of today's events. The monthly view window 5514 may display, for example, a full month's events in standard calendar form. Main viewing panel 410 of "Personal Calendar" channel 5500 may also include certain control buttons, such as, but not limited to, an "Events" button, a "Mail" button, an "Address Book" button, and a "Subscribe" button.

[00293] Referring to Figure 56, screenshots of certain components of an example of "myNet" channel 5600 that is suitable for use in enterprise applications is

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presented. Figure 56 shows "myNet" channel 5600 operating in a substantially full-screen mode. A "myNet" touchlet 316P is provided for presenting dynamic information of, interacting with, and/or launching "myNet" channel 5600. The "myNet" channel 5600 may provide a compilation of certain social sites (e.g., company-specific, division-specific, group-specific, and/or account-specific social sites). The "myNet" channel 5600 may provide simple tools to enable posting of a commentary to multiple forums. The "myNet" channel 5600 may also provide the capability to send a variety of alert types, such as text driven alerts.

[00294] Main viewing panel 410 of "myNet" channel 5600 may include, for example, a friends window 5612 and a latest updates window 5614. The friends window 5612 may display, for example, a list of the contacts as well as their online status. The latest updates window 5614 may display, for example, one or more forums for posting comments. For example, latest updates window 5614 may include a Facebook session, a Twitter session, and a chronological log of the user's activities.

[00295] Referring to Figure 57, screenshots of certain components of an example of "Sales Pipeline" channel 5700 that is suitable for use in enterprise applications is presented. Figure 57 shows "Sales Pipeline" channel 5700 operating in a substantially full-screen mode. A "Sales Pipeline" touchlet 316S is provided for presenting dynamic information of, interacting with, and/or launching "Sales Pipeline" channel 5700. The "Sales Pipeline" channel may provide a forecast of total account revenue by month, probability, and category, such as hardware, software, and/or services. In addition, other sales metrics maybe tracked. For example, total sales opportunity, total proposals, and total contracts may be tracked. In interacting with the "Sales Pipeline" channel the user may interrogate various forecasts and metrics to obtain more information and context about the information. For example, in interrogating the sales contracts metrics the "Account Bookings" channel may be launched, combined, and/or merged with the "Sales Pipeline" channel in order to allow the user to understand exactly what accounts have booked contracts.

[00296] Main viewing panel 410 of "Sales Pipeline" channel 5700 may include, for example, a selection window 5712 and a sales forecast window 5714. The selection window 5712 allows the user to select any month of the year. Once the user selects a certain month, the selected month's sales forecast information is displayed in sales

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forecast window 5714. Main viewing panel 410 of "Sales Pipeline" channel 5700 may also include certain control buttons, such as, but not limited to, a "Settings" button, as well as a search tool.

[00297] Referring to Figure 58, screenshots of certain components of an example of an "Open Room" channel 5800 that is suitable for use in enterprise applications is presented. Figure 58 shows "Open Room" channel 5800 operating in a substantially full-screen mode. An "Open Room" touchlet 316V is provided for presenting dynamic information of, interacting with, and/or launching "Open Room" channel 5800. "Open Room" channel 5800 provides a video and/or audio conferencing service to users 116.

[00298] Main viewing panel 410 of "Open Room" channel 5800 may include, for example, an attendees window 5812 and a video feed window 5814. The attendees window 5812 displays a list of any attendees that have joined the video conference and a chat feature. The video feed window 5814 displays streaming video or periodic camera shots of any attendees that have joined the video conference. Main viewing panel 410 of "Open Room" channel 5800 may also include certain control buttons for, for example, sharing documents, passing control of the video conference, and the like. Mini-touchlets 416 may include touchlets that are specifically relevant to the video conference and/or mini-touchlets that help aid collaboration of the team members. For example, a certain "Open Room" mini-touchlet 416 may be used to book a meeting room for the next team meeting. Mini-touchlets 416 may include touchlets that provide information relevant to the meeting topic. In providing information relevant to the meeting, the "Personal Calendar" channel of the meeting organizer may be interrogated to determine the subject of the meeting. If, for example, the meeting is a monthly sales meeting, one mini-touchlet 416 may be a "Sales Pipeline" mini-touchlet.

[00299] Referring to Figures 59, 60, and 61, screenshots of certain components of an example of the "Security Threat Trends" channel 5900 that is suitable for use in enterprise applications is presented. Figures 59, 60, and 61 show "Security Threat Trends" channel 5900 operating in a substantially full-screen mode. A "Security Threat Trends" touchlet 316W is provided for presenting dynamic information of, interacting with, and/or launching "Security Threat Trends" channel 5900. The

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"Security Threat Trends" channel may provide company intelligence on threats facing the company from internal and external sources. For example threats to computer network security.

[00300] Main viewing panel 410 of "Security Threat Trends" channel 5900 may include, for example, a data window 5912 and a trends window 5914. The data window 5912 displays, for example, certain information about company host computer resources. Trends window 5914 includes, for example, three tabs: a "Threat Management Trend" tab, a "Vulnerability Exposure Trend" tab, and a "Security Intelligence Trend" tab. Figure 59 shows information corresponding to the "Threat Management Trend" tab. Figure 60 shows information corresponding to the "Vulnerability Exposure Trend" tab. Figure 61 shows information corresponding to the "Security Intelligence Trend" tab. Main viewing panel 410 of "Security Threat Trends" channel 5900 may also include certain control buttons, such as, but not limited to, a "Settings" button, as well as a search tool.

[00301] Referring to Figure 62, a block diagram of an example of an enterprise user hierarchy 6200 is presented that shows individual users, roles assigned to users, and/or users assigned to groups within an enterprise. The implementation of individual users, roles, and/or groups in information delivery system 100 is not limited to enterprise applications only. Individual users, roles, and/or groups are likewise applicable to consumer applications.

[00302] Users 116 in, for example, a corporate environment may be assigned to groups based, for example, on their titles, positions, levels, and/or authority in a company. Users 116 may then be assigned roles within their assigned group.

[00303] In one example, enterprise user hierarchy 6200 includes one or more users 116 that are assigned to a directors group 6210. In this example, each user 116 may have the title of director within the enterprise. However, among the users 116 in the directors group 6210, a certain user 116 (i.e., director) in the directors group 6210 may have the role of "System Administrator," while another user 116 in the directors group 6210 may have the role of "Emergency Coordinator."

[00304] In another example, enterprise user hierarchy 6200 includes one or more users 116 that are assigned to a managers group 6212. In this example, each user 116

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may have the title of manager within the enterprise. However, among the users 116 in the managers group 6212, a certain user 116 (i.e., manager) in the managers group 6212 may have the role of "Performance Appraiser," while another user 116 in the managers group 6212 may have the role of "Threat Case Manager."

[00305] In yet another example, enterprise user hierarchy 6200 includes one or more users 116 that are assigned to an analysts group 6214. In this example, each user 116 may have the title of analyst within the enterprise. However, among the users 116 in the analysts group 6214, a certain user 116 (i.e., analyst) in the analysts group 6214 may have the role of "Senior Analyst," while another user 116 in the analysts group 6214 may have the role of "Associate Analyst."

[00306] Outside of the aforementioned groups and/or roles, enterprise user hierarchy 6200 may also include one or more individuals 6216, which may be any users 116 that are not necessarily assigned to a group. While not assigned to a group, each individual 6216 may be assigned a role based on their title, position, level, and/or authority in the company. For example, one individual 6216 may be the company CEO, which is his/her assigned role. Another individual 6216 may be the company CFO, which is his/her assigned role.

[00307] The content that is available to any user 116 may be group- and/or role-dependent. That is, the authorizations and/or permissions with respect to accessing and/or using channels, channel grids, and/or with respect content presented by the channels and/or channel grids may be dependent on the user's group and/or role within the enterprise. By way of example, let's apply enterprise user hierarchy 6200 of Figure 62 to an information security enterprise, such as, but not limited to, corporate security office that is responsible for safeguarding sensitive corporate information. In one example, the process of safeguarding sensitive information may include an insider threat avoidance system that is implemented using information delivery system 100. In this example, in order to detect and prevent any breach of information security, information delivery system 100 is used to monitor employee (or any insider, such as a contractor, supplier, regulator, and/or project manager) activity with respect to unauthorized access, use, disclosure, disruption, modification, perusal, inspection, recording, or destruction of sensitive information. If a potential

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threat is indentified, a case may be opened to manage the investigation of the threat using "Security Threat Trends" channel 5900.

[00308] In the example of the information security enterprise, users 116 (i.e., directors) in the directors group 6210 may have the highest authorization level with respect to access and/or use of certain channels and/or content and/or with respect to permissions to perform certain actions. That is, users 116 (i.e., directors) in the directors group 6210 have full authority to perform any task and/or function. For example, a particular user 116 (i.e., director) in the directors group 6210 may have the role of "System Administrator," who has the authority to add, update, and delete users 116 and/or cases from the insider threat avoidance system, which is implemented using information delivery system 100. Under the control of the "System Administrator" the authorization status of individuals 6216 may be assigned uniquely depending upon their respective roles in the enterprise (e.g., CEO, CFO, etc).

[00309] In the information security enterprise, users 116 (i.e., managers) in the managers group 6212 may have medium level authorization with respect to access and/or use of certain channels and/or content and/or with respect to permissions to perform certain actions. Generally, users 116 in the managers group 6212 have create, update, and read authority; and also have business process control. For example, a particular user 116 (i.e., manager) in the managers group 6212 may have the role of "Threat Case Manager," who has the authority to create a case, view a case, update a case, and perform an approval step, which may promote the case to the next step in the workflow. However, the role of "Threat Case Manager" in the managers group 6212 does not allow adding and deleting users and/or cases.

[00310] In the information security enterprise, users 116 (i.e., analysts) in the analysts group 6214 may have the lowest level authorization with respect to access and/or use of certain channels and/or content and/or with respect to permissions to perform certain action. For example, a particular user 116 (i.e., analyst) in the analysts group 6214 may have the role of "Senior Analyst," who has the authority to create a case, view a case, and update a case. However, the role of "Senior Analyst" in the analysts group 6214 does not allow business process control. For example, the "Senior Analyst" in the analysts group 6214 may not perform the approval step and promote the case to the next step in the workflow.

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[00311] Examples of group- and/or role-dependent content and/or actions with respect to an insider threat avoidance system, which is implemented using information delivery system 100, are described with reference to Figures 63 through 72.

[00312] Referring to Figure 63, a screenshot of an analyst client GUI 6300 is presented that includes an example of a channel grid for users 116 (i.e., analysts) in the analysts group 6214 of the enterprise. For example, when an analyst logs into the system, a channel grid 318c is displayed on the user device 118 of the analyst. The content of channel grid 318c is role-specific with respect to users 116 (i.e., analysts) in the analysts group 6214. In this example, channel grid 318c includes three touchlets 316 for which analysts are authorized. For example, channel grid 318c includes an "Alerts" touchlet 316A, a "Personnel Activity" touchlet 316B, and a "Reports" touchlet 316C.

[00313] "Alerts" touchlet 316A of channel grid 318c may be associated with an "Alerts" channel, such as, but not limited to, an "Alerts" channel 6800 of Figure 68. For example, the "Alerts" channel allows authorized analysts, managers, and/or directors to be alerted to and/or view new cases for individuals who may have performed potentially suspicious activities.

[00314] "Personnel Activity" touchlet 316B of channel grid 318c may be associated with a "Personnel Activity" channel, such as, but not limited to, a "Personnel Activity" channel 6900 of Figure 69. For example, the "Personnel Activity" channel allows authorized analysts, managers, and/or directors to view activities of personnel inside the enterprise and investigate their activities in relation to the alert and case.

[00315] "Reports" touchlet 316C of channel grid 318c may be associated with a "Reports" channel, such as, but not limited to, a "Reports" channel 7000 of Figure 70. For example, the "Reports" channel allows authorized analysts, managers, and/or directors to generate analytics reports on specific activities data. The "Reports" channel may access, merge, and/or combine with the "Personnel Activity" channel to facilitate the production of a report. For example the "Personnel Activity" channel may provide a computer log of a user's system activity that may be included in the analytics section of a report.

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[00316] Referring to Figure 64, a screenshot of a manager client GUI 6400 is presented that includes an example of a channel grid for users 116 (i.e., managers) in the managers group 6212 of the enterprise. For example, when a manager logs into the system, a channel grid 318d is displayed on the user device 118 of the manager. The content of channel grid 318d is role-specific with respect to users 116 (i.e., managers) in the managers group 6212. In this example, channel grid 318d includes four touchlets 316 for which managers are authorized. For example, channel grid 318d includes the "Alerts" touchlet 316A, "Personnel Activity" touchlet 316B, and "Reports" touchlet 316C that are described in Figure 63 with respect to analysts. However, managers are further authorized to receive a "Catalog" touchlet 316D. Whereas analysts are not authorized to receive "Catalog" touchlet 316D (see channel grid 318c of Figure 63).

[00317] "Catalog" touchlet 316D of channel grid 318d may be associated with a channel application catalog, such as, but not limited to, a channel application catalog 6500 of Figure 65. The channel application catalog allows users to configure the channels that are displayed on their channel grids. Referring to Figure 65, a screenshot of an example of the channel application catalog 6500 is presented that includes content that corresponds to users 116 (i.e., managers) in the managers group 6212 of the enterprise. In this example, the content of channel application catalog 6500 is role-specific with respect to managers. That is, only channels for which managers are authorized are available in channel application catalog 6500. In this example, shown in a channel catalog window 6512, managers are authorized to receive the "Alerts" channel, "Personnel Activity" channel, "Reports" channel, and additional manager level channels from "Catalog" channel.

[00318] Referring to Figure 66, a screenshot of a director client GUI 6600 is presented that includes an example of a channel grid for users 116 (i.e., directors) in the directors group 6210 of the enterprise. For example, when a director logs into the system, a channel grid 318e is displayed on the user device 118 of the director. The content of channel grid 318e is role-specific with respect to users 116 (i.e., directors) in the directors group 6210. In this example, channel grid 318e includes six touchlets 316 for which directors are authorized. For example, channel grid 318e includes the "Alerts" touchlet 316A, "Personnel Activity" touchlet 316B, and "Reports" touchlet

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316C that are described in Figure 63 with respect to analysts. Channel grid 318e also includes the "Catalog" touchlet 316D that is described in Figure 64 with respect to managers. However, directors are further authorized to receive a "User Administration" touchlet 316E and a "Catalog Administration" touchlet 316F. Whereas analysts and managers are not authorized to receive "User Administration" touchlet 316E and "Catalog Administration" touchlet 316F (see channel grid 318c of Figure 63 and channel grid 318d of Figure 64).

[00319] "User Administration" touchlet 316E of channel grid 318e may be associated with a "User Administration" channel, such as, but not limited to, a "User Administration" channel 7100 of Figure 71. For example, a particular user 116 (i.e., director) in the directors group 6210 may have the role of "System Administrator," who has the authority to set roles and groups for the system users.

[00320] "Catalog Administration" touchlet 316F of channel grid 318e may be associated with a "Catalog Administration" channel, such as, but not limited to, a "Catalog Administration" channel 7200 of Figure 72. For example, the "Catalog Administration" channel allows the "System Administrator" to manage the catalog content as it relates to roles and groups of the system users.

[00321] Referring to Figure 67, a screenshot of an example of a channel application catalog 6700 is presented that includes content that corresponds to users 116 (i.e., directors) in the directors group 6210 of the enterprise. In this example, the content of channel application catalog 6700 is role-specific with respect to directors. That is, only channels for which directors are authorized are available in channel application catalog 6700. In this example, shown in a channel catalog window 6712, directors are authorized to receive the "Alerts" channel, "Personnel Activity" channel, "Reports" channel, "Catalog" channel, "User Administration" channel, and "Catalog Administration" channel.

[00322] Referring to Figure 68, screenshots of certain components of an example of the "Alerts" channel 6800 that is suitable for use in enterprise applications is presented. Figure 68 shows "Alerts" channel 6800 operating in a substantially full-screen mode. An "Alerts" touchlet 316A is provided for presenting dynamic information of, interacting with, and/or launching "Alerts" channel 6800. The "Alerts" channel 6800 allows authorized users to view new cases for individuals who

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have performed potentially suspicious activities. Certain advanced information products that provide analytic capabilities may be operating behind "Alerts" channel 6800 for flagging individuals who may be performing potentially suspicious activities. The data upon which analysis is performed may be obtained from legacy applications, such as, but not limited to, HRM, ERP, PLM, CRM systems and tools, any other management tools, and the like. For example, if a threat was detected concerning theft of customer information, the CRM legacy application may provide information to investigate the theft.

[00323] Main viewing panel 410 of "Alerts" channel 6800 may include, for example, an alerts window 6812 and an alerts detail window 6814. The alerts window 6812 displays a list of potential alerts to potentially be investigated. Once the user selects a certain alert at alerts window 6812, the details of the selected alert are displayed in alerts detail window 6814. Main viewing panel 410 of "Alerts" channel 6800 may also include certain control buttons, such as, but not limited to, a "Delete" button and an "Add New" button. An "Approved" dropdown menu may also be provided.

[00324] Referring to Figure 69, screenshots of certain components of an example of the "Personnel Activity" channel 6900 that is suitable for use in enterprise applications is presented. Figure 69 shows "Personnel Activity" channel 6900 operating in a substantially full-screen mode. A "Personnel Activity" touchlet 316B is provided for presenting dynamic information of, interacting with, and/or launching "Personnel Activity" channel 6900. The "Personnel Activity" channel 6900 allows authorized users to view activities of personnel inside the enterprise.

[00325] Main viewing panel 410 of "Personnel Activity" channel 6900 may include, for example, a personnel activity window 6912 and an activity details window 6914. The personnel activity window 6912 displays a list of personnel activities to potentially be investigated. Once the user selects a certain activity at personnel activity window 6912, the details of the selected activity is displayed in activity details window 6914. Main viewing panel 410 of "Personnel Activity" channel 6900 may also include an "Analyzing" dropdown menu. The activities data from which analysis is performed may be obtained from legacy applications, such as,

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but not limited to, HRM, ERP, PLM, CRM systems and tools, any other management tools, and the like.

[00326] Referring to Figure 70, screenshots of certain components of an example of a "Reports" channel 7000 that is suitable for use in enterprise applications is presented. Figure 70 shows "Reports" channel 7000 operating in a substantially full-screen mode. A "Reports" touchlet 316C is provided for presenting dynamic information of, interacting with, and/or launching "Reports" channel 7000. The "Reports" channel 7000 allows authorized users to generate analytics reports on specific activities data.

[00327] Main viewing panel 410 of "Reports" channel 7000 may include, for example, a report types window 7012 and an activities window 7014. The report types window 7012 displays a list of different types of reports. Once the user selects a certain report type at report types window 7012, the activities related to the selected report type are displayed in activities window 7014.

[00328] Referring to Figure 71, screenshots of certain components of an example of the "User Administration" channel 7100 that is suitable for use in enterprise applications is presented. Figure 71 shows "User Administration" channel 7100 operating in a substantially full-screen mode. A "User Administration" touchlet 316E is provided for presenting dynamic information of, interacting with, and/or launching "User Administration" channel 7100. The "User Administration" channel 7100 allows, for example, the "System Administrator" of the directors group 6210 to set roles and groups for the system users.

[00329] Main viewing panel 410 of "User Administration" channel 7100 may include, for example, a user details window 7112. The user details window 7112 provides one or more information entry fields by which the "System Administrator" may enter information about a certain user 116 in a certain group. For example, user details window 7112 may be used to set the group and/or role of a certain user 116. Predetermined groups and/or roles may have certain permissions and/or parameters already defined.

[00330] Referring to Figure 72, screenshots of certain components of an example of a "Catalog Administration" channel 7200 that is suitable for use in enterprise

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applications is presented. Figure 72 shows "Catalog Administration" channel 7200 operating in a substantially full-screen mode. A "Catalog Administration" touchlet 316F is provided for presenting dynamic information of, interacting with, and/or launching "Catalog Administration" channel 7200. The "Catalog Administration" channel 7200 allows the "System Administrator" in the directors group 6210 to manage the catalog content as it relates to roles and groups of the system users.

[00331] Main viewing panel 410 of "Catalog Administration" channel 7200 may include, for example, a channel details window 7212. The channel details window 7212 provides one or more information entry fields by which, for example, the "System Administrator" in the directors group 6210 may enter information about a certain channel applications, such as, but not limited to, "Alerts" channel 6800, "Personnel Activity" channel 6900, "Reports" channel 7000, and "User Administration" channel 7100. Additionally, channel details window 7212 may be used to manage the catalog content as it relates to roles and groups of the system users. For example, channel details window 7212 may be used to set "User Administration" channel 7100 to be used by the "System Administrator" in the directors group 6210, but not by users 116 in the managers group 6212 and users 116 in the analysts group 6214.

[00332] Referring again to Figures 52 through 72, while non-limiting examples of channels 200 that may be suitable for enterprise use have been described largely in the context of processing and presenting role-based content, the present invention is not limited to role-based content only. Information delivery system 100 may be used to process and present role-based content, location-based content, time-based content, activity-based content, behavior-based content, and any combinations thereof. That is, information delivery system 100 provides the framework by which a developer can create any useful information products, such as role-based product, location-based products, time-based products, activity-based products, behavior-based products, and any combinations thereof. Again, bringing to the user the information and experience that is most important to them.

[00333] Additionally, information delivery system 100 may be used to push scheduled events to users 116. For example, in the enterprise environment, a notification may be sent to users 116 that it is time for their annual training session.

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Similarly, information delivery system 100 may push information to users 116 about any corporate activity, event, or news.

[00334] SYSTEM ARCHITECTURE SUPPORTING A WEB PRESENTATION FRAMEWORK

[00335] For the purpose of illustration, Figures 73 through 78 describe the system architecture of information delivery system 100 of the present invention implemented for supporting a web presentation framework. In one example, the web presentation framework is implemented using HTML5. HTML5 is a language for structuring and presenting content for the World Wide Web, a core technology of the Internet. It is the latest revision of the HTML standard and currently remains under development. Its core aims have been to improve the language with support for the latest multimedia while keeping it easily readable by humans and consistently understood by computers and devices (e.g., web browsers, parsers, etc.). As compared to previous versions, HTML5 adds many new syntactical features. These include the `<video>`, `<audio>`, and `<canvas>` elements (or tags), as well as the integration of Scalable Vector Graphics (SVG) content. These features are designed to make it easy to include and handle multimedia and graphical content on the web. Additionally, HTML5 provides support for off-line storage. Further, HTML5 includes a new protocol called WebSockets that allows bidirectional asynchronous communication.

[00336] Referring to Figure 73, a functional block diagram of an example of a PID application architecture 7300 for supporting the web presentation framework is presented. PID application architecture 7300 is another example of the application architecture of the server side of PID application 112. In this example, the user devices 118 that are used with the Flex presentation framework of PID application architecture 600 of Figure 6 are replaced by user devices 7310. That is, instead of supporting Adobe AIR-enabled devices, PID application architecture 7300 supports user devices 7310, which may be any web (or Internet) browser-enabled devices (hereafter called browser-enabled devices). For example, Figure 73 shows a web browser 7312 running on each user device 7310. Examples of web (or Internet) browsers that may be running on user devices 7310 may include, but are not limited to, Microsoft Internet Explorer® 9, Google Chrome, Mozilla Firefox 4, Apple Safari 5, and Opera 11.

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[00337] Accordingly, examples of user devices 7310 may include, but are not limited to, any type, brand, and/or model of browser-enabled desktop computer; browser-enabled laptop computer; browser-enabled tablet computer; browser-enabled net-book computing device; browser-enabled handheld computing device; browser-enabled personal digital assistant; browser-enabled enterprise digital assistant; browser-enabled portable digital assistant; browser-enabled telecommunications device including one of an browser-enabled telephone, browser-enabled cell phone, and browser-enabled smart phone; browser-enabled personal navigation device; browser-enabled vehicle-based device; browser-enabled optical disk player; browser-enabled television; browser-enabled game console; and the like.

[00338] PID application architecture 7300 may include facilitation layer 610, integration and process layer 612, and integrated services and applications layer 614 of PID application architecture 600 of Figure 6, albeit with certain modifications for supporting the web presentation framework.

[00339] For example, facilitation layer 610 includes the facilitation server 616 and the certain other servers 628, such as, but not limited to, channel server 630, content delivery server 632, collaboration media server 634, stream sync server 636, analytics server 638, advertising server 640, transcoding server 642, and media server 644. However, in this embodiment, facilitation server 616 includes a client gateway 7314 instead of the client gateway 618 of PID application architecture 600 of Figure 6. Client gateway 7314 uses hypertext transfer protocol (HTTP) for communicating with the client (e.g., web browsers 7312 of user devices 7310), while using, for example, JMS protocol for communicating with the rest of the server stack. In this way, facilitation server 616 may serve as an HTTP server. Preferably, client gateway 7314 of facilitation server 616 uses HTTPS protocol, which is HTTP Secure protocol.

[00340] While facilitation server 616 manages certain communication between the client (e.g., web browsers 7312 of user devices 7310) and the server (e.g., application server 110), the use of HTTP may be have certain limitations. For example, under HTTP protocol, a client, such as a web browser, must open a connection to a server, make a request, wait for a response, and then close the connection. If the client needs more data, it must open a new connection. Likewise, if the server has new information for the client, it must wait until the client requests it rather than sending it

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over instantly. Consequently, HTTP protocol may be an inefficient way to exchange data. However, HTML5 includes a new protocol called WebSockets. This protocol allows a web client to create a connection, keep it open as long as it wants, and both send and receive data continuously. WebSocket connections allow two-way communication between the client (e.g., web browsers 7312 of user devices 7310) and the server without having to use Ajax type of mechanisms, thereby providing an efficient way to exchange data.

[00341] Therefore, facilitation layer 610 of PID application architecture 7300 also includes a messaging server 7316, which uses the WebSocket technology. That is, messaging server 7316 uses WebSocket protocol for communicating with the client (e.g., web browsers 7312 of user devices 7310), while using, for example, JMS protocol for communicating with the rest of the server stack. Preferably, messaging server 7316 uses WSS protocol, which is WebSocket Secure protocol. The WSS protocol enables bidirectional message-calling capability between the browser and messaging server 7316. The WSS protocol provides the path to the enterprise service bus 680 of integration and process server 646. The messages from the client (e.g., web browsers 7312) are converted from HTTP protocol to JMS protocol. The WSS protocol rejects connections that have not been authenticated (i.e., needs a token that indicates authentication). As a result, PID application architecture 7300 uses the combination of messaging server 7316 and facilitation server 616 to manage communication between the client (e.g., web browsers 7312 of user devices 7310) and the server (e.g., application server 110).

[00342] Additionally, the relational database management system (RDBMS) 686 of integrated services and applications layer 614 of PID application architecture 7300 may include a schema-less database 7318. Schema-less database 7318 is in communication with data management subsystem 650 of integration and process layer 612 via enterprise service bus 680 and adaptors 682. A RDBMS imposes a fixed schema, while a schema-less database does not. A main advantage of a schema-less database (e.g., a NoSQL database) compared with a relational database (e.g., a SQL database) is that it is easily scalable. A schema-less database is well-suited for the web presentation framework of PID application architecture 7300 because it provides a convenient database for channel/content developers. In one example, schema-less

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database 7318 may be the MongoDB available from 10gen, Inc (New York, NY). MongoDB is an open source, high performance, scalable, document-oriented database.

[00343] Referring to Figure 74, a functional block diagram of an example of client architecture 7400 of PID application 112 for supporting the web presentation framework is presented. Client architecture 7400 is another example of the application architecture of the client side of PID application 112. In this example, client architecture 7400 may include an integrated development environment (IDE) layer 7410, a runtime layer 7412, an application layer 7414, and a themes layer 7416.

[00344] IDE layer 7410 is the layer of client architecture 7400 in which developers may develop channels and/or content of PID application 112 for running in the web presentation framework. There may be a channel IDE local component, a channel IDE client component, and a channel IDE server component. Developers may use writing panels, creating panels, developing panels, views, code, and the like when developing channels and/or content.

[00345] Runtime layer 7412 provides the engine for processing the channels and/or content that is created using the IDE layer 7410. There may be a channel runtime local component, a channel runtime client component, and a channel runtime server component. There may be, for example, document object model (DOM) views in runtime layer 7412. A DOM view provides the hierarchy of a web page. With respect to the channel runtime local component and the channel IDE local component, when creating channels and/or content for information delivery system 100, a developer may, optionally, have a local copy of certain components of the server loaded and executing on his/her user device 7310. This simply provides convenience to the developer to not have to continuously access, for example, the server-side portion of PID application 112 at application server 110 when creating channels and/or content.

[00346] Application layer 7414 contains the rules for the look and feel of the PID application 112 in the browser. For example, application layer 7414 contains the rules for displaying the channel grid that contains touchlets, a taskbar, a navigation bar, and the like. Application layer 7414 processes the raw application data and organizes the data into a complete application picture for the user.

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[00347] Themes layer 7416 transforms the raw application data into the actual GUI presentation in the browser to the user. For example, a theme may be a company-based theme. In one example, the theme may be the XYZ Corporation theme.

[00348] Using the web presentation framework of PID application architecture 7300 and/or client architecture 7400, a user 116 may access PID application 112 of information delivery system 100 by launching the web browser 7312 on his/her user device 7310. Then the user 116 may enter the URL address of PID application 112 (e.g., http://www.PIDapplication.com/) and perform a login process. That is, by entering the URL address of PID application 112, the user 116 is connected via HTTP to facilitation server 616, which is the HTTP server. The user 116 then enters a username and password in a login window that is presented in web browser 7312 of his/her user device 7310. During the login process, the user may be asked whether using a public or private computer. If a public computer, no information is cached on the computer. That is, once the browser is closed, no trace of the user's activity is left behind on the computer.

[00349] Once authenticated, a session begins and the user 116 may access the resources of the rest of the server stack. Web browser 7312 connects to messaging server 7316 via WSS protocol and bidirectional communication begins. Based on user identity, a certain channel grid and/or channel application is retrieved and launched in the web browser 7312 on his/her user device 7310. For example, configuration server 654 accesses the schema-less database 7318 for user configuration and preference information with regard to the user's grid, and any other information needed to render the grid. This information is passed back to the client and the grid is rendered at the web browser 7312.

[00350] Subsequently, the user 116 may access one or more channel grids to which he/she is authorized to use. The user may select a certain touchlet of a certain channel grid in web browser 7312 and interact with a certain channel within the environment of the web browser 7312. Examples of channel grids, touchlets, and/or channels that are operating in web browser 7312 per the web presentation framework are shown with reference to Figures 75 through 78.

[00351] Additionally, dynamic updates may occur. For example, there may be circumstance where the user's grid is updated. That is, the user himself makes a

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change, or some other user modifies a shared grid (e.g., adds a channel). In this example, the schema-less database 7318 may be updated with the change and the change is then pushed to the user who is running the grid in their web browser 7312. Additionally, if someone updates configuration preferences in integration and process server 646, the schema-less database 7318 is updated and the changes are also pushed to other clients that are subscribed to be notified of these changes. Changes are routed through JMS (a publish/subscribe mechanism) through facilitation server 616, which is the HTTP server, to the web browser 7312. Then, the web browser 7312 refreshes to implement the changes. In one example, if a user 116 no longer has access to certain content, that user 116 is immediately blocked from the content. In another example, if a new touchlet has been added to a channel grid, a new touchlet immediately appears on the grid in the user's web browser 7312.

[00352] In another example of performing dynamic updates, a "Stock Watch" channel (e.g., a "Stock Watch" channel 7800 of Figure 78) uses dynamic updates to periodically push stock content to the "Stock Watch" channel at the web browser 7312. When first launched, an initial request is made for current stock data through messaging server 7316 via WSS protocol, and then via JMS protocol to the integration and process server 646, and then to the external data sources. The current stock data that has been archived in the schema-less database 7318 is transmitted back to the web browser 7312 and displayed. The integration and process server 646 is not passive, it polls the external feeds for updates, stores the latest data in the schema-less database 7318, and pushes the updates back to the subscribing clients. The updates are also published to the eventing and alerting subsystem 652 and analyzed with respect to certain events that have been set up and that are being monitored. If certain conditions are met, alert notifications are triggered.

[00353] Referring to Figure 75, a screenshot of an example of a web browser 7312, which is running on a user device 7310, is presented for displaying a web page of a channel grid to the user. In this example, web browser 7312 may be a Microsoft Internet Explorer® web browser, but may be any type of browser, such as, but not limited to, a Google Chrome, Firefox, Safari, or Opera web browser. The web page that is displayed in web browser 7312 shows, for example, a channel grid 7510 that includes one or more touchlets 7512. The web page in web browser 7312 also shows

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a set of one or more channel grid buttons 7514 for selecting a certain channel grid to be displayed in web browser 7312. In one example, channel grid buttons 7514 may include an "At Home" channel grid button, a "My TV" channel grid button, an "At Work" channel grid button, a "Catalog" channel grid button, and a "Developer" channel grid button. In one example, when a user selects a certain channel grid button 7514, the corresponding channel grid web page is displayed in web browser 7312. The set of touchlets 7512 shown in channel grid 7510 of web browser 7312 of Figure 75 is an example of the touchlets of the user's "At Home" channel grid, meaning the channel grid that the user is likely to use when at home. When the user 116 selects a certain touchlet 7512, the web browser 7312 is updated (i.e., refreshed) with the corresponding channel application web page.

[00354] In this example, channel grid 7510 of Figure 75 (i.e., the user's "At Home" channel grid) includes, for example, one or more television media touchlets, such as a "Fringe" touchlet 7512A, a "Lost" touchlet 7512B, a "MasterChef" touchlet 7512C, and a "So You Think You Can Dance" touchlet 7512D; one or more movie media touchlets, such as an "Avatar" touchlet 7512E, a "How To Train Your Dragon" touchlet 7512F, and a "NetFlix" touchlet 7512G; and one or more other channel application touchlets, such as an "Advertising" touchlet 7512H, a "Last Viewed" touchlet 7512I, a "Remote Care" touchlet 7512J, a "My Medicine Cabinet" touchlet 7512K, and a "Home Security" touchlet 7512L. Each touchlet 7512 is associated with its corresponding channel application. More details of an example of a "Home Security" channel that is associated with "Home Security" touchlet 7512L and that is operating in the web presentation framework are described with reference to Figure 76.

[00355] Referring to Figure 76, a screenshot of web browser 7312 displaying a web page of a "Home Security" channel 7600 that is operating in a substantially full-screen mode is presented. "Home Security" channel 7600 is the channel application associated with "Home Security" touchlet 7512L of Figure 75. "Home Security" channel 7600 provides a mechanism for monitoring and/or reporting information about the user 116's home security system. The web page of "Home Security" channel 7600 may include, for example, a status window 7610 and one or more video feed windows 7612. The status window 7610 shows in text form any alert conditions

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that are present as well as any useful control buttons. For example, a keypad button 7614 may be provided for launching a keypad window (not shown).

[00356] The web page of "Home Security" channel 7600 and/or of any other channel may also include a set of mini-touchlet buttons 7616 and a return-to-grid button 7618. When the user 116 selects a certain mini-touchlet button 7616, the web browser 7312 is updated (i.e., refreshed) with the web page of the corresponding channel application. Similarly, when the user 116 selects the return-to-grid button 7618, the web browser 7312 is updated (i.e., refreshed) with the channel grid web page, such as the channel grid web page shown in Figure 75.

[00357] From the user's perspective, "Home Security" touchlet 7512L of Figure 75 and "Home Security" channel 7600 of Figure 76 are substantially the same as "Home Security" touchlet 4110J and "Home Security" channel 4300 of Figure 43. However, "Home Security" channel 7600 of Figure 76 may be implemented using the web presentation framework, while "Home Security" channel 4300 of Figure 43 may be implemented using the Flex presentation framework.

[00358] Referring to Figure 77, another screenshot of web browser 7312, which is running on a user device 7310, is presented for displaying a web page of another channel grid to the user. In this example, the web browser 7312 displays a web page that includes the user's "At Work" channel grid. That is, a channel grid 7710 displays touchlets 7712 associated with the user's "At Work" channel grid, meaning the channel grid that the user is likely to use when at work.

[00359] In this example, channel grid 7710 of Figure 77 (i.e., the user's "At Work" channel grid) includes, for example, a "News Reader" touchlet 7712A, a "Stock Watch" touchlet 7712B, another "Stock Watch" touchlet 7712C, a "Business CRM" touchlet 7712D, a "Currency" touchlet 7712E, a "Banking" touchlet 7712F, a "Live News" touchlet 7712G, a "Business Calendar" touchlet 7712H, an "Email" touchlet 7712I, a "Personal Calendar" touchlet 7712J, and a "Business Finance" touchlet 7712K. More details of an example of a "Stock Watch" channel that is associated with "Stock Watch" touchlet 7712B and that is operating in the web presentation framework are described with reference to Figure 78.

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[00360] Referring to Figure 78, a screenshot of web browser 7312 displaying a web page of a "Stock Watch" channel 7800 that is operating in a substantially full-screen mode is presented. "Stock Watch" channel 7800 is the channel application associated with "Stock Watch" touchlet 7712B of Figure 77. "Stock Watch" channel 7800 provides a mechanism for monitoring and/or reporting certain stock and/or financial information of a company of interest. In this example, "Stock Watch" channel 7800 is monitoring Brocade Communications Systems, Inc (BRCD). The web page of "Home Security" channel 7800 may include, for example, an overview window 7810, one or more information windows 7812, and a trading window 7814.

[00361] From the user's perspective, "Stock Watch" touchlet 7712B of Figure 77 and "Stock Watch" channel 7800 of Figure 78 are substantially the same as "Stock Watch" touchlet 316B and "Stock Watch" channel 1400 of Figure 14. However, "Stock Watch" channel 7800 of Figure 78 may be implemented using the web presentation framework, while "Stock Watch" channel 1400 of Figure 14 may be implemented using the Flex presentation framework.

[00362] Referring to Figures 73 through 78, from the user's perspective, while implemented using the web presentation framework, the operations of channel grid 7510 and touchlets 7512 (and the underlying channel applications) of Figure 75 and of channel grid 7710 and touchlets 7712 (and the underlying channel applications) of Figure 77 are substantially the same as channel grids, touchlets, and channels that are implemented using the Flex presentation framework. For example, a web page is designed to display channel grid 7510 that contains one or more touchlets 7512 in web browser 7312. Each touchlet 7512 may be used for presenting dynamic information of, interacting with, and/or launching its underlying channel application. Once launched, a substantially full-screen view of the channel is presented via a web page in web browser 7312.

[00363] Additionally, eventing and alerting functions may occur in the web presentation framework of information delivery system 100 of the present invention. Further, both consumer and enterprise scenarios may be implemented using the web presentation framework. Further still, the web presentation framework of information delivery system 100 supports a channel/content developer environment in which

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developers may create channels/content using HTML5, JavaScript, and Cascading Style Sheets (CSS), such as CSS3.

[00364] FLEX PRESENTATION FRAMEWORK VS. WEB PRESENTATION FRAMEWORK

[00365] Referring again to Figures 1 through 11, in the Flex presentation framework embodiment of information delivery system 100, the user device 118 is the "client" in the client-server system architecture. As a result, a client portion of PID application 112 must be installed on each user device 118.

[00366] Referring again to Figures 73 and 74, in the web presentation framework embodiment of information delivery system 100, the web browser (e.g., web browser 7312) is the "client" in the client-server system architecture. As a result, a web browser application must be installed on each user device 7310.

[00367] Referring again to Figures 1 through 11, when developing channels and/or content for the Flex presentation framework embodiment of information delivery system 100, developers are writing applications (i.e., channels and/or content) that are compiled into an executable. Because of this, developers are (1) limited to the APIs that are exposed through Adobe proprietary software; (2) able to easily distribute an application with little more than a double-click install; and (3) able to control the precise look and feel of the application with minimal effort at production time.

[00368] Referring again to Figures 73 and 74, when developing channels and/or content for the web presentation framework embodiment of information delivery system 100, developers are writing applications (i.e., channels and/or content) that is interpreted by the browser. Because of this, developers are (1) able to build a full scale web application with nothing more than a text editor (and a browser); (2) required to test applications in all supported browsers; and (3) unrestricted by a third party feature release schedule (except as it pertains to standards implementation). Additionally, because there is no compilation step, HTML/JavaScript/CSS is quick and easy to create/edit on the fly.

[00369] Referring again to Figures 1 through 11, when developing channels and/or content for the Flex presentation framework embodiment of information delivery system 100, such as when using Adobe's RIA development tool, there are, for

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example, three ways to build an application: (1) a web-based application that is meant for distributing over HTTP; (2) an Adobe AIR-based application, which is an application that runs on the desktop; and (3) a mobile application, which is an application meant to be used in a mobile device (e.g., smart phone, tablet). The development process for these three is more or less the same. However, the developer must choose which of these "project types" to use before building the application. Although, there may be ways to convert a web-based application into an Adobe AIR-based application.

[00370] Referring again to Figures 73 and 74, when developing channels and/or content for the web presentation framework embodiment of information delivery system 100, such as when using HTML5, JavaScript, and CSS, developers have only one choice for distribution of the application, which is the web. Therefore, the application must be interpreted by a web browser application in order to be used.

[00371] Referring again to Figures 1 through 11, the Flex presentation framework embodiment of information delivery system 100, provides the capability to access any information that is exposed at the device level (e.g., to determine the presence of a camera, microphone, speaker, etc). Accordingly, channels and/or content may make use of this device level information.

[00372] Referring again to Figures 73 and 74, currently HTML5 does not provide the ability to interrogate the client device with respect to device level information (e.g., to determine the presence of a camera, microphone, speaker, etc). The HTML5 specification is not yet certified, therefore its full functionality is still to be determined. Therefore, in the web presentation framework embodiment of information delivery system 100, native applications may be written (using native code) to run on any user device 7310. For example, in order to use a camera that is present on a certain user device 7310 for a web-conferencing application, a native application may be written to activate the camera of the certain type, brand, and/or model of device. The web presentation framework of PID application 112 of information delivery system 100 can use HTML5 to interact with the native application at the user device 7310. In this example, a camera touchlet of a channel grid may be used for presenting dynamic information of, interacting with, and/or

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launching its underlying camera channel application (or any channel application using the camera), which may be use to interact with the native camera application.

[00373] Further, with respect to the various examples of channel grids, touchlets, and channels shown in Figures 12 through 72 and that are depicted using the Flex presentation framework of information delivery system 100, those skilled in the art will recognize that these examples may also be implemented using the web presentation framework of information delivery system 100.

[00374] Conclusion

[00375] While various inventive embodiments have been described and illustrated herein, those of ordinary skill in the art will readily envision a variety of other means and/or structures for performing the function and/or obtaining the results and/or one or more of the advantages described herein, and each of such variations and/or modifications is deemed to be within the scope of the inventive embodiments described herein. More generally, those skilled in the art will readily appreciate that all parameters, dimensions, materials, and configurations described herein are meant to be exemplary and that the actual parameters, dimensions, materials, and/or configurations will depend upon the specific application or applications for which the inventive teachings is/are used. Those skilled in the art will recognize, or be able to ascertain using no more than routine experimentation, many equivalents to the specific inventive embodiments described herein. It is, therefore, to be understood that the foregoing embodiments are presented by way of example only and that inventive embodiments may be practiced otherwise than as specifically described. Inventive embodiments of the present disclosure are directed to each individual feature, system, article, material, kit, and/or method described herein. In addition, any combination of two or more such features, systems, articles, materials, kits, and/or methods, if such features, systems, articles, materials, kits, and/or methods are not mutually inconsistent, is included within the inventive scope of the present disclosure.

[00376] The above-described embodiments of the invention can be implemented in any of numerous ways. For example, some embodiments may be implemented via one or more controllers, which may employ hardware, software or a combination thereof. In some embodiments discussed herein, one or more controllers may be implemented, at least in part, as a state machine.

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[00377] When any aspect of an embodiment is implemented at least in part in software, the software code can be executed on any suitable processor or collection of processors, whether provided in a single device or computer or distributed among multiple devices/computers.

[00378] In this respect, various aspects of the invention, may be embodied at least in part as a computer readable storage medium (or multiple computer readable storage media) (e.g., a computer memory, one or more floppy discs, compact discs, optical discs, magnetic tapes, flash memories, circuit configurations in Field Programmable Gate Arrays or other semiconductor devices, or other tangible computer storage medium or non-transitory medium) encoded with one or more programs that, when executed on one or more computers or other processors, perform methods that implement the various embodiments of the technology discussed above. The computer readable medium or media can be transportable, such that the program or programs stored thereon can be loaded onto one or more different computers or other processors to implement various aspects of the present technology as discussed above.

[00379] The terms "program" or "software" are used herein in a generic sense to refer to any type of computer code or set of computer-executable instructions that can be employed to program a computer or other processor to implement various aspects of the present technology as discussed above. Additionally, it should be appreciated that according to one aspect of this embodiment, one or more computer programs that when executed perform methods of the present technology need not reside on a single computer or processor, but may be distributed in a modular fashion amongst a number of different computers or processors to implement various aspects of the present technology.

[00380] Computer-executable instructions may be in many forms, such as program modules, executed by one or more computers or other devices. Generally, program modules include routines, programs, objects, components, data structures, etc. that perform particular tasks or implement particular abstract data types. Typically the functionality of the program modules may be combined or distributed as desired in various embodiments.

[00381] Also, the technology described herein may be embodied as a method, of which at least one example has been provided. The acts performed as part of the

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method may be ordered in any suitable way. Accordingly, embodiments may be constructed in which acts are performed in an order different than illustrated, which may include performing some acts simultaneously, even though shown as sequential acts in illustrative embodiments.

[00382] All definitions, as defined and used herein, should be understood to control over dictionary definitions, definitions in documents incorporated by reference, and/or ordinary meanings of the defined terms.

[00383] The indefinite articles "a" and "an," as used herein in the specification, unless clearly indicated to the contrary, should be understood to mean "at least one."

[00384] The phrase "and/or," as used herein in the specification, should be understood to mean "either or both" of the elements so conjoined, i.e., elements that are conjunctively present in some cases and disjunctively present in other cases. Multiple elements listed with "and/or" should be construed in the same fashion, i.e., "one or more" of the elements so conjoined. Other elements may optionally be present other than the elements specifically identified by the "and/or" clause, whether related or unrelated to those elements specifically identified. Thus, as a non-limiting example, a reference to "A and/or B", when used in conjunction with open-ended language such as "comprising" can refer, in one embodiment, to A only (optionally including elements other than B); in another embodiment, to B only (optionally including elements other than A); in yet another embodiment, to both A and B (optionally including other elements); etc.

[00385] As used herein in the specification, "or" should be understood to have the same meaning as "and/or" as defined above. For example, when separating items in a list, "or" or "and/or" shall be interpreted as being inclusive, i.e., the inclusion of at least one, but also including more than one, of a number or list of elements, and, optionally, additional unlisted items. Only terms clearly indicated to the contrary, such as "only one of" or "exactly one of," or, when used in claims, "consisting of," will refer to the inclusion of exactly one element of a number or list of elements. In general, the term "or" as used herein shall only be interpreted as indicating exclusive alternatives (i.e. "one or the other but not both") when preceded by terms of exclusivity, such as "either," "one of," "only one of," or "exactly one of."

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"Consisting essentially of," when used in claims, shall have its ordinary meaning as used in the field of patent law.

[00386] As used herein in the specification, the phrase "at least one," in reference to a list of one or more elements, should be understood to mean at least one element selected from any one or more of the elements in the list of elements, but not necessarily including at least one of each and every element specifically listed within the list of elements and not excluding any combinations of elements in the list of elements. This definition also allows that elements may optionally be present other than the elements specifically identified within the list of elements to which the phrase "at least one" refers, whether related or unrelated to those elements specifically identified. Thus, as a non-limiting example, "at least one of A and B" (or, equivalently, "at least one of A or B," or, equivalently "at least one of A and/or B") can refer, in one embodiment, to at least one, optionally including more than one, A, with no B present (and optionally including elements other than B); in another embodiment, to at least one, optionally including more than one, B, with no A present (and optionally including elements other than A); in yet another embodiment, to at least one, optionally including more than one, A, and at least one, optionally including more than one, B (and optionally including other elements); etc.

[00387] In the specification above, all transitional phrases such as "comprising," "including," "carrying," "having," "containing," "involving," "holding," "composed of," and the like are to be understood to be open-ended, i.e., to mean including but not limited to. Only the transitional phrases "consisting of" and "consisting essentially of" shall be closed or semi-closed transitional phrases, respectively, as set forth in the United States Patent Office Manual of Patent Examining Procedures, Section 2111.03.

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CLAIMS

1. An apparatus to provide secure user-centric information via at least one user platform operated by a user, the apparatus comprising:

at least one communication interface to facilitate wired and/or wireless communications with the at least one user platform via one or more transmission media;

at least one memory to store processor-executable instructions; and

at least one processor communicatively coupled to the at least one communication interface and the at least one memory, wherein upon execution of the processor-executable instructions by the at least one processor, the at least one processor establishes a bidirectional, asynchronous user session to manage provision of and interaction with the secure user-centric information by:

A) implementing a plurality of channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information;

B) controlling the at least one communication interface to receive, from the at least one user platform, a user identity for the user and a platform identity for the at least one user platform;

C) authenticating the user and the user platform to receive the secure user-centric information based at least in part on the user identity and the platform identity; and

D) if the user and the user platform are authenticated in C), controlling the at least one communication interface so as to cause the bidirectional, asynchronous user session to be established between the apparatus and a web browser of the at least one user platform and to transmit to the at least one user platform during the user session first authenticated channel information relating to at least one authorized channel of the plurality of channels implemented in A), based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of channels, the user, and the user platform,

wherein in D), the processor is configured to control the at least one communication interface to cause the bidirectional, asynchronous user session

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to be established without requiring a separate application other than the web browser to be installed on the user platform to establish the user session.

2. The apparatus of claim 1, wherein in D), the processor is configured to control the at least one communication interface so as to cause the user session to be established by transmitting a HTML file to the user platform.

3. The apparatus of claim 2, wherein the HTML file is a HTML5 file.

4. The apparatus of claim 3, wherein in D), the processor controls the at least one communication interface so as to cause the user session to be established using a WebSocket Secure protocol.

5. The apparatus of claim 1, wherein in D), the at least one authorized channel comprises a television channel, and wherein the first authenticated channel information comprises a media program.

6. The apparatus of claim 5, wherein the first authenticated channel information comprises at least one advertisement.

7. The apparatus of claim 6, wherein the at least one advertisement is based on a context of the media program.

8. The apparatus of claim 7, wherein the context comprises one or more characteristics of the media program.

9. The apparatus of claim 8, wherein a product or service to which the at least one advertisement is directed is based on a subject matter of the media program.

10. The apparatus of claim 8, wherein a product or service to which the at least one advertisement is directed is based on a subject matter of an advertisement provided within the media program.

11. The apparatus of claim 8, wherein in D):

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the at least one user platform comprises a first user platform and a second user platform;

the processor controls the at least one communication interface so as to cause the bidirectional, asynchronous user session to be established between the apparatus and a web browser of each of the first user platform and the second user platform;

the at least one advertisement comprises a first advertisement provided to the first user platform and a second advertisement provided to the second user platform; and

the first advertisement and the second advertisement include related subject matter.

12. The apparatus of claim 11, wherein:

the first advertisement provided to the first user platform is a national advertisement; and

the second advertisement provided to the second user platform is a local advertisement related to content of the national advertisement.

13. The apparatus of claim 11, in combination with the first user platform, wherein the first user platform comprises a television set or a set top box.

14. The apparatus of claim 11, in combination with the second user platform, wherein the second user platform comprises a mobile computing device.

15. The apparatus of claim 14, wherein the second user platform comprises a tablet device, a smartphone, or a laptop computer.

16. The apparatus of claim 6, wherein the at least one advertisement comprises an interactive advertisement.

17. The apparatus of claim 1, wherein the at least one memory stores at least one user profile to identify user preferences, platform identities, and service support instructions that determine how the secure user-centric information behaves on the user platform, and wherein:

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C) comprises authenticating the user and the user platform based at least in part on the user profile; and

D) comprises transmitting the first authenticated channel information to the at least one user platform based at least in part on the user profile.

18. The apparatus of claim 1, wherein:

the at least one memory stores an authentication directory to provide the information access rights and/or security protocols respectively associated with the corresponding plurality of channels, the user, and the user platform;

the authentication directory includes a plurality of user accounts, a plurality of device accounts, and a plurality of application accounts; and

C) comprises authenticating the user and the user platform based at least in part on the plurality of user accounts and the plurality of device accounts included in the authentication directory.

19. A method for providing secure user-centric information via at least one user platform operated by a user, the method comprising:

A) implementing a plurality of channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information; B) receiving, from the at least one user platform, a user identity for the user and a platform identity for the at least one user platform;

C) authenticating the user and the user platform to receive the secure user-centric information based at least in part on the user identity and the platform identity; and

D) if the user and the user platform are authenticated in C), causing a bidirectional, asynchronous user session to be established with a web browser of the at least one user platform and transmitting to the at least one user platform during the user session first authenticated channel information relating to at least one authorized channel of the plurality of channels implemented in A), based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of channels, the user, and the user platform,

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wherein in D), the bidirectional, asynchronous user session is established without requiring a separate application other than the web browser to be installed on the user platform to establish the user session.

20. At least one computer readable storage medium storing processor-executable instructions that, when executed by at least one processor, perform a method for providing secure user-centric information via at least one user platform operated by a user, the method comprising:

A) implementing a plurality of channels through which the user receives and/or interacts with, via the at least one user platform, respective portions of the secure user-centric information; B) receiving, from the at least one user platform, a user identity for the user and a platform identity for the at least one user platform;

C) authenticating the user and the user platform to receive the secure user-centric information based at least in part on the user identity and the platform identity; and

D) if the user and the user platform are authenticated in C), causing a bidirectional, asynchronous user session to be established with a web browser of the at least one user platform and transmitting to the at least one user platform during the user session first authenticated channel information relating to at least one authorized channel of the plurality of channels implemented in A), based at least in part on information access rights and/or security protocols respectively associated with the corresponding plurality of channels, the user, and the user platform,

wherein in D), the bidirectional, asynchronous user session is established without requiring a separate application other than the web browser to be installed on the user platform to establish the user session.

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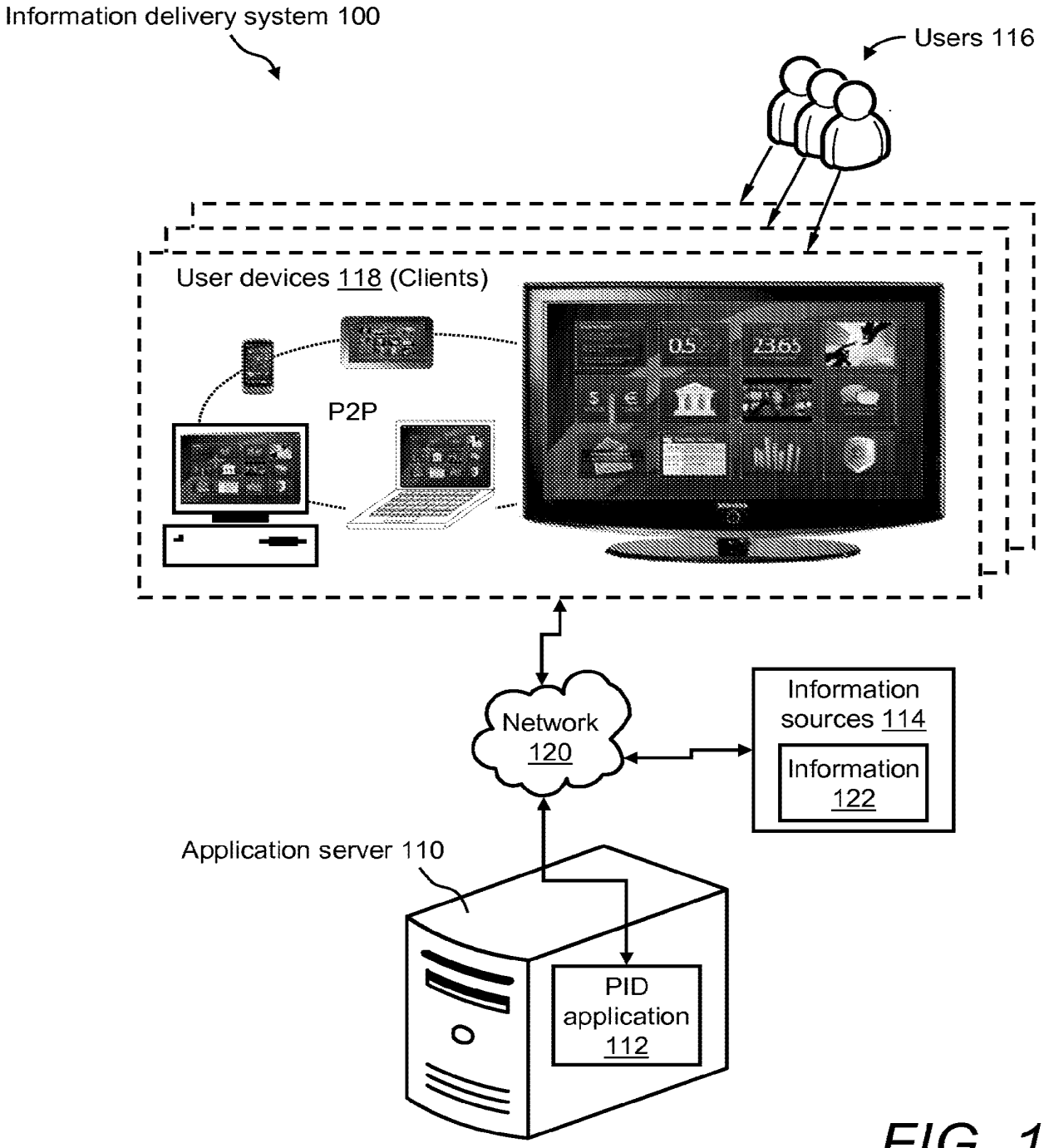

Information delivery system 100
Users 116
User devices 118 (Clients)
P2P
Network 120
Information sources 114
Information 122
Application server 110
PID application 112

FIG. 1

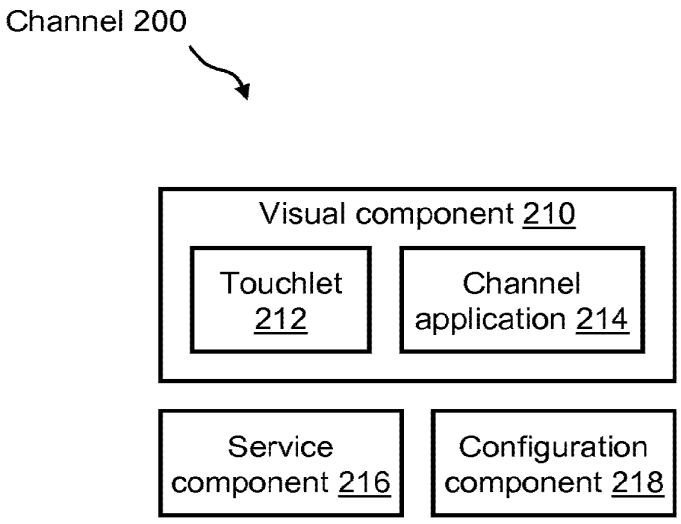

Channel 200
Visual component 210
Touchlet 212
Channel application 214
Service component 216
Configuration component 218

FIG. 2

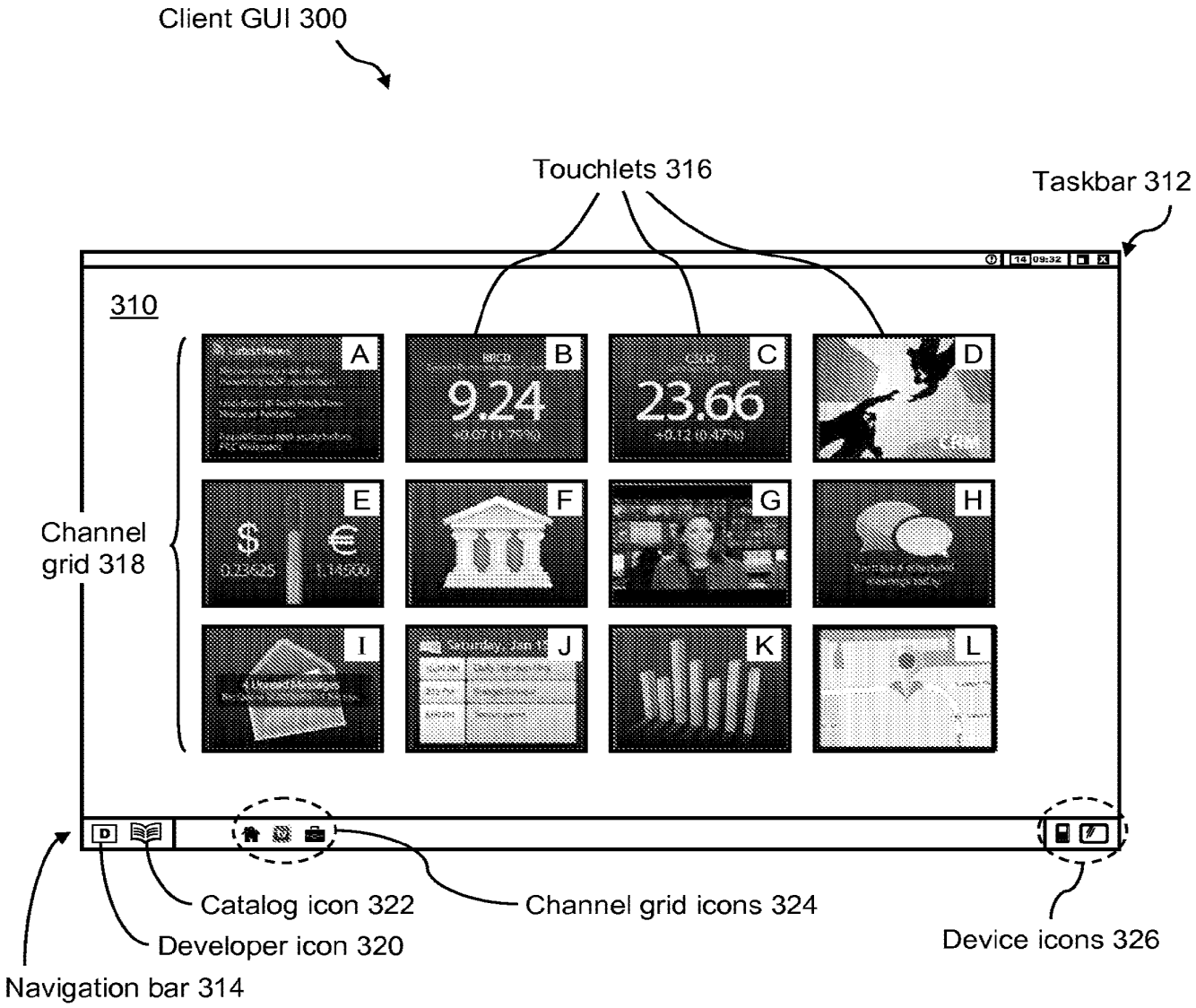

Client GUI 300
Touchlets 316
Taskbar 312
310
Channel grid 318
A
B
9.24
C
23.66
D
E
F
G
H
I
J
K
L
Catalog icon 322
Channel grid icons 324
Developer icon 320
Device icons 326
Navigation bar 314

FIG. 3

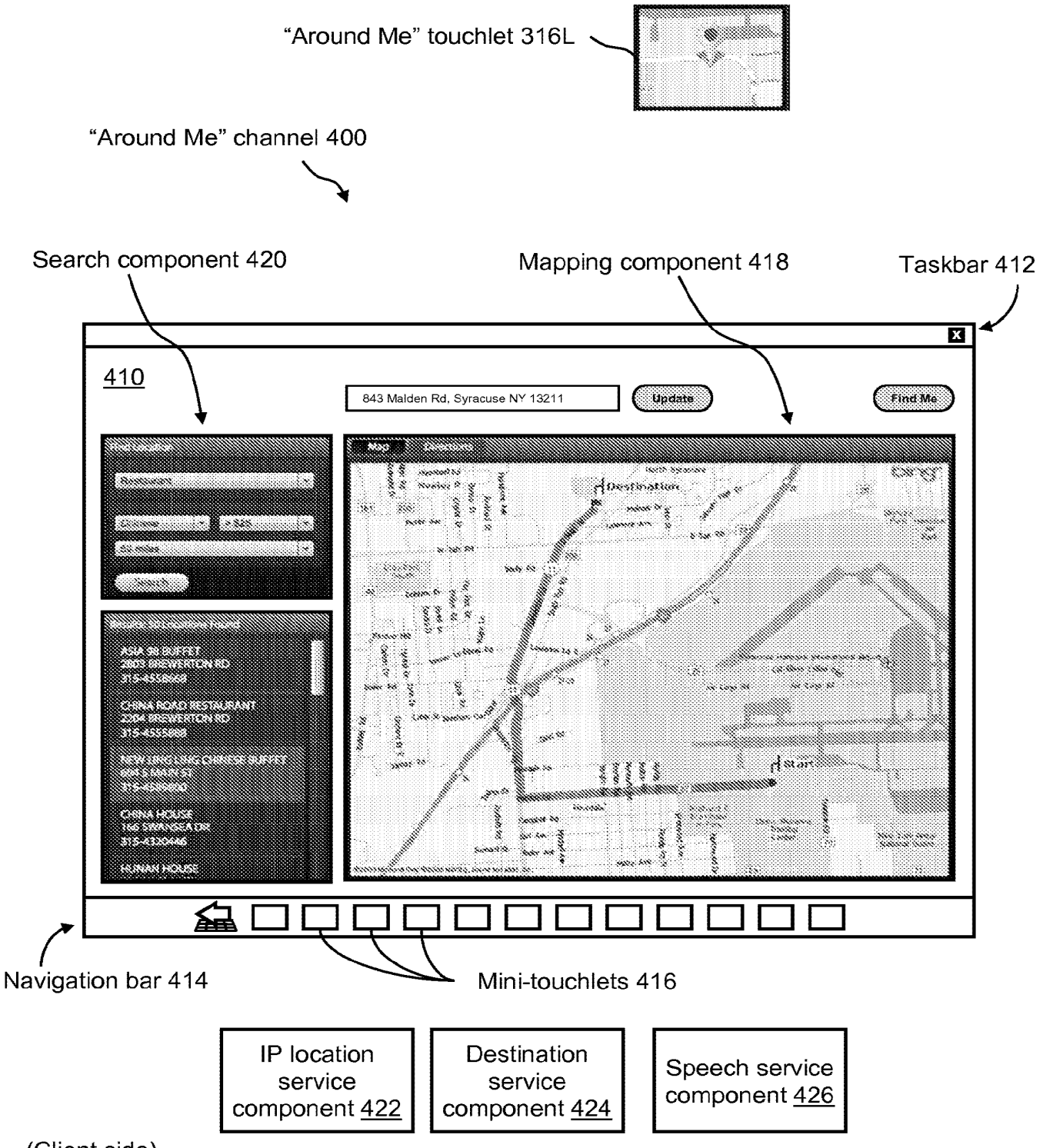

"Around Me" touchlet 316L
"Around Me" channel 400
Search component 420
Mapping component 418
Taskbar 412
410
843 Malden Rd, Syracuse NY 13211
Update
Find Me
Navigation bar 414
Mini-touchlets 416
IP location service component 422
Destination service component 424
Speech service component 426
(Client side)
(Server side)

FIG. 4

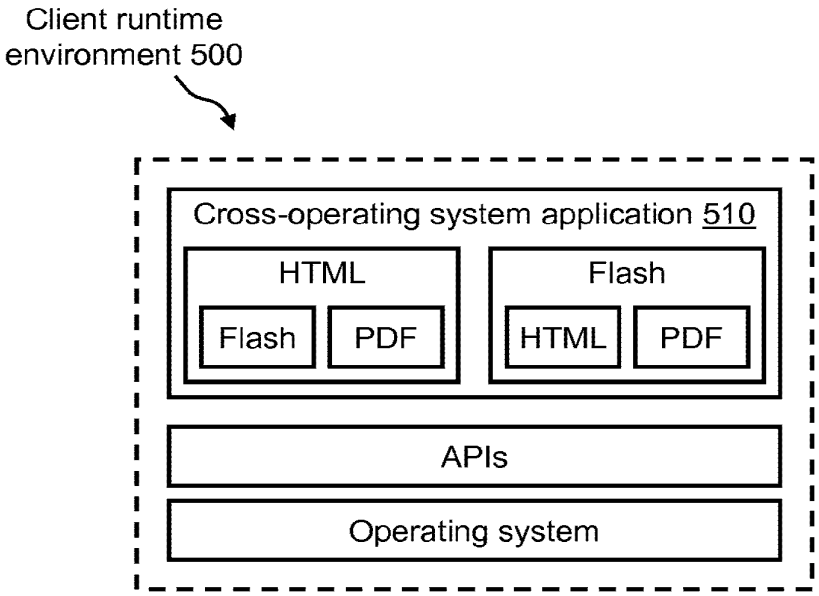

Client runtime environment 500
Cross-operating system application 510
HTML
Flash
PDF
Flash
HTML
PDF
APIs
Operating system

FIG. 5

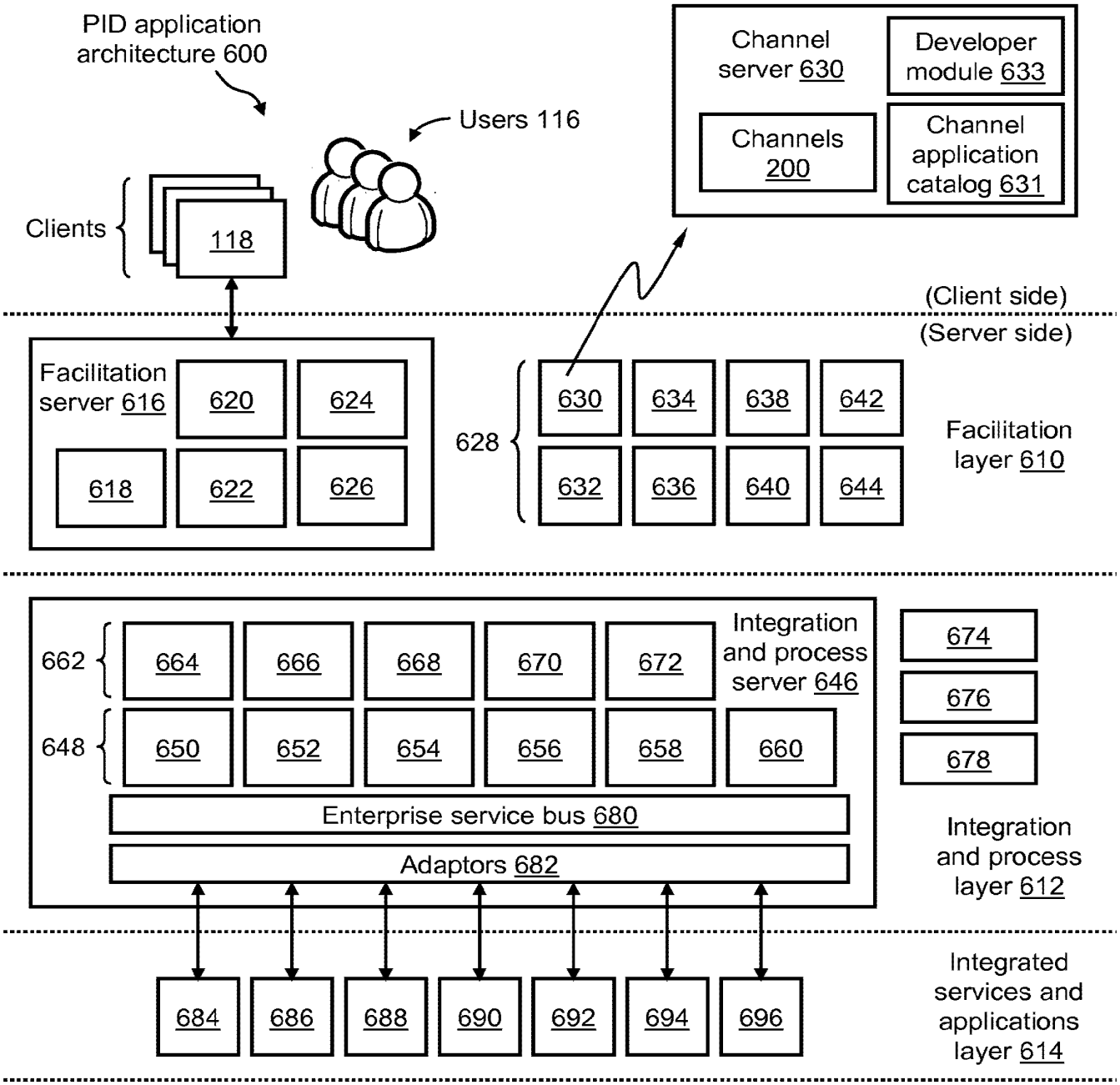

PID application architecture 600
Users 116
Clients
118
Channel server 630
Developer module 633
Channels 200
Channel application catalog 631
(Client side)
(Server side)
Facilitation server 616
620
624
618
622
626
628
630
634
638
642
632
636
640
644
Facilitation layer 610
662
664
666
668
670
672
Integration and process server 646
648
650
652
654
656
658
660
674
676
678
Enterprise service bus 680
Adaptors 682
Integration and process layer 612
684
686
688
690
692
694
696
Integrated services and applications layer 614

FIG. 6

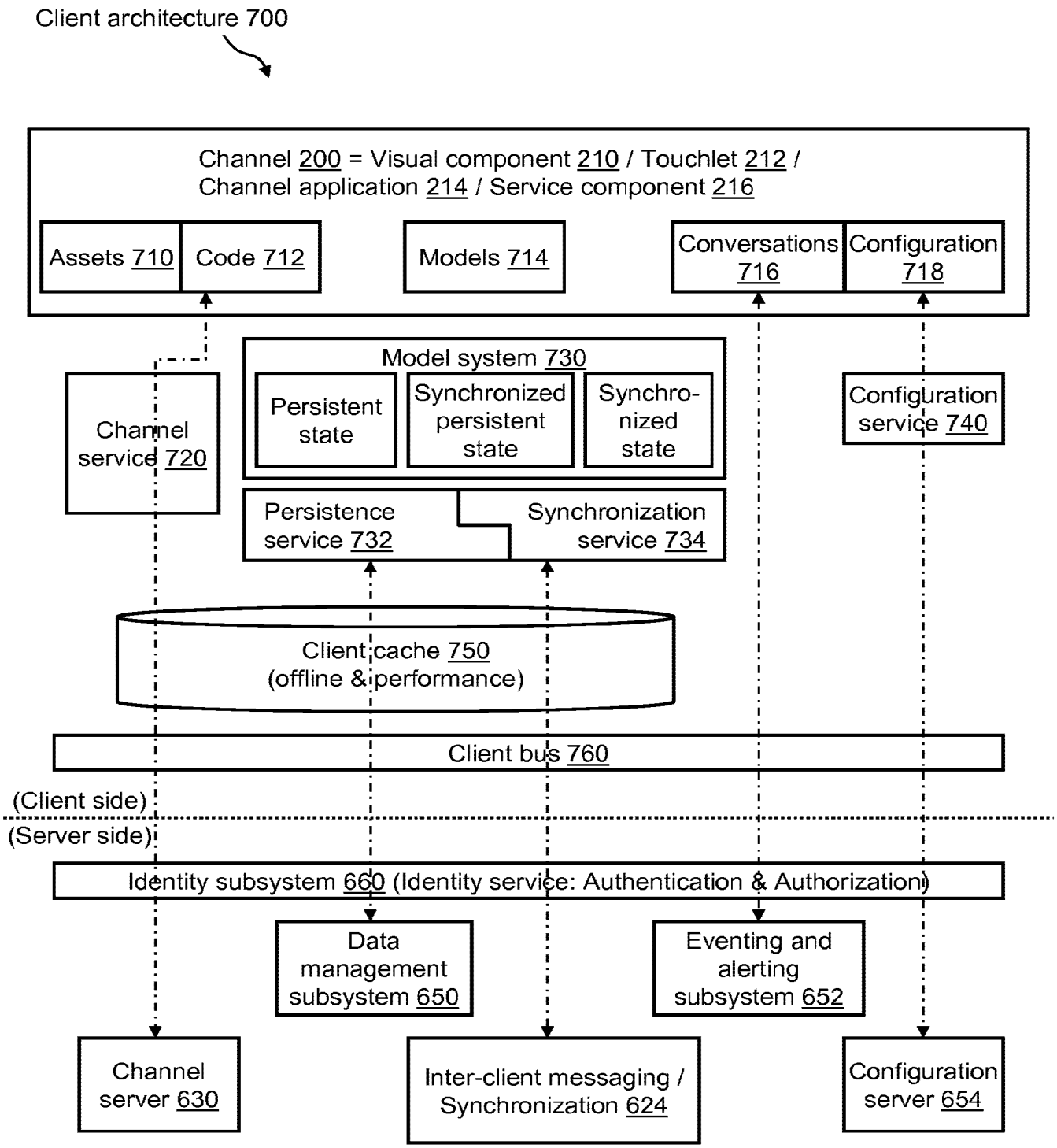

Client architecture 700
Channel 200 = Visual component 210 / Touchlet 212 /
Channel application 214 / Service component 216
Assets 710
Code 712
Models 714
Conversations 716
Configuration 718
Model system 730
Persistent state
Synchronized persistent state
Synchro-nized state
Channel service 720
Configuration service 740
Persistence service 732
Synchronization service 734
Client cache 750
(offline & performance)
Client bus 760
(Client side)
(Server side)
Identity subsystem 660 (Identity service: Authentication & Authorization)
Data management subsystem 650
Eventing and alerting subsystem 652
Channel server 630
Inter-client messaging / Synchronization 624
Configuration server 654

FIG. 7

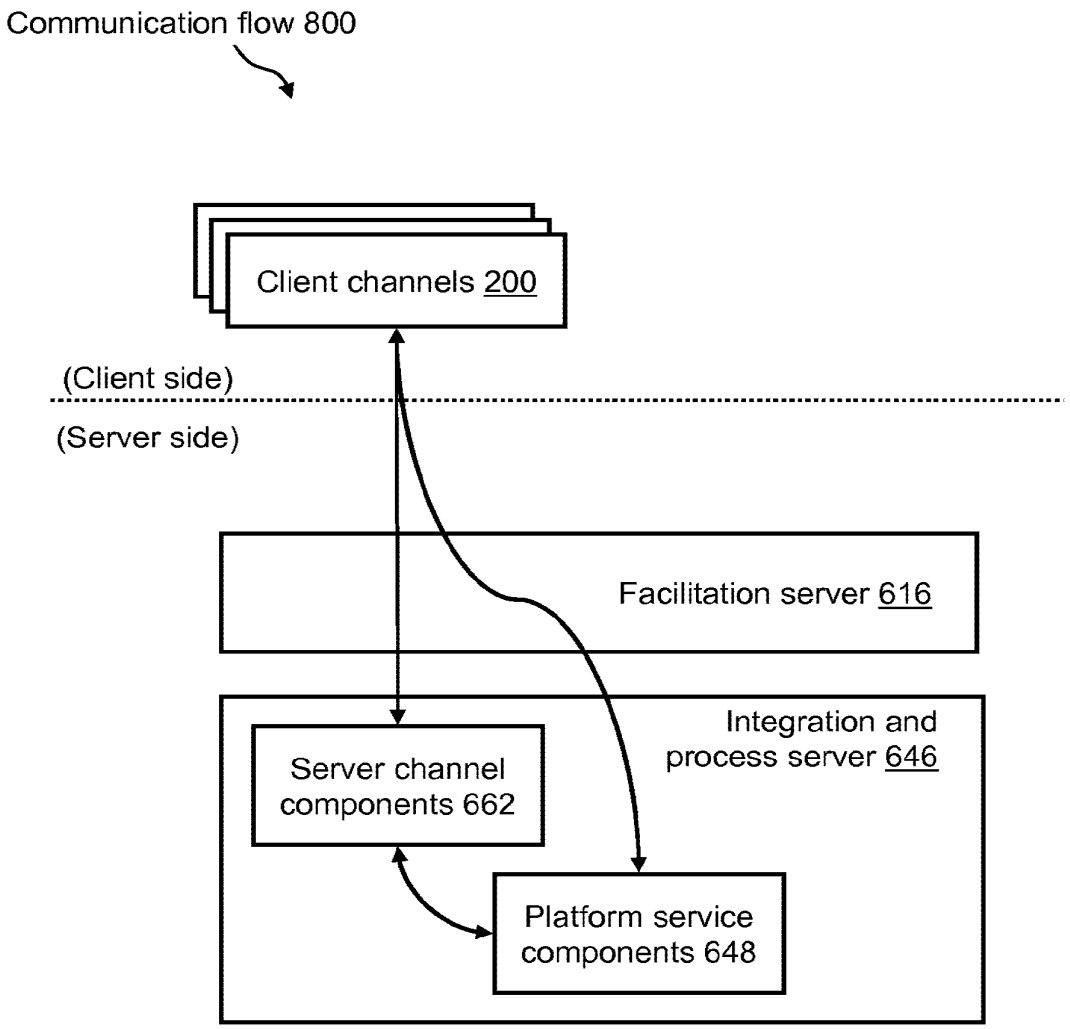

Communication flow 800
Client channels 200
(Client side)
(Server side)
Facilitation server 616
Integration and process server 646
Server channel components 662
Platform service components 648

FIG. 8

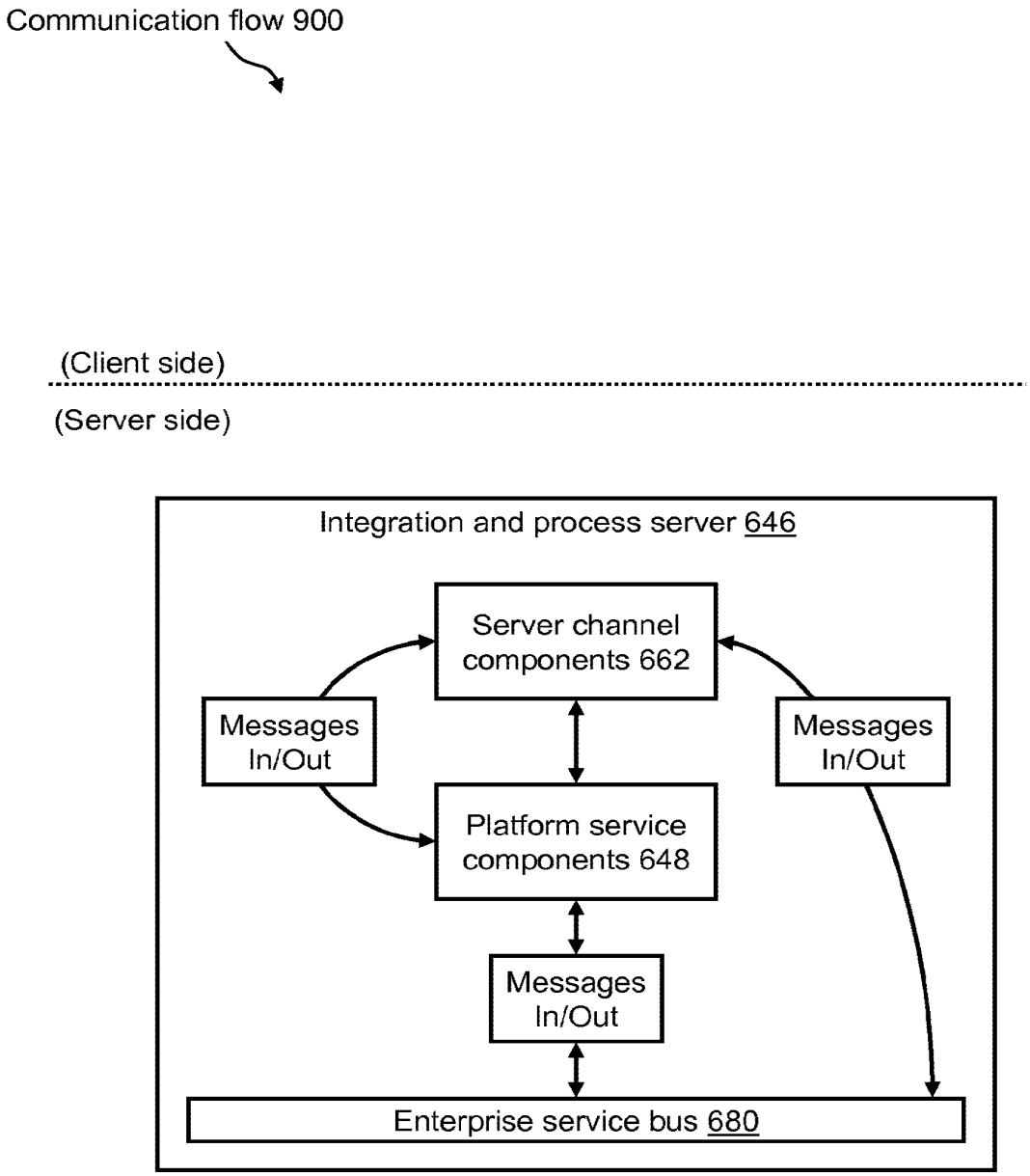

Communication flow 900
(Client side)
(Server side)
Integration and process server 646
Server channel components 662
Messages In/Out
Messages In/Out
Platform service components 648
Messages In/Out
Enterprise service bus 680

FIG. 9

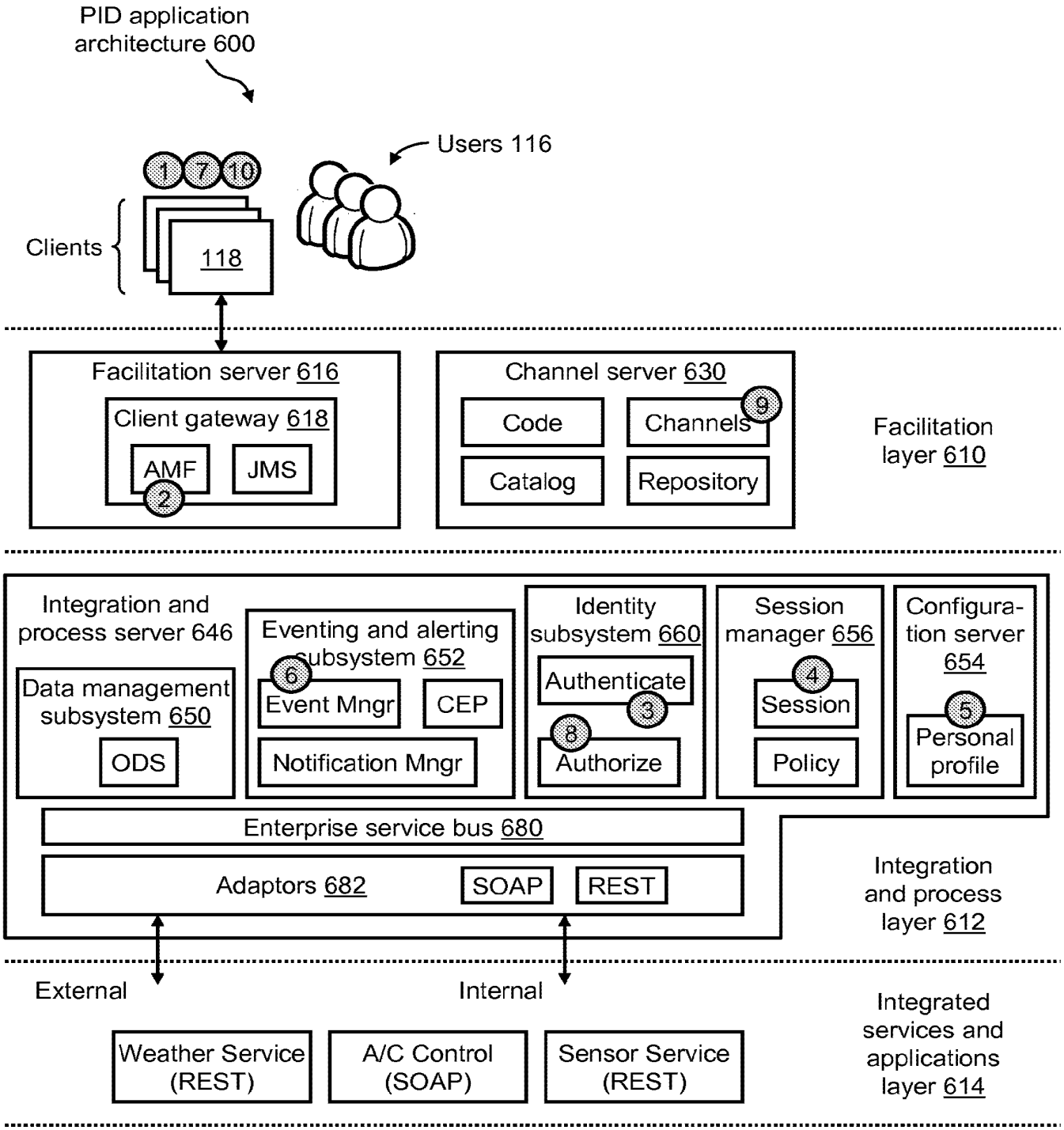

PID application architecture 600
Users 116
1
7
10
Clients
118
Facilitation server 616
Client gateway 618
AMF
JMS
2
Channel server 630
Code
Channels
9
Catalog
Repository
Facilitation layer 610
Integration and process server 646
Data management subsystem 650
ODS
Eventing and alerting subsystem 652
6
Event Mngr
CEP
Notification Mngr
Identity subsystem 660
Authenticate
3
8
Authorize
Session manager 656
4
Session
Policy
Configura-tion server 654
5
Personal profile
Enterprise service bus 680
Adaptors 682
SOAP
REST
Integration and process layer 612
External
Internal
Weather Service (REST)
A/C Control (SOAP)
Sensor Service (REST)
Integrated services and applications layer 614

FIG. 10

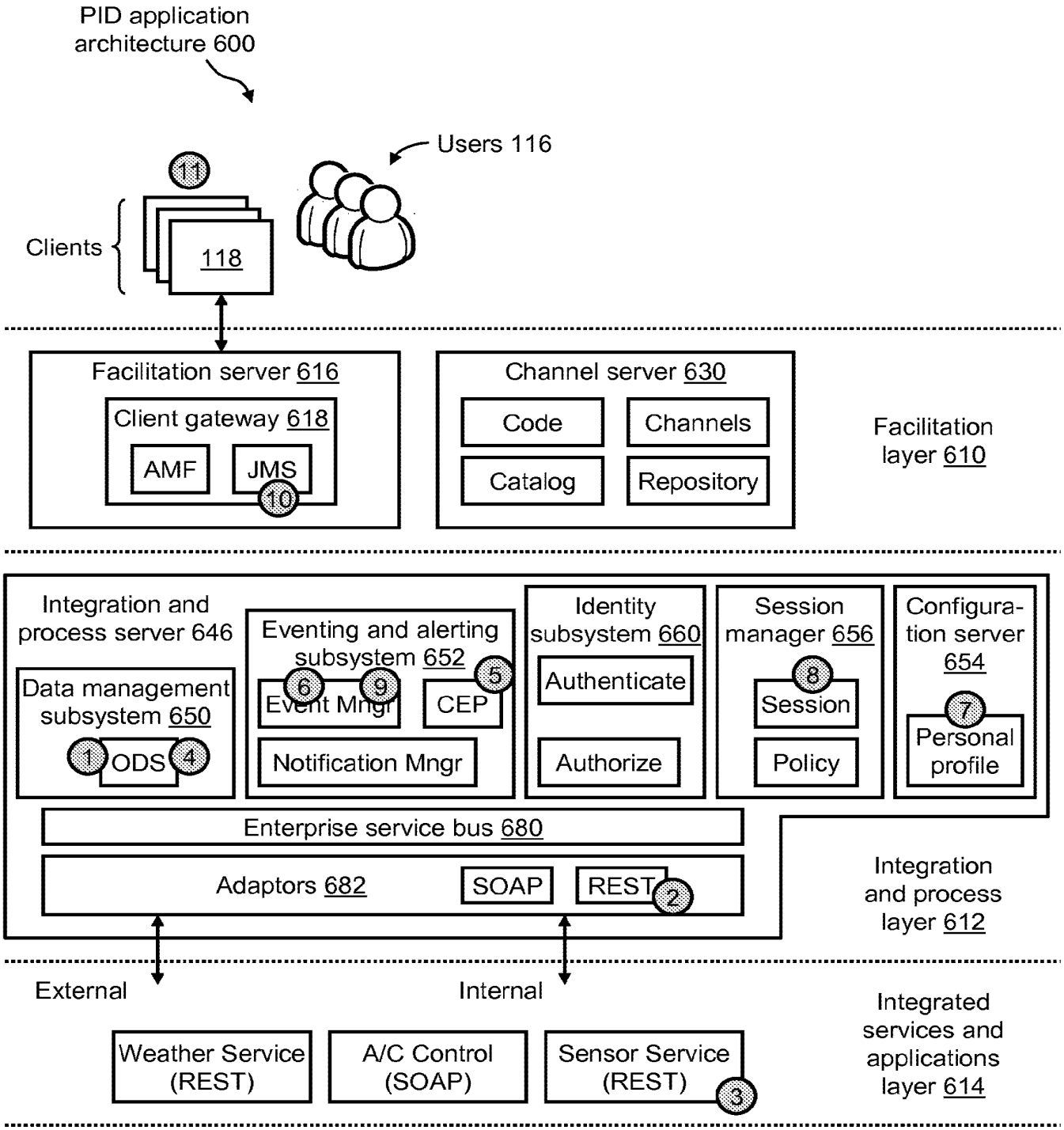

PID application architecture 600
Users 116
11
Clients
118
Facilitation server 616
Client gateway 618
AMF
JMS
10
Channel server 630
Code
Channels
Catalog
Repository
Facilitation layer 610
Integration and process server 646
Data management subsystem 650
1
ODS
4
Eventing and alerting subsystem 652
6
9
Event Mngr
CEP
5
Notification Mngr
Identity subsystem 660
Authenticate
Authorize
Session manager 656
8
Session
Policy
Configura-tion server 654
7
Personal profile
Enterprise service bus 680
Adaptors 682
SOAP
REST
2
Integration and process layer 612
External
Internal
Weather Service (REST)
A/C Control (SOAP)
Sensor Service (REST)
3
Integrated services and applications layer 614

FIG. 11

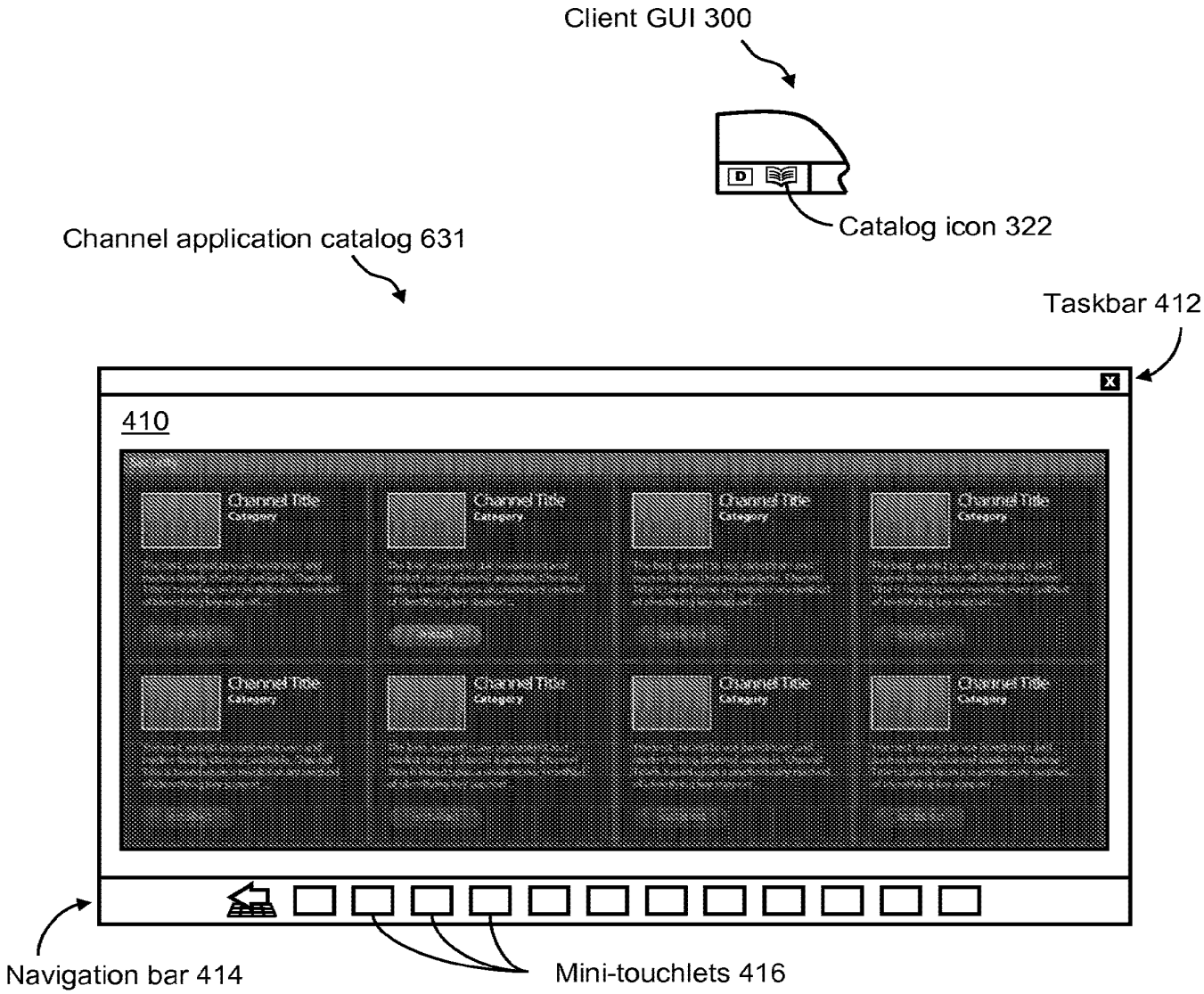

Client GUI 300
Catalog icon 322
Channel application catalog 631
Taskbar 412
410
Navigation bar 414
Mini-touchlets 416

FIG. 12

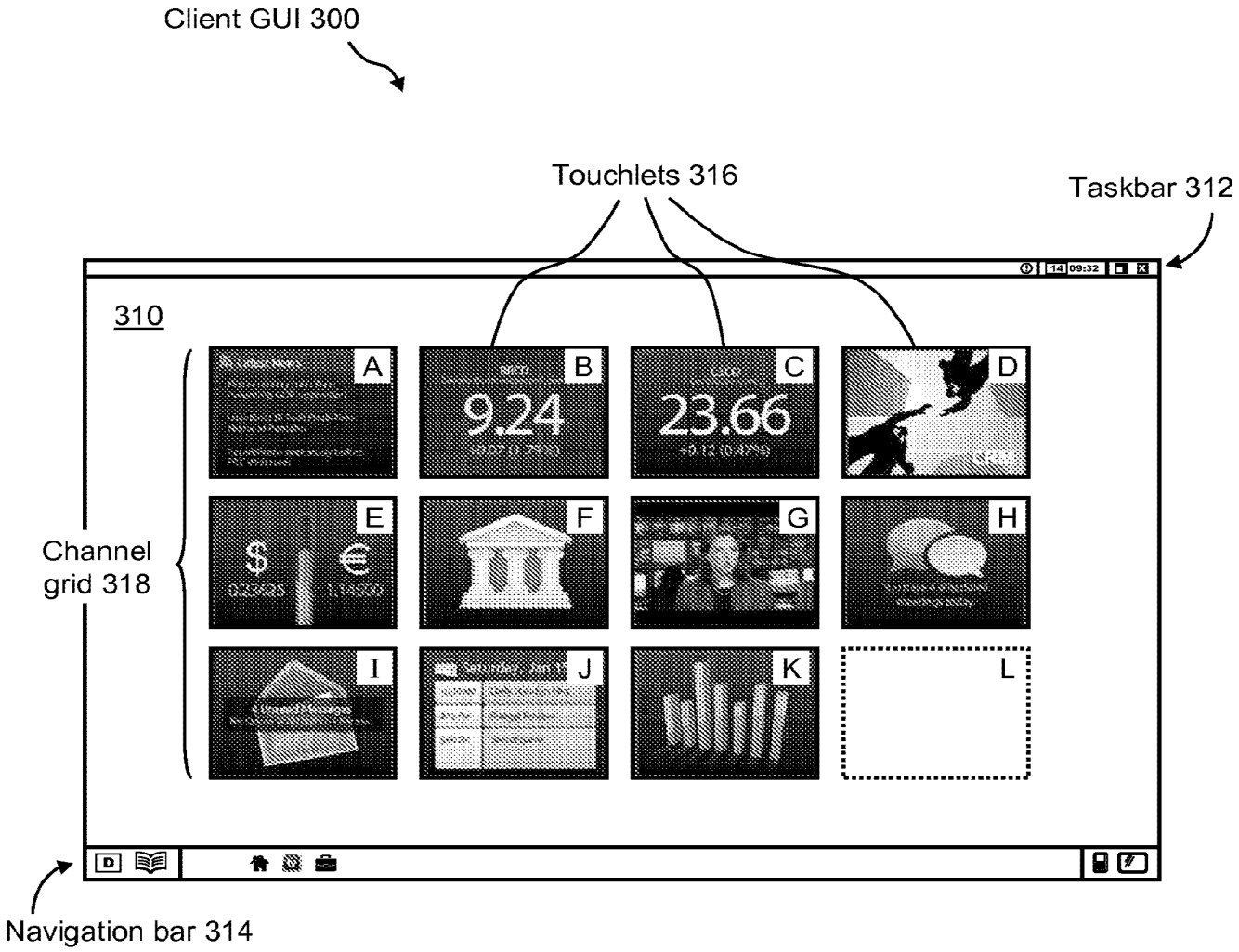

Client GUI 300
Touchlets 316
Taskbar 312
310
Channel grid 318
Navigation bar 314
A
B
9.24
C
23.66
D
E
F
G
H
I
J
K
L

FIG. 13

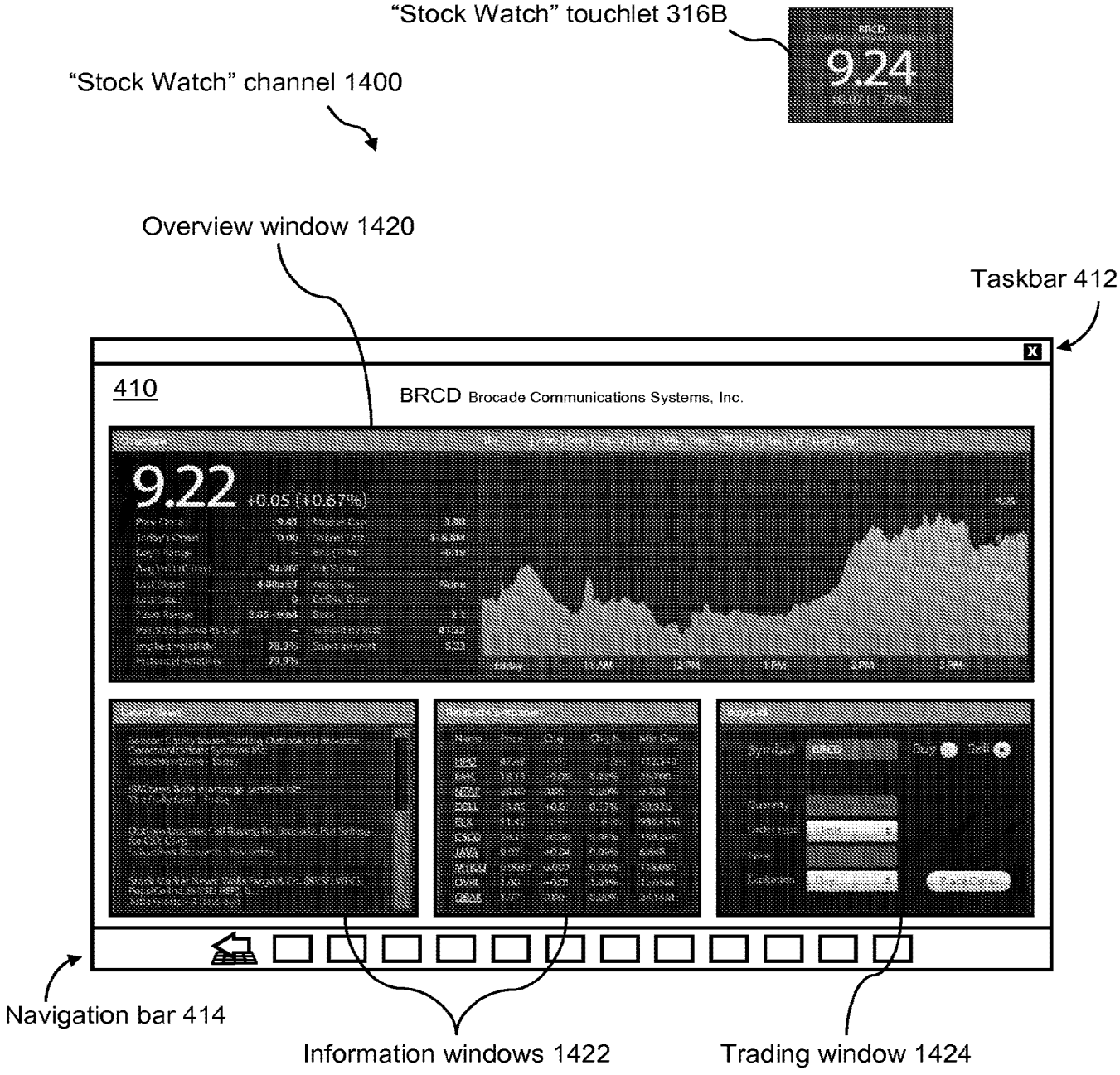

"Stock Watch" touchlet 316B
9.24
"Stock Watch" channel 1400
Overview window 1420
Taskbar 412
410
BRCD Brocade Communications Systems, Inc.
9.22
+0.05 (+0.67%)
Navigation bar 414
Information windows 1422
Trading window 1424

FIG. 14

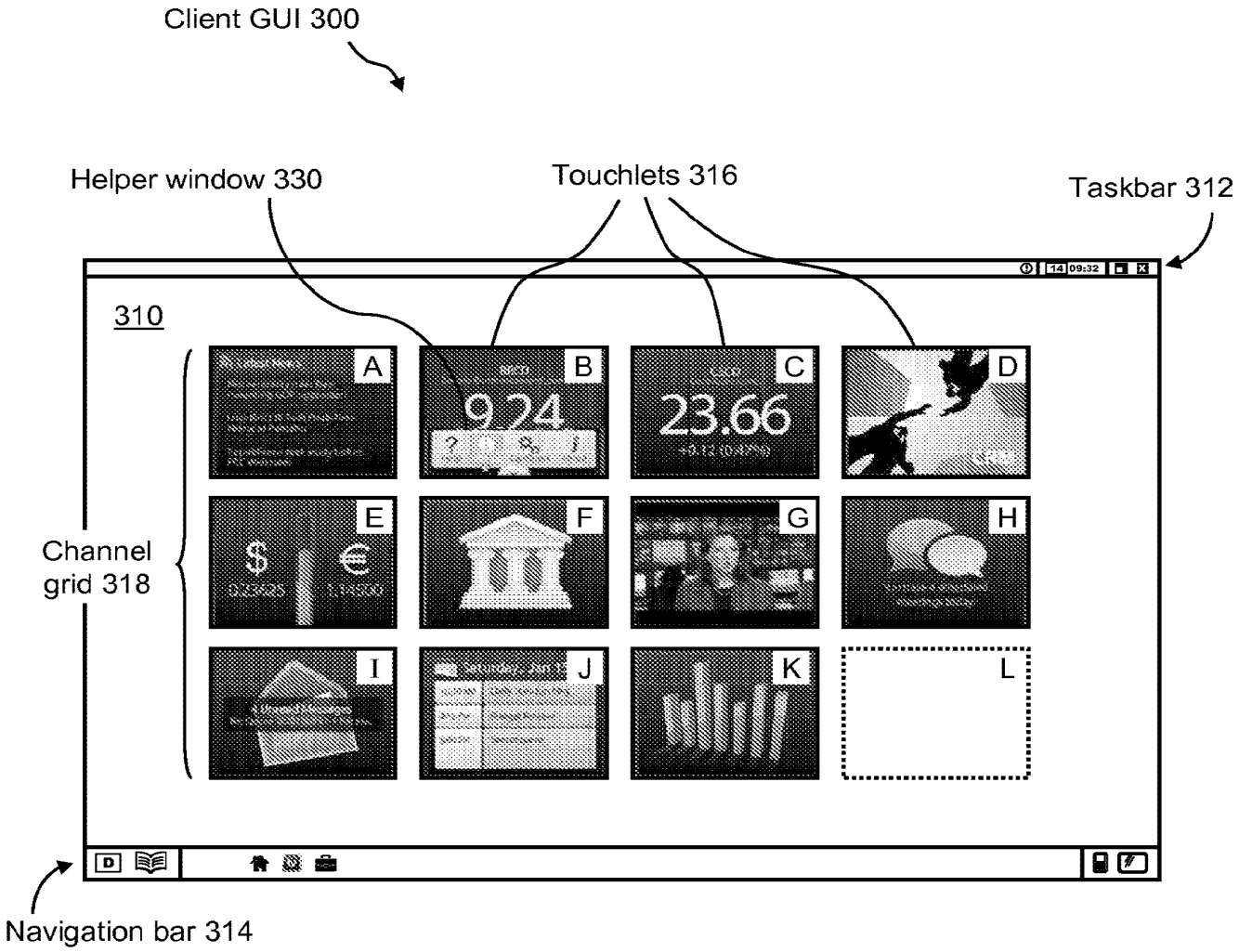

Client GUI 300
Helper window 330
Touchlets 316
Taskbar 312
310
Channel grid 318
Navigation bar 314
A
B
C
D
E
F
G
H
I
J
K
L
9.24
23.66

FIG. 15

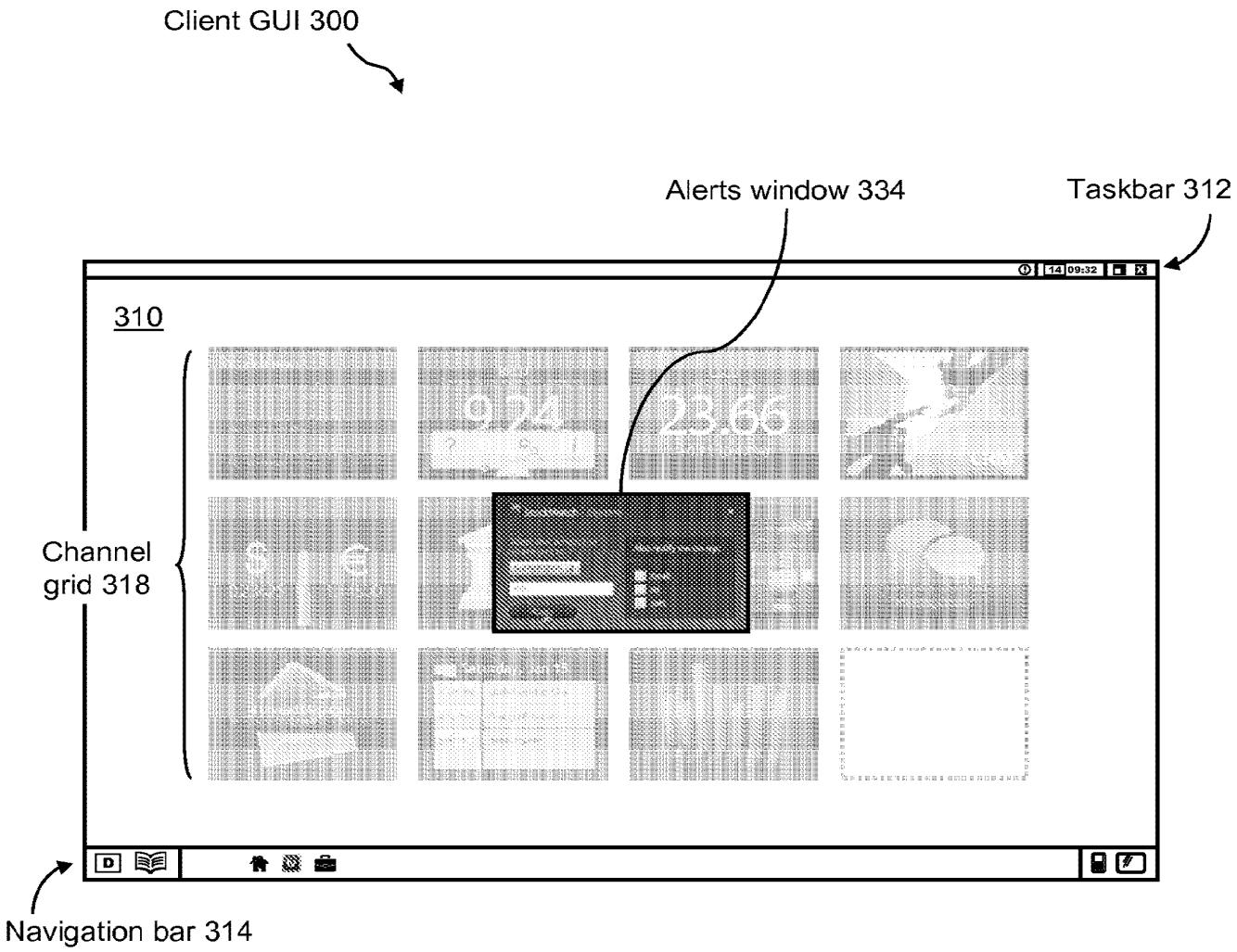

Client GUI 300
Alerts window 334
Taskbar 312
310
Channel grid 318
Navigation bar 314

FIG. 16

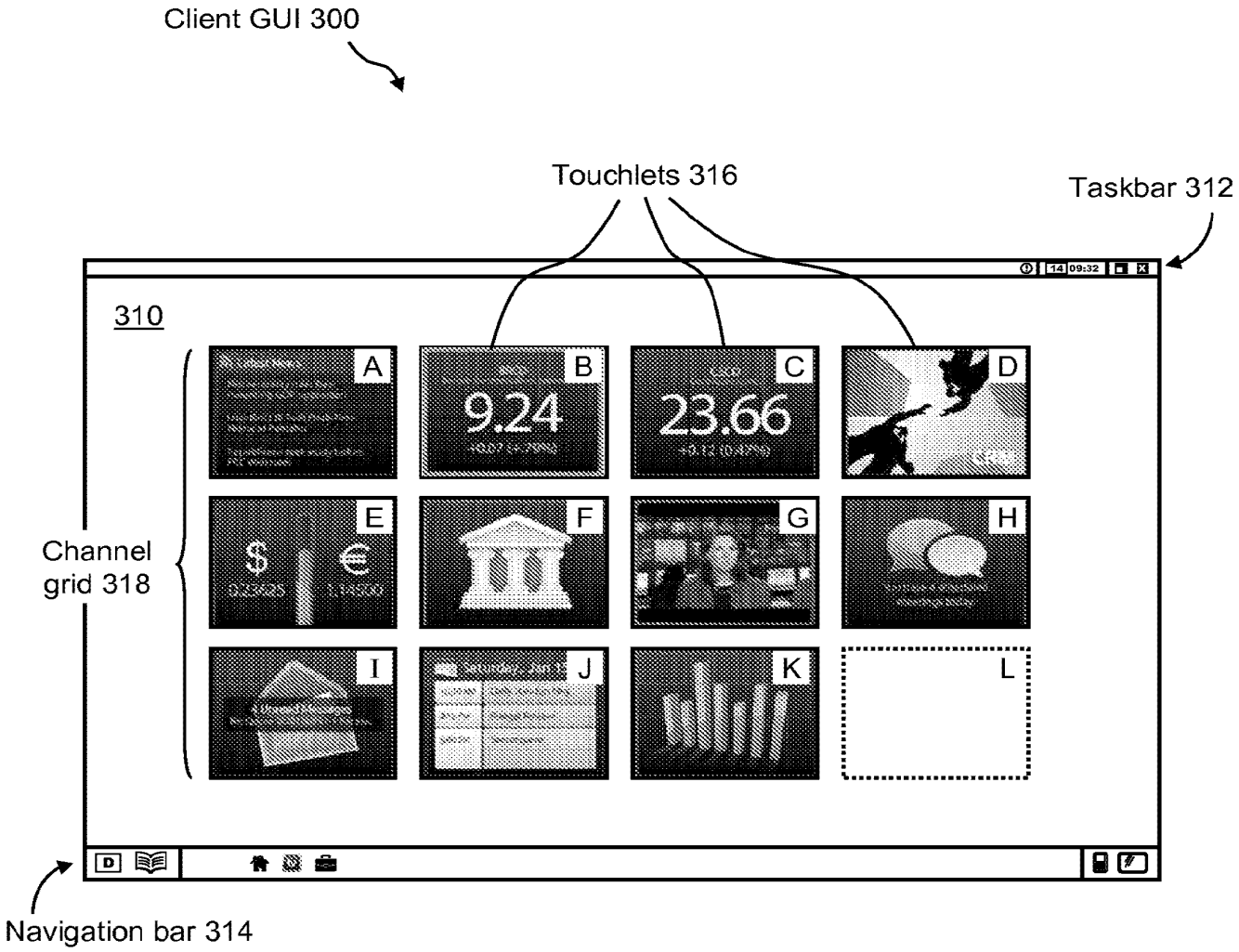

Client GUI 300
Touchlets 316
Taskbar 312
310
Channel grid 318
Navigation bar 314
A
B
9.24
C
23.66
D
E
F
G
H
I
J
K
L

FIG. 17

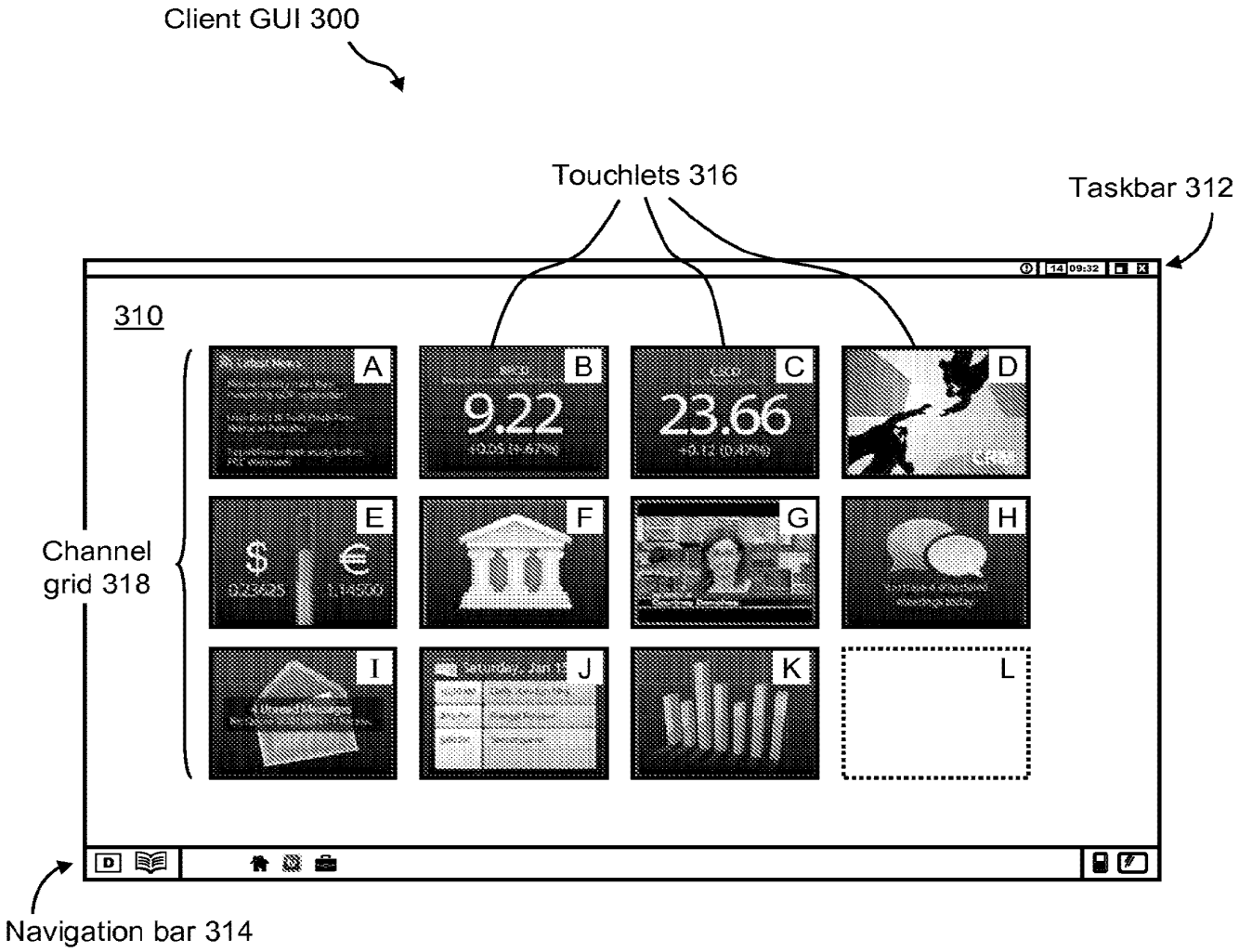

Client GUI 300
Touchlets 316
Taskbar 312
310
Channel grid 318
Navigation bar 314
A
B
9.22
C
23.66
D
E
F
G
H
I
J
K
L

FIG. 18

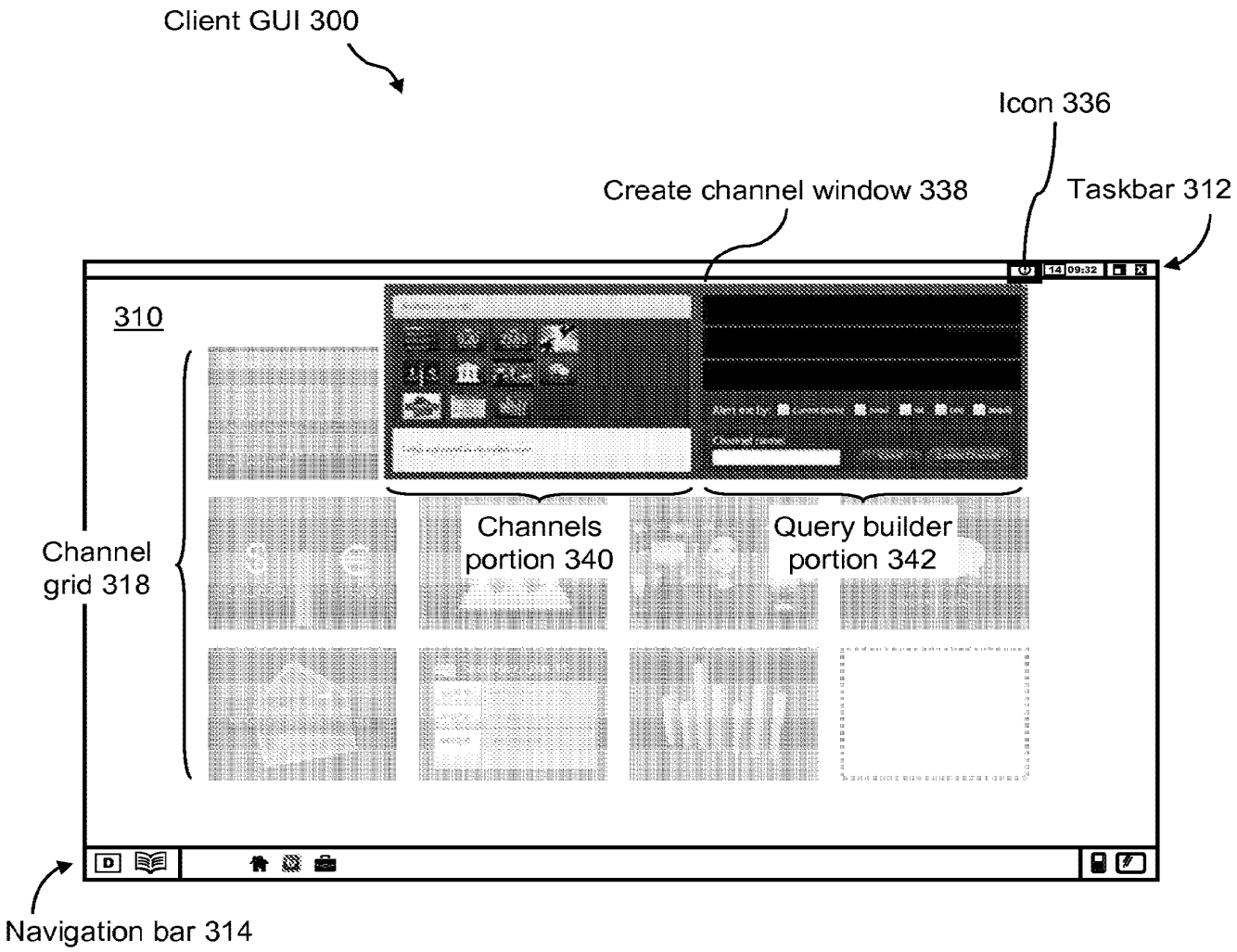

Client GUI 300
Icon 336
Create channel window 338
Taskbar 312
310
Channel grid 318
Channels portion 340
Query builder portion 342
Navigation bar 314

FIG. 19

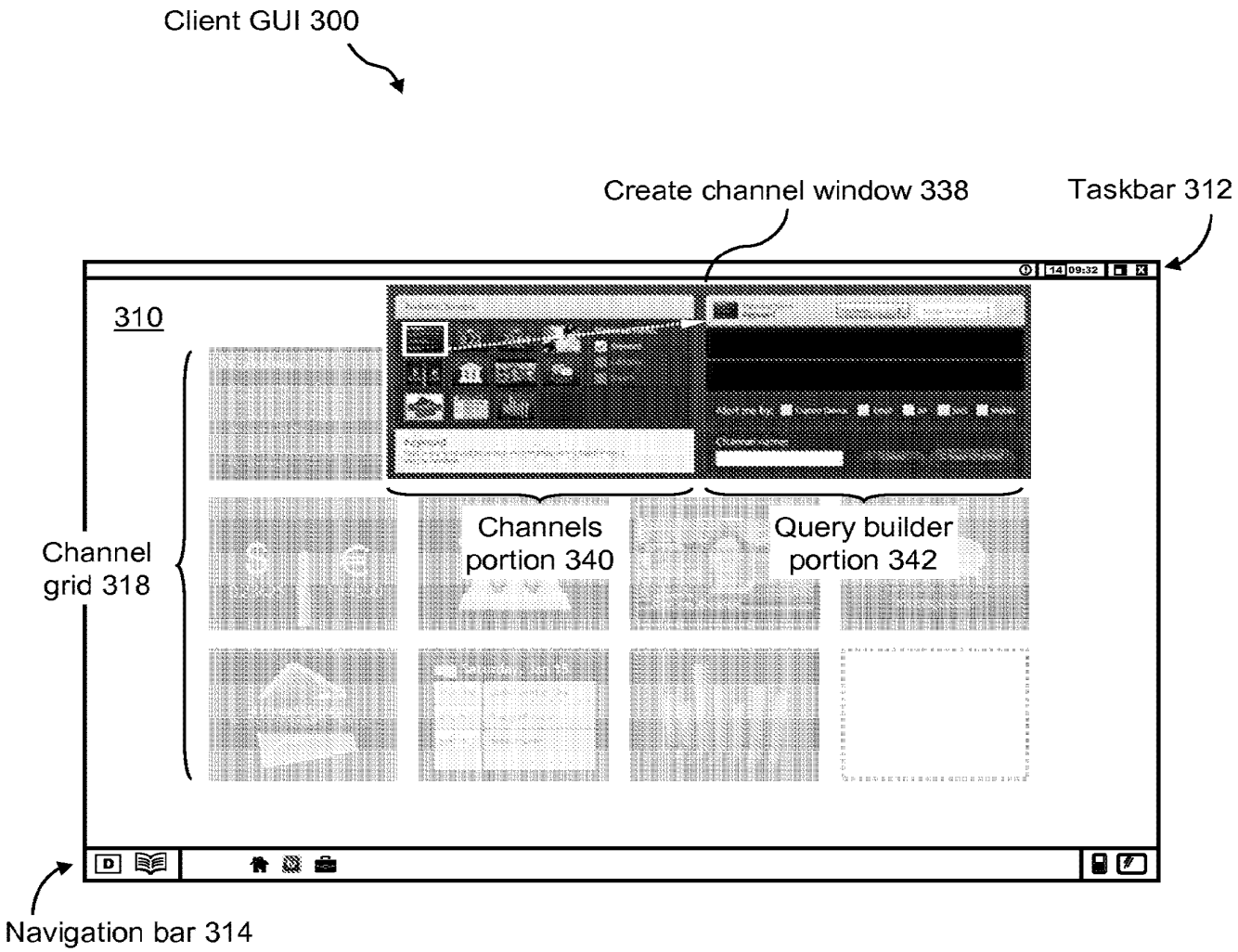

Client GUI 300
Create channel window 338
Taskbar 312
310
Channel grid 318
Channels portion 340
Query builder portion 342
Navigation bar 314

FIG. 20

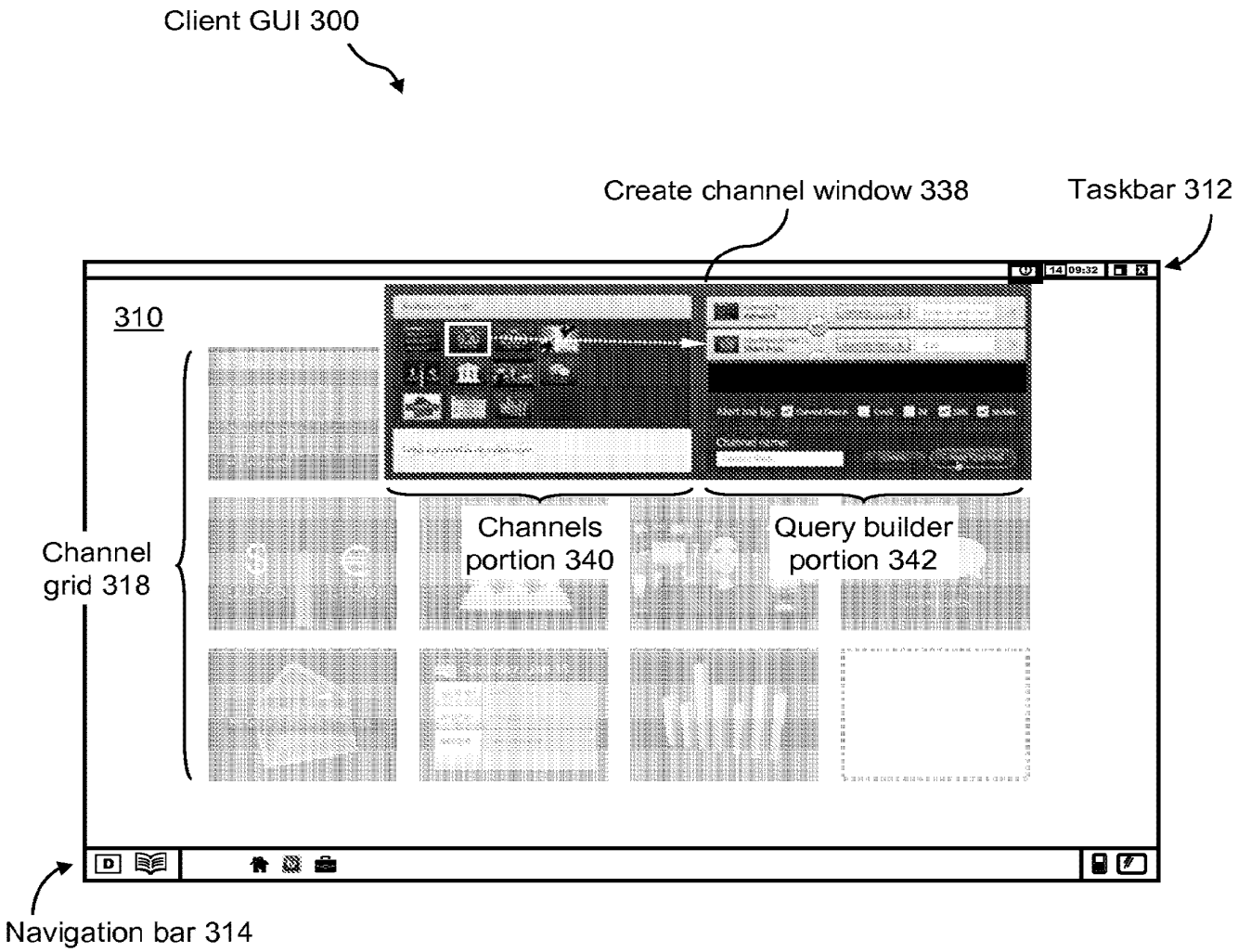

Client GUI 300
Create channel window 338
Taskbar 312
310
Channel grid 318
Channels portion 340
Query builder portion 342
Navigation bar 314

FIG. 21

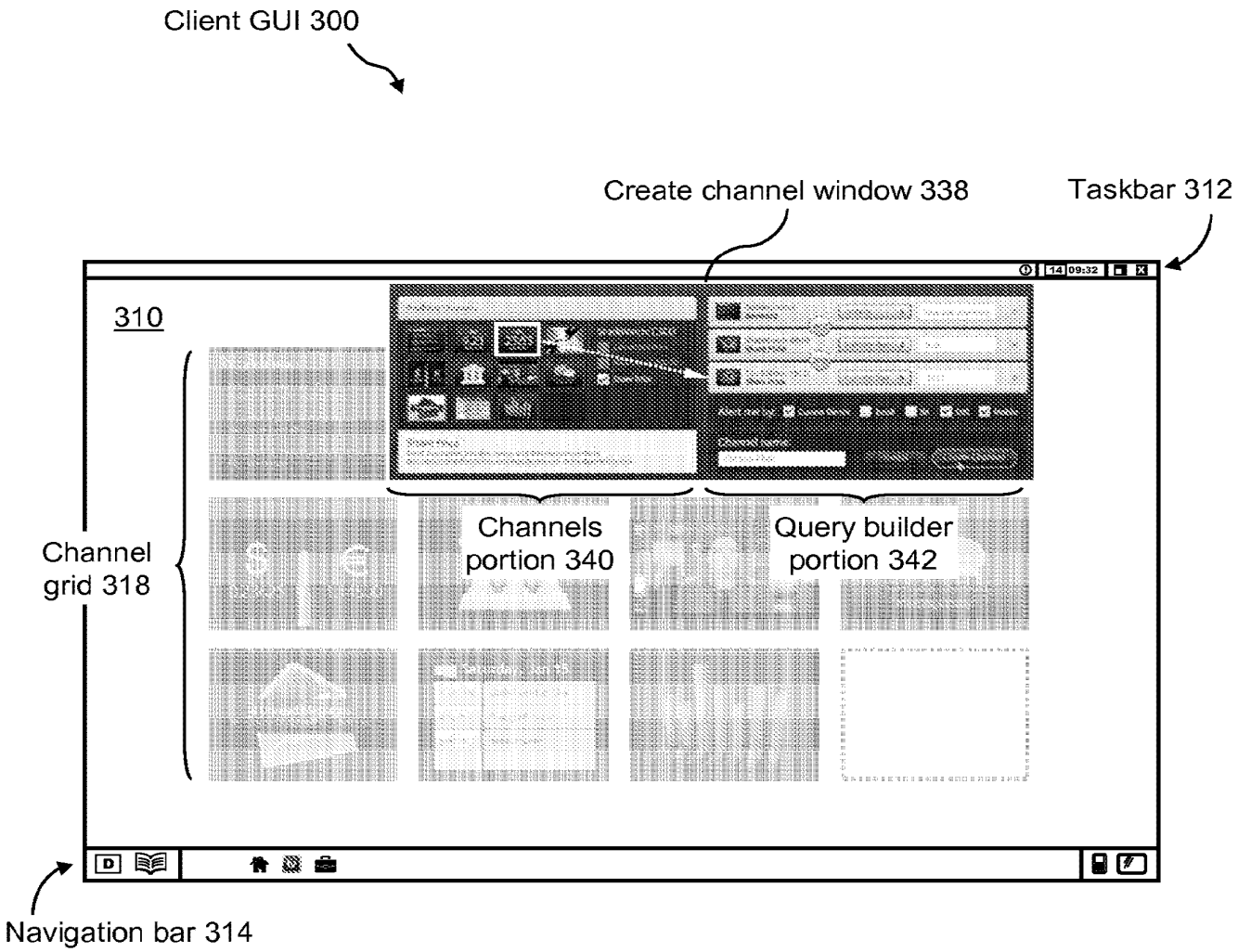

Client GUI 300
Create channel window 338
Taskbar 312
310
Channel grid 318
Channels portion 340
Query builder portion 342
Navigation bar 314

FIG. 22

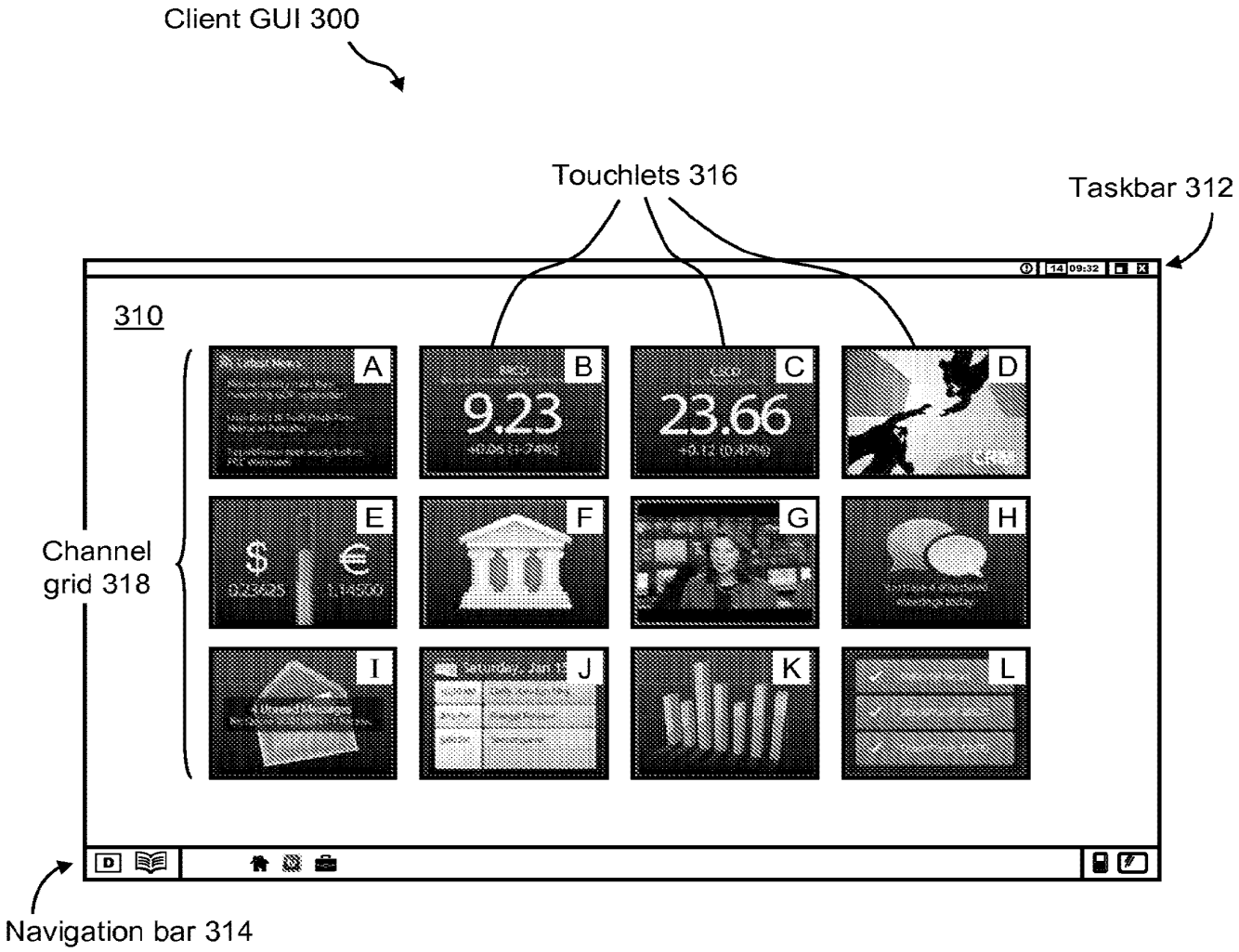

Client GUI 300
Touchlets 316
Taskbar 312
310
Channel grid 318
Navigation bar 314
A
B
9.23
C
23.66
D
E
F
G
H
I
J
K
L

FIG. 23

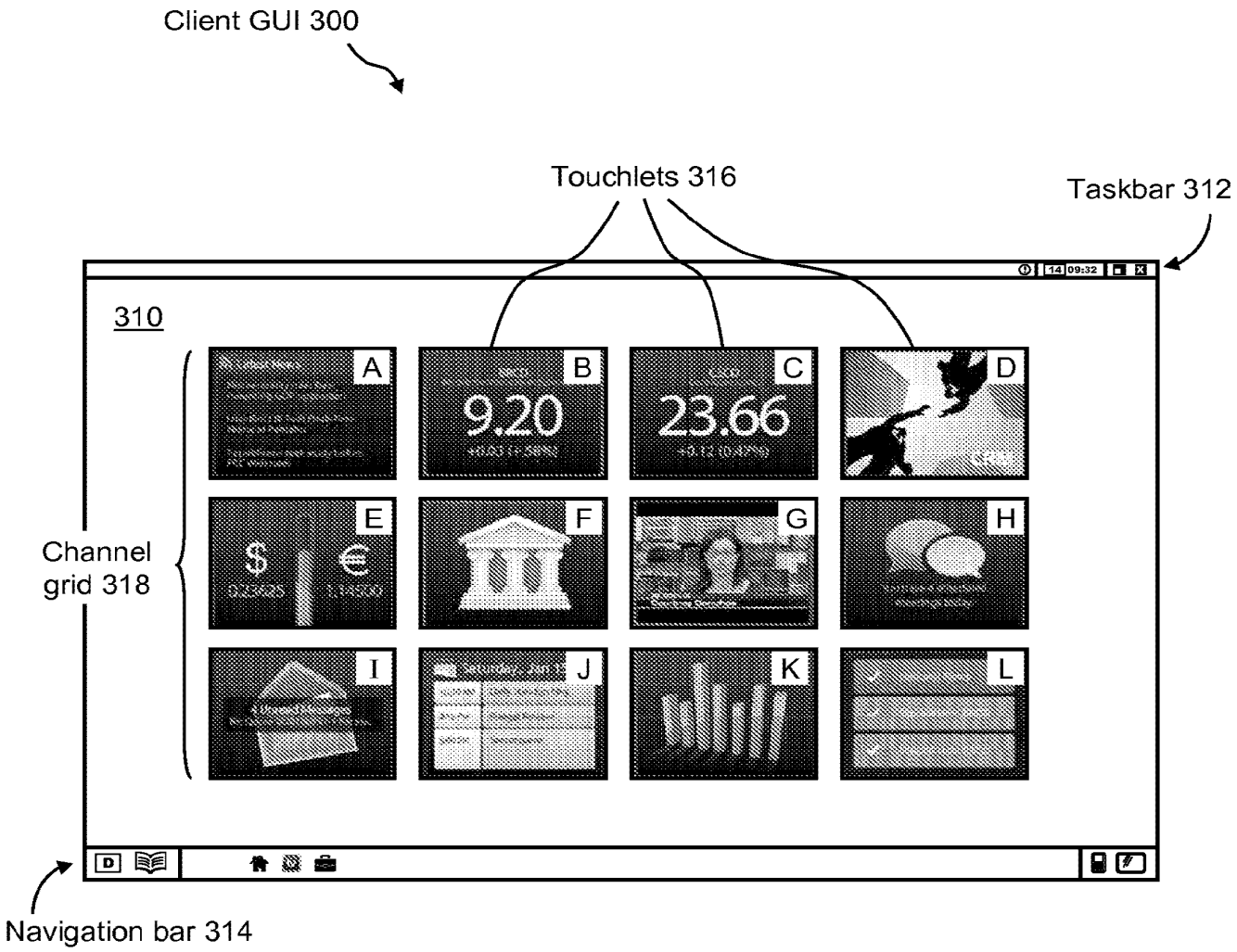

Client GUI 300
Touchlets 316
Taskbar 312
310
Channel grid 318
Navigation bar 314
A
B
9.20
C
23.66
D
E
F
G
H
I
J
K
L

FIG. 24

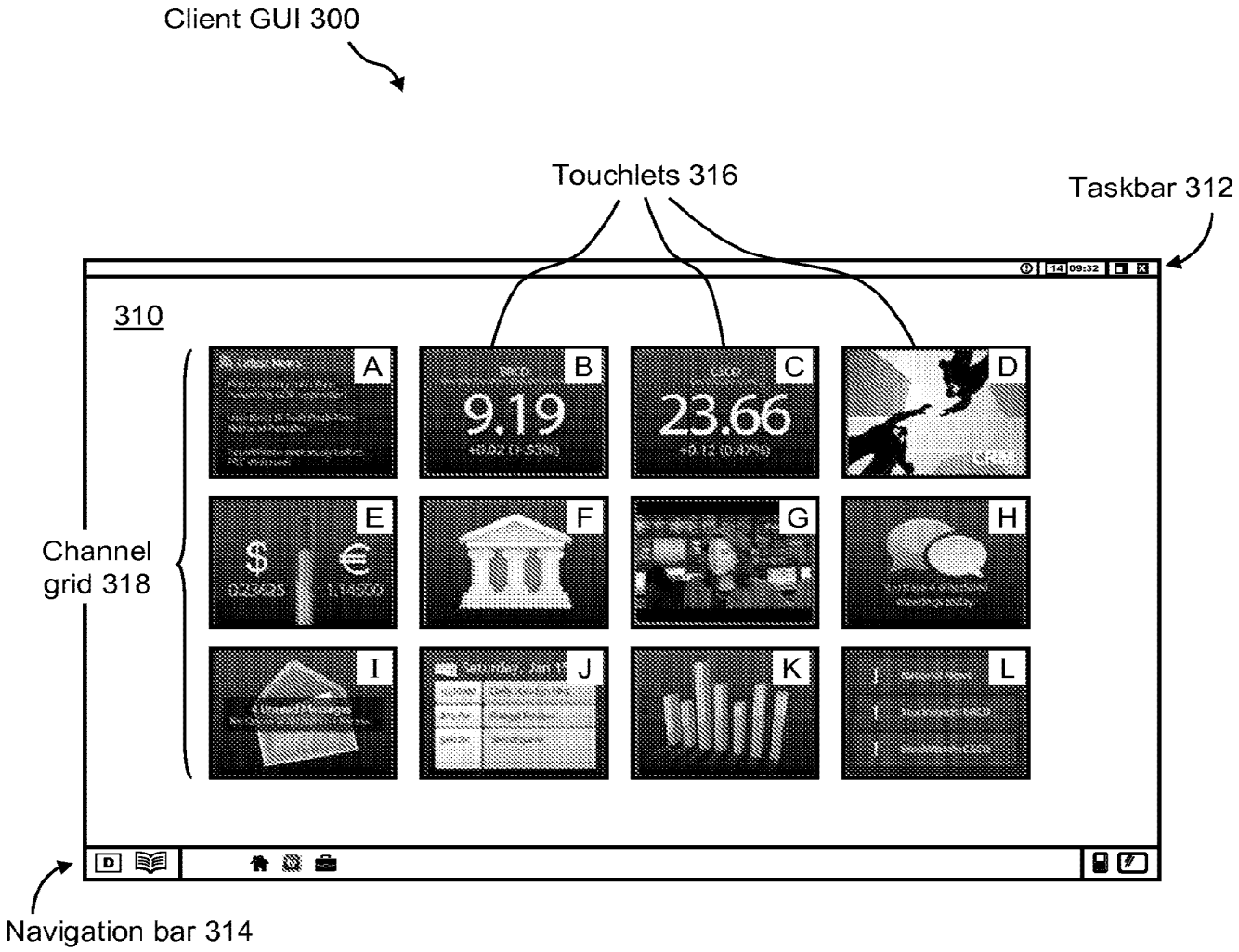

Client GUI 300
Touchlets 316
Taskbar 312
310
Channel grid 318
Navigation bar 314
A
B
9.19
C
23.66
D
E
F
G
H
I
J
K
L

FIG. 25

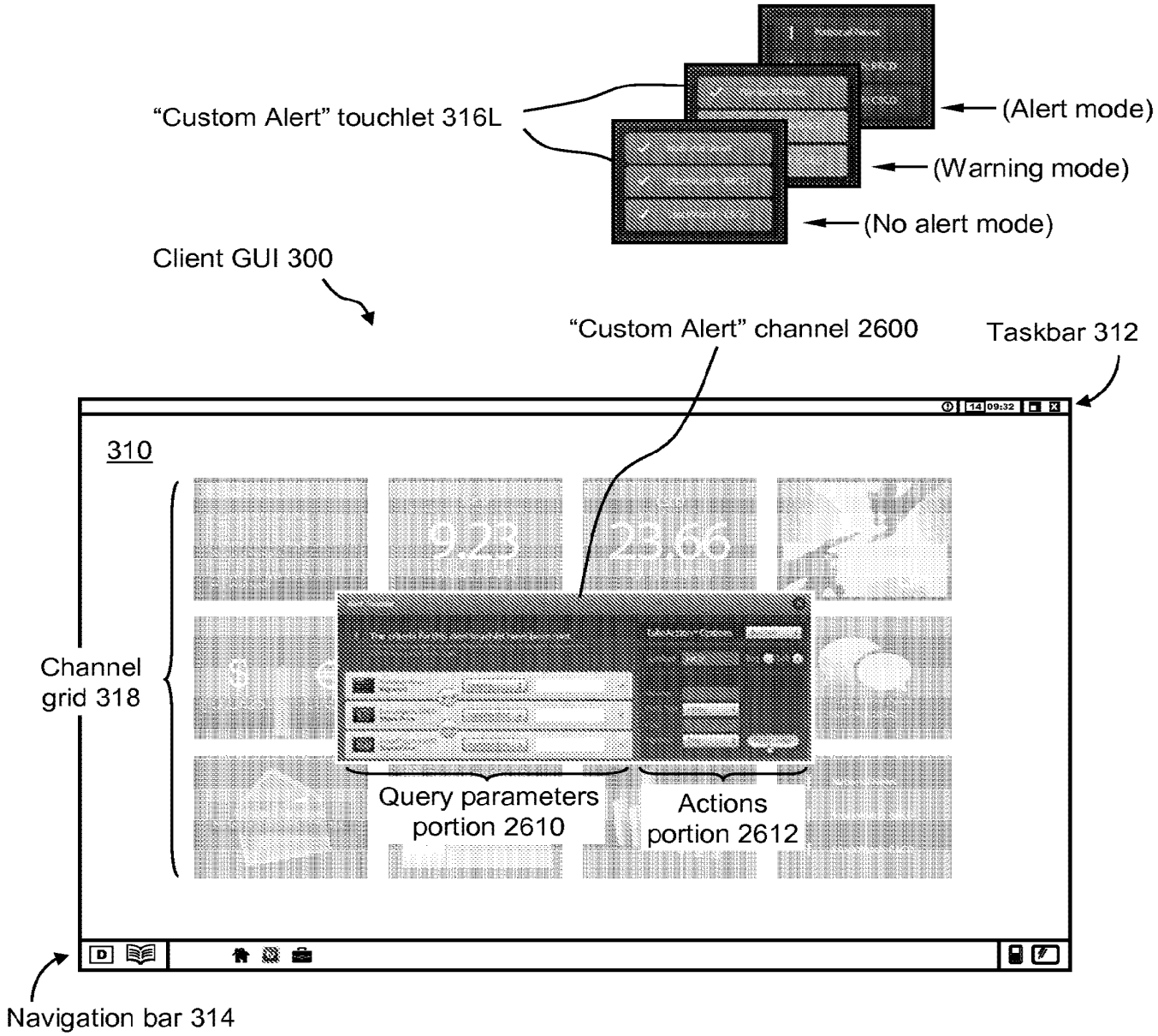

"Custom Alert" touchlet 316L
(Alert mode)
(Warning mode)
(No alert mode)
Client GUI 300
"Custom Alert" channel 2600
Taskbar 312
310
Channel grid 318
Query parameters portion 2610
Actions portion 2612
Navigation bar 314

FIG. 26

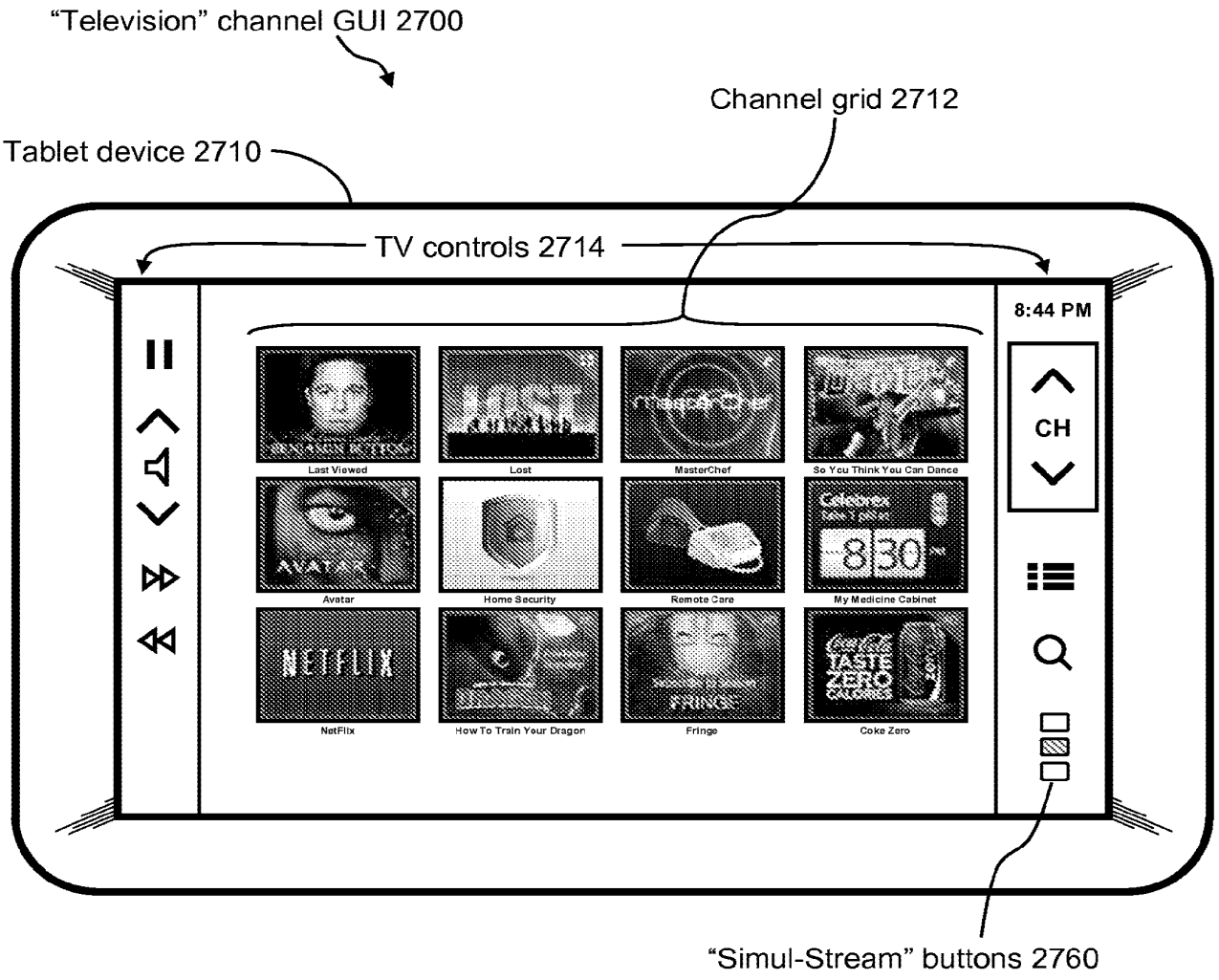

"Television" channel GUI 2700
Channel grid 2712
Tablet device 2710
TV controls 2714
8:44 PM
CH
Last Viewed
Lost
MasterChef
So You Think You Can Dance
Avatar
Home Security
Remote Care
My Medicine Cabinet
NetFlix
How To Train Your Dragon
Fringe
Coke Zero
"Simul-Stream" buttons 2760

FIG. 27

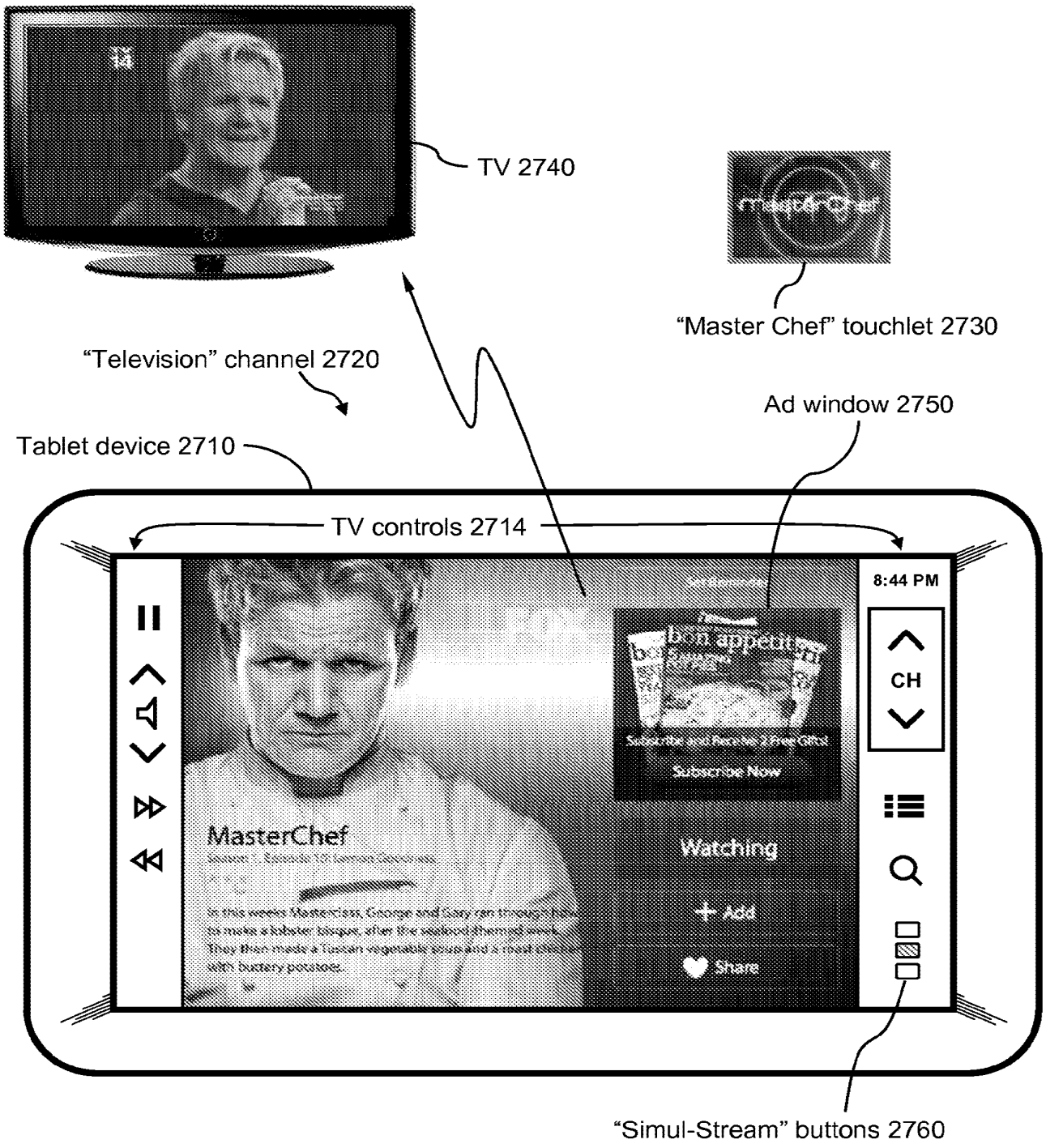

TV 2740
"Master Chef" touchlet 2730
"Television" channel 2720
Ad window 2750
Tablet device 2710
TV controls 2714
8:44 PM
CH
MasterChef
Watching
+ Add
Share
Subscribe Now
"Simul-Stream" buttons 2760

FIG. 28

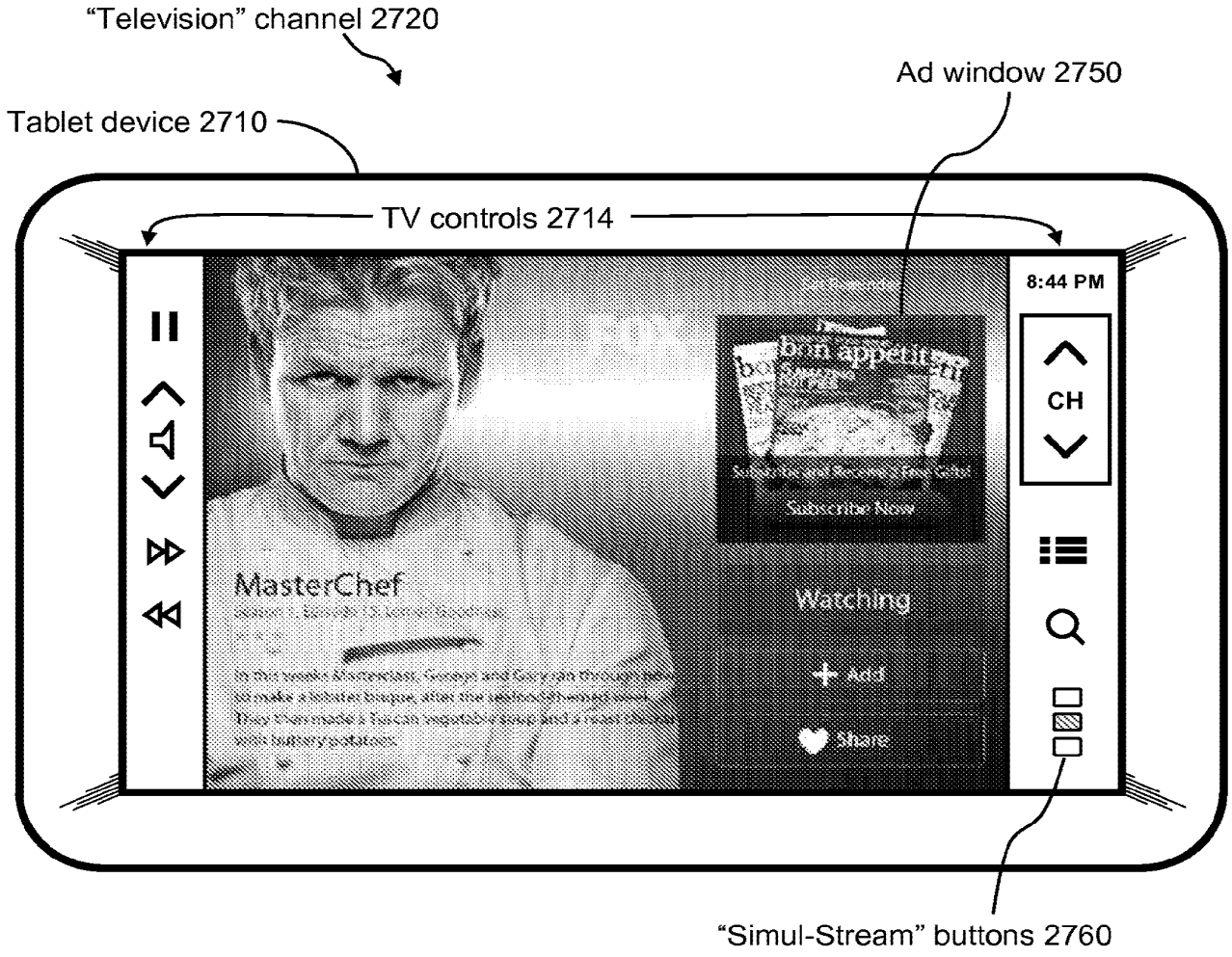

"Television" channel 2720
Ad window 2750
Tablet device 2710
TV controls 2714
8:44 PM
CH
MasterChef
Watching
Add
Share
Subscribe Now
"Simul-Stream" buttons 2760

FIG. 29

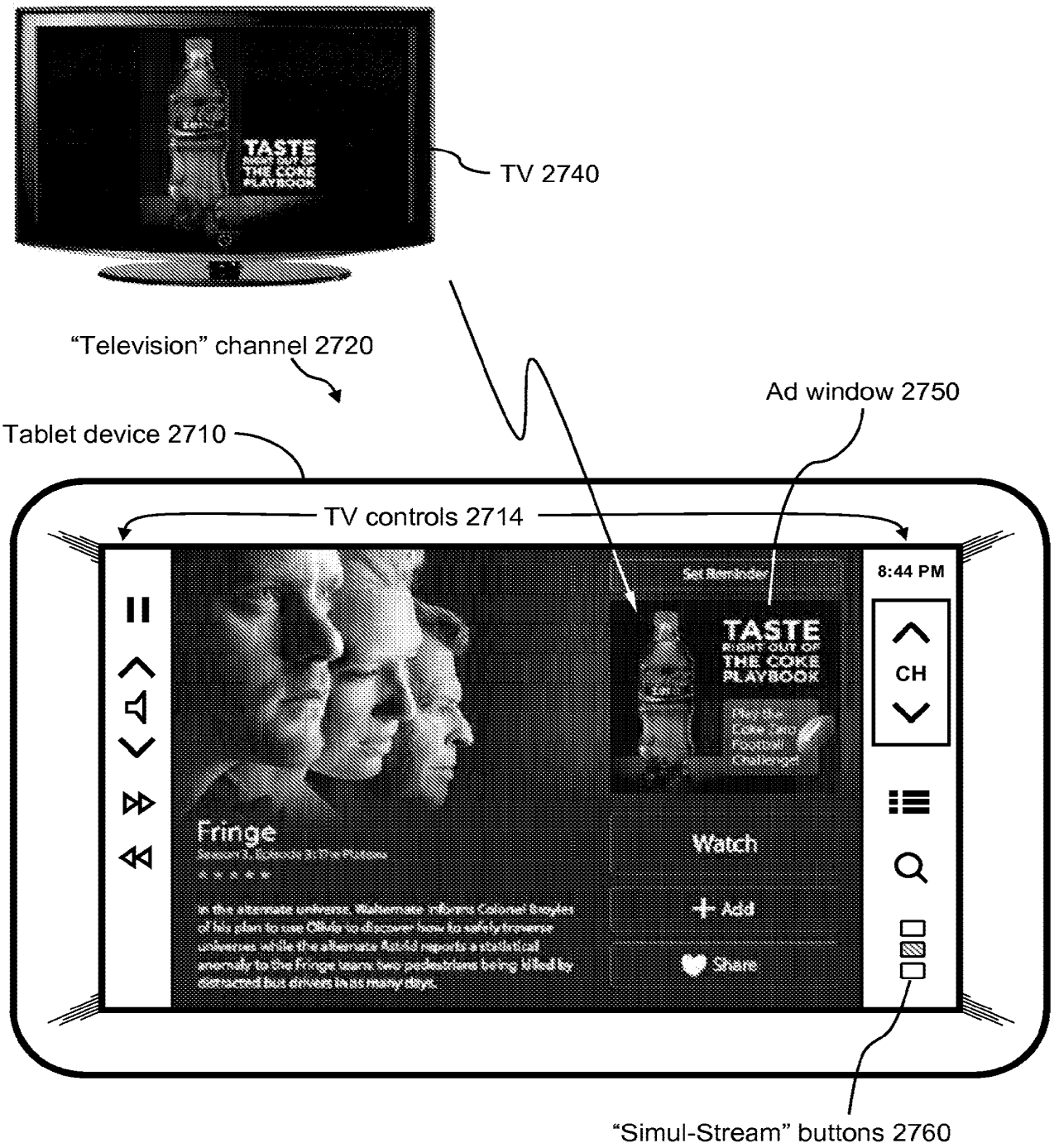

TASTE
RIGHT OUT OF
THE COKE
PLAYBOOK
TV 2740
"Television" channel 2720
Ad window 2750
Tablet device 2710
TV controls 2714
8:44 PM
CH
Fringe
Watch
Add
Share
"Simul-Stream" buttons 2760

FIG. 30

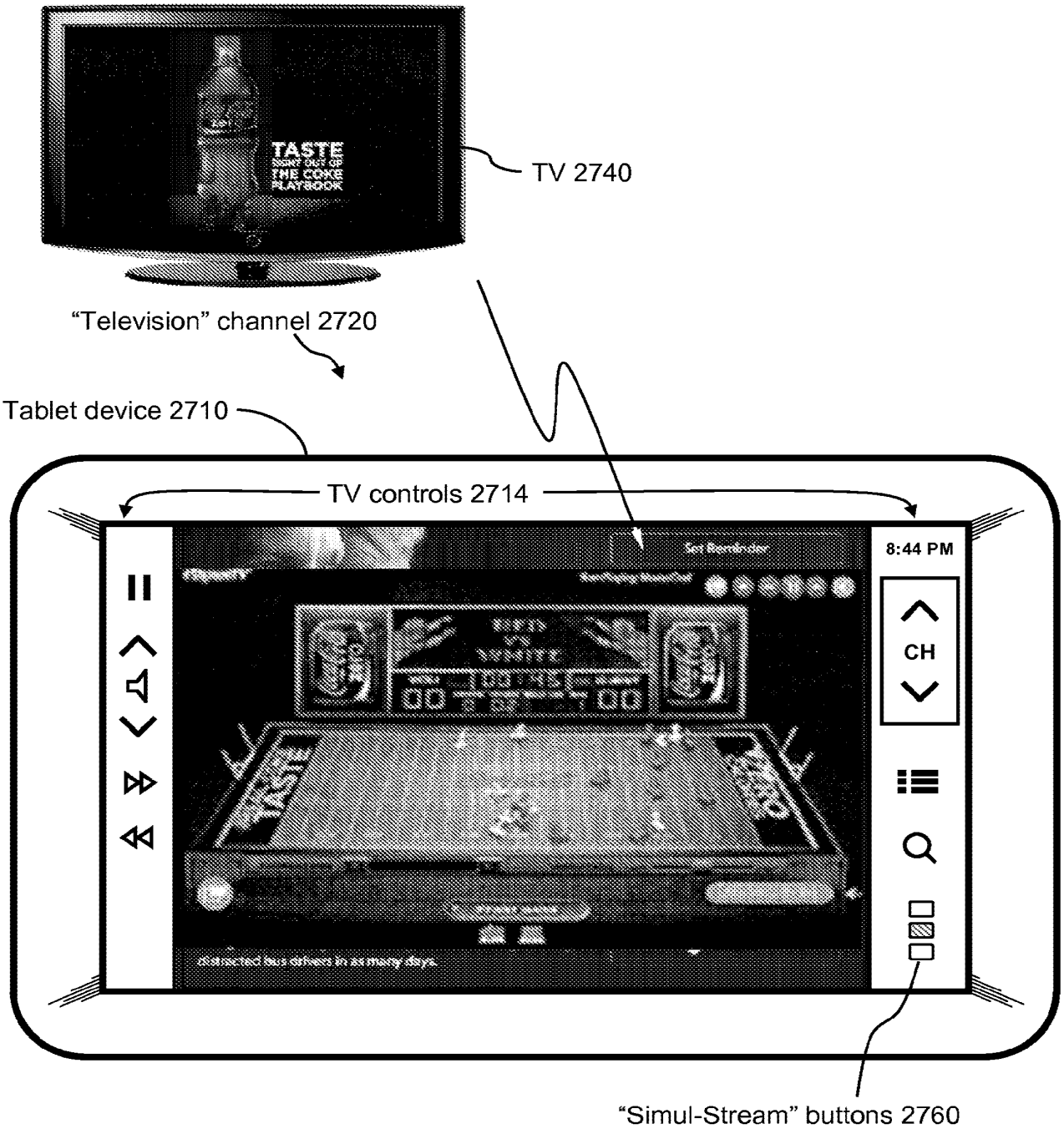

TASTE
TV 2740
"Television" channel 2720
Tablet device 2710
TV controls 2714
8:44 PM
CH
"Simul-Stream" buttons 2760

FIG. 31

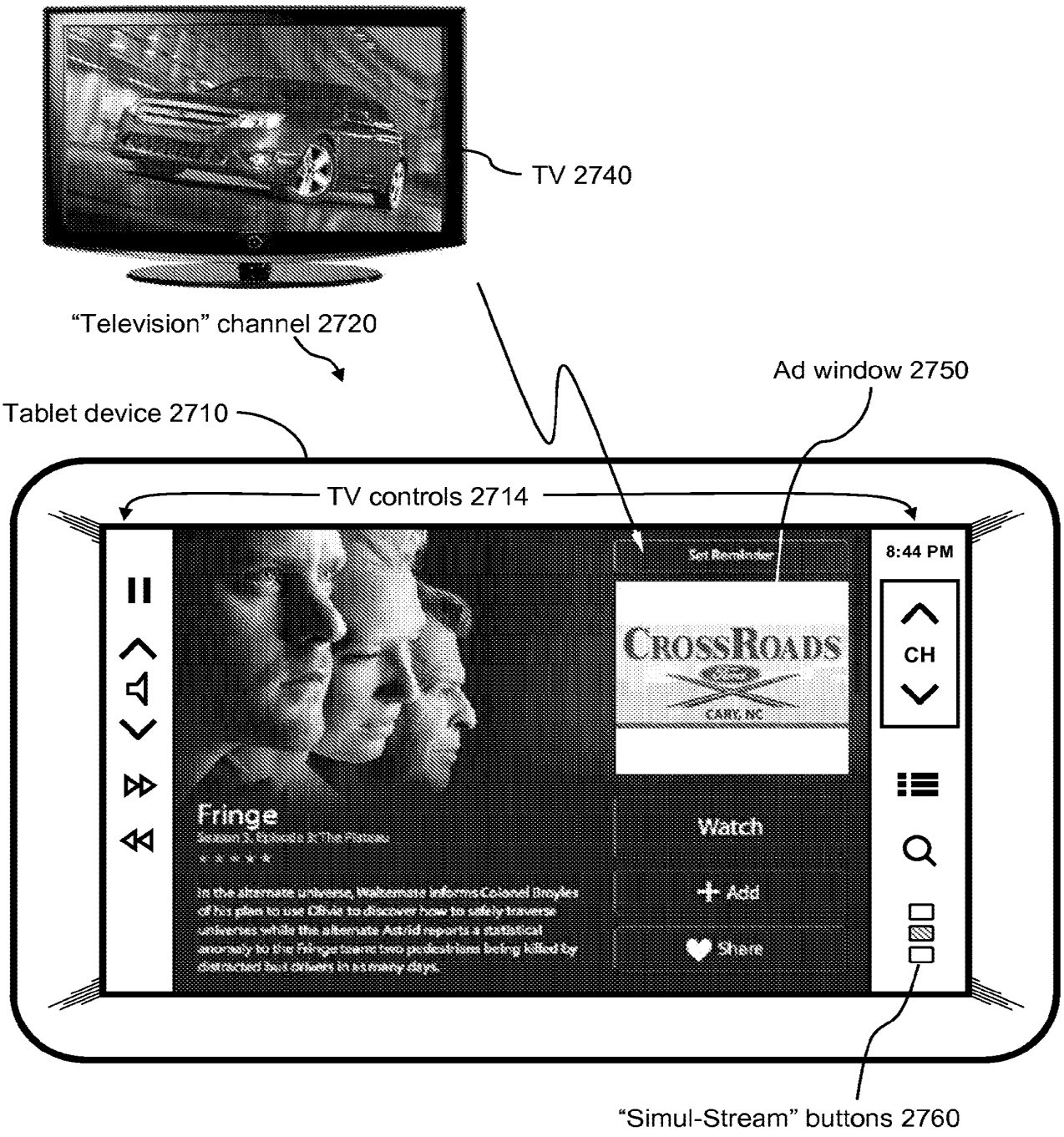

TV 2740
"Television" channel 2720
Ad window 2750
Tablet device 2710
TV controls 2714
8:44 PM
CH
CROSSROADS
CARY, NC
Fringe
Watch
Add
Share
"Simul-Stream" buttons 2760

FIG. 32

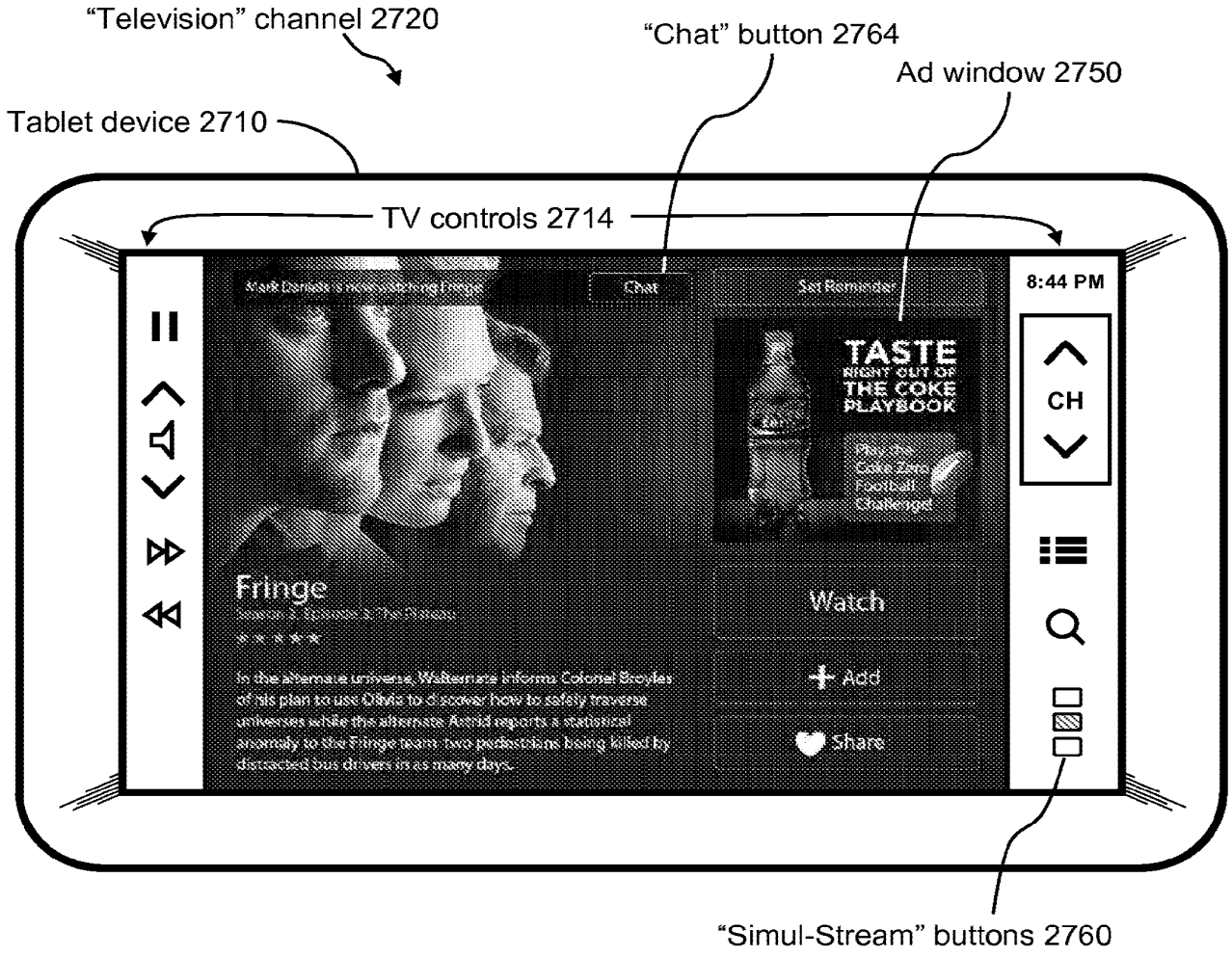

"Television" channel 2720
"Chat" button 2764
Ad window 2750
Tablet device 2710
TV controls 2714
Chat
Set Reminder
8:44 PM
TASTE
RIGHT OUT OF
THE COKE
PLAYBOOK
CH
Fringe
Watch
Add
Share
"Simul-Stream" buttons 2760

FIG. 33

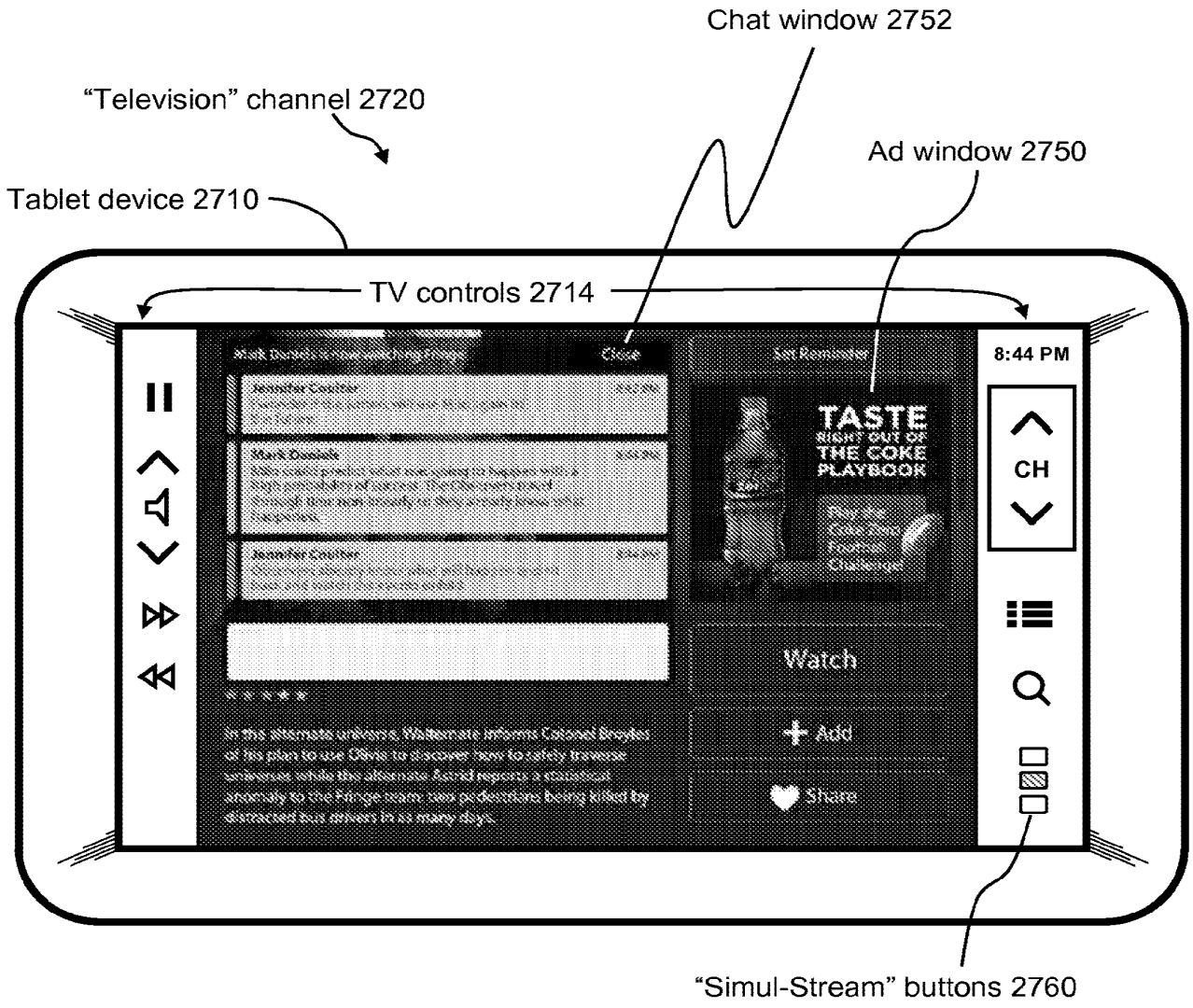

Chat window 2752
"Television" channel 2720
Ad window 2750
Tablet device 2710
TV controls 2714
Close
Set Reminder
8:44 PM
TASTE
RIGHT OUT OF
THE COKE
PLAYBOOK
CH
Watch
Add
Share
"Simul-Stream" buttons 2760

FIG. 34

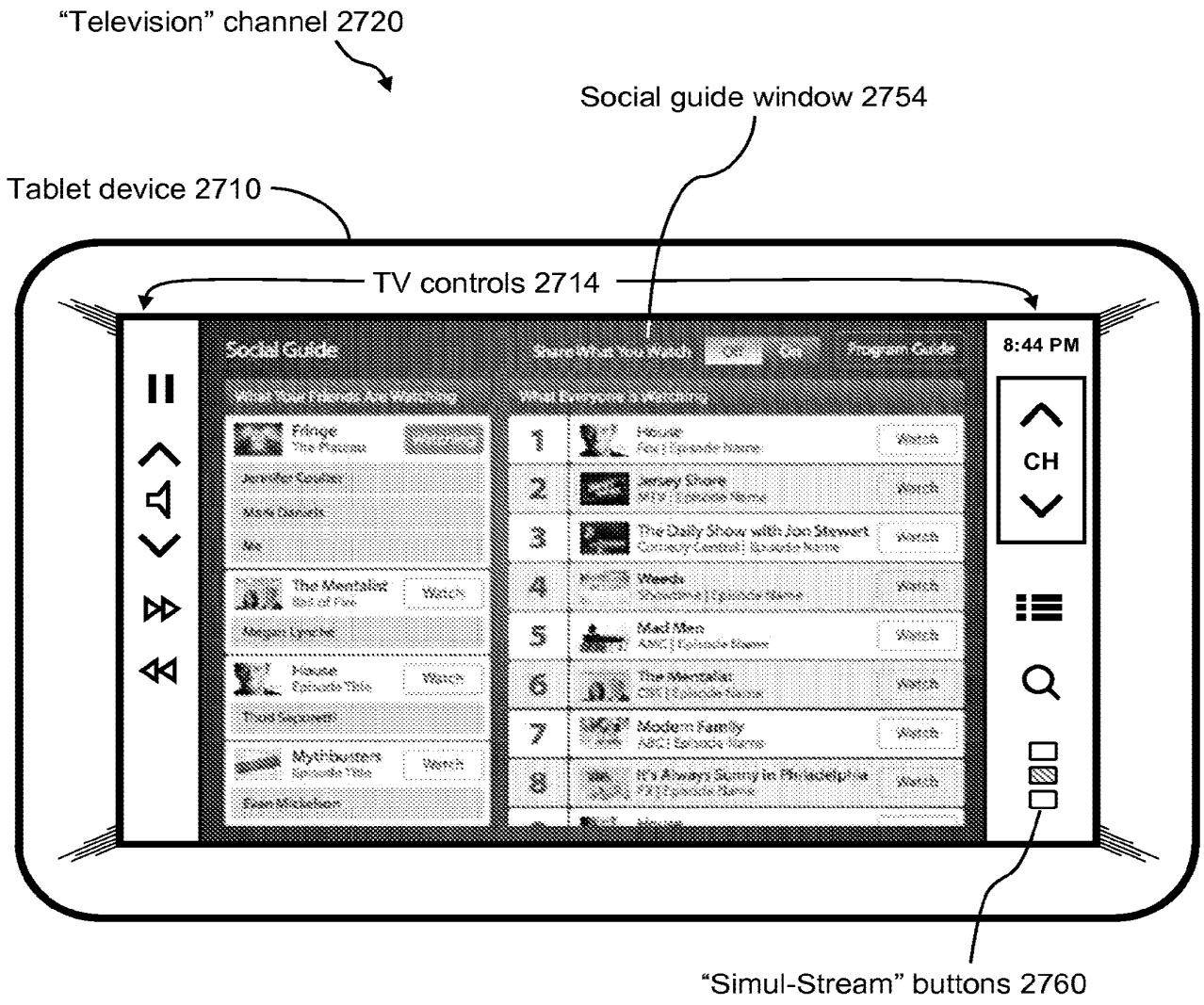

"Television" channel 2720
Social guide window 2754
Tablet device 2710
TV controls 2714
Social Guide
8:44 PM
CH
"Simul-Stream" buttons 2760

FIG. 35

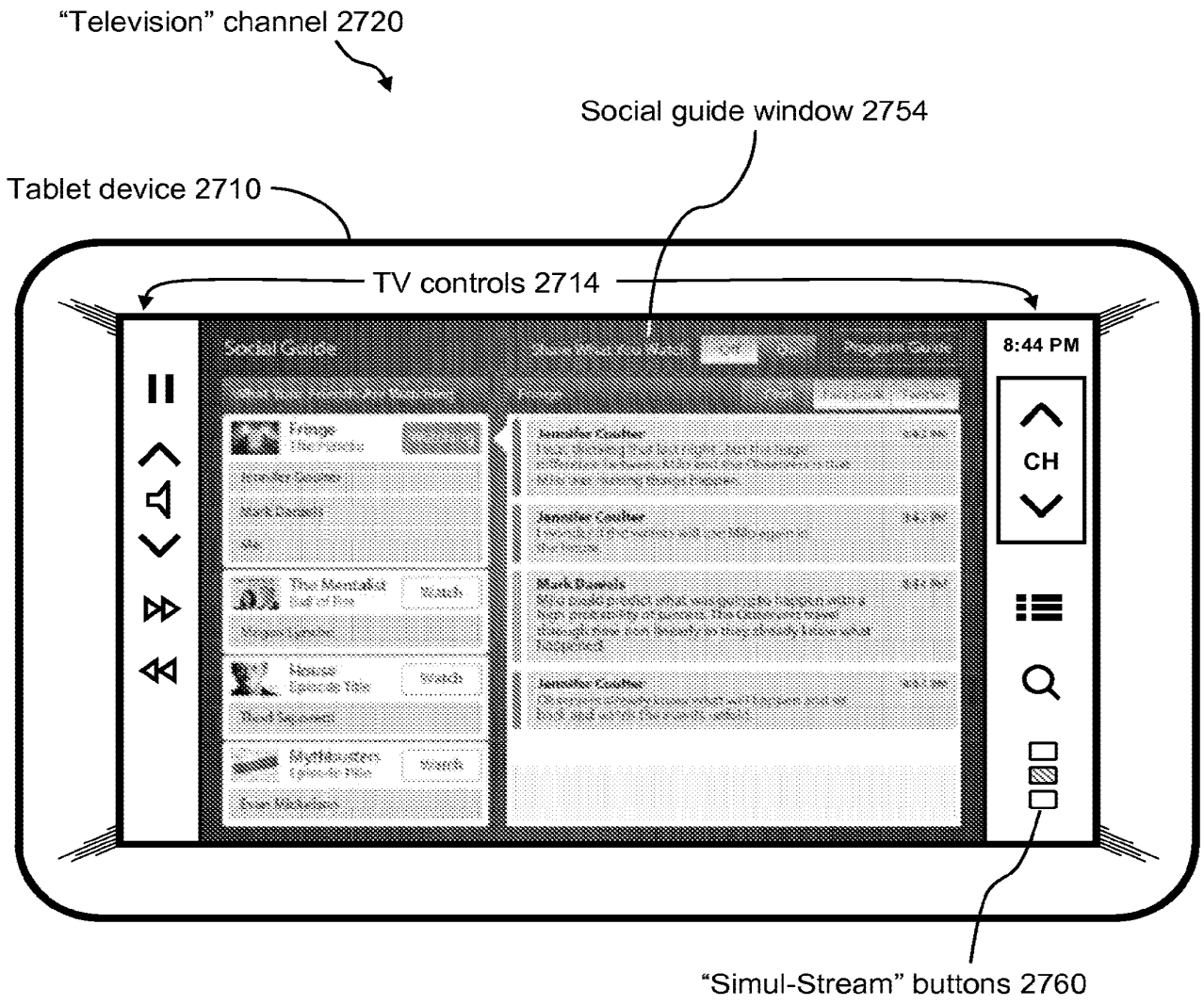

"Television" channel 2720
Social guide window 2754
Tablet device 2710
TV controls 2714
8:44 PM
CH
"Simul-Stream" buttons 2760

FIG. 36

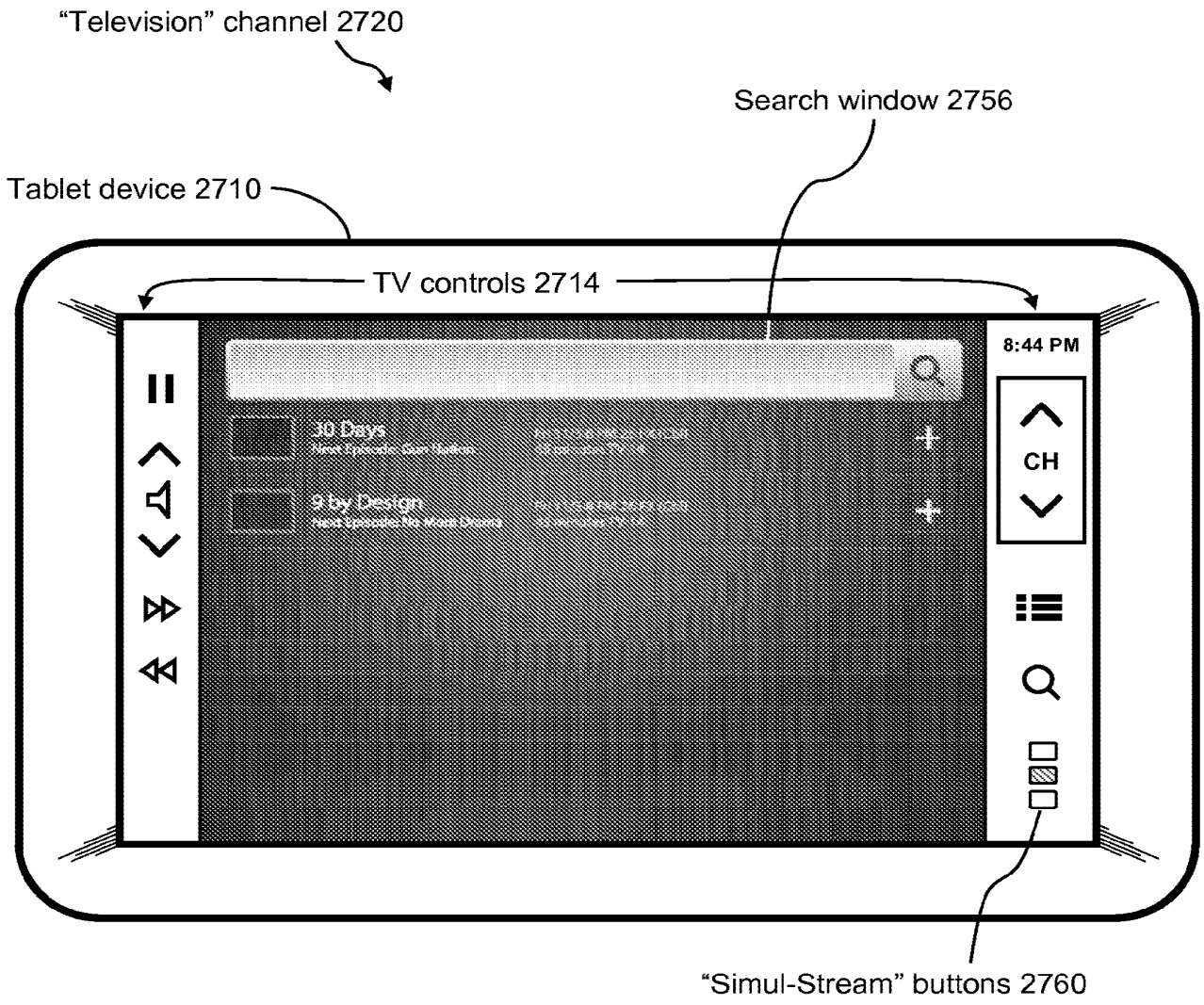

"Television" channel 2720
Search window 2756
Tablet device 2710
TV controls 2714
8:44 PM
CH
30 Days
9 by Design
"Simul-Stream" buttons 2760

FIG. 37

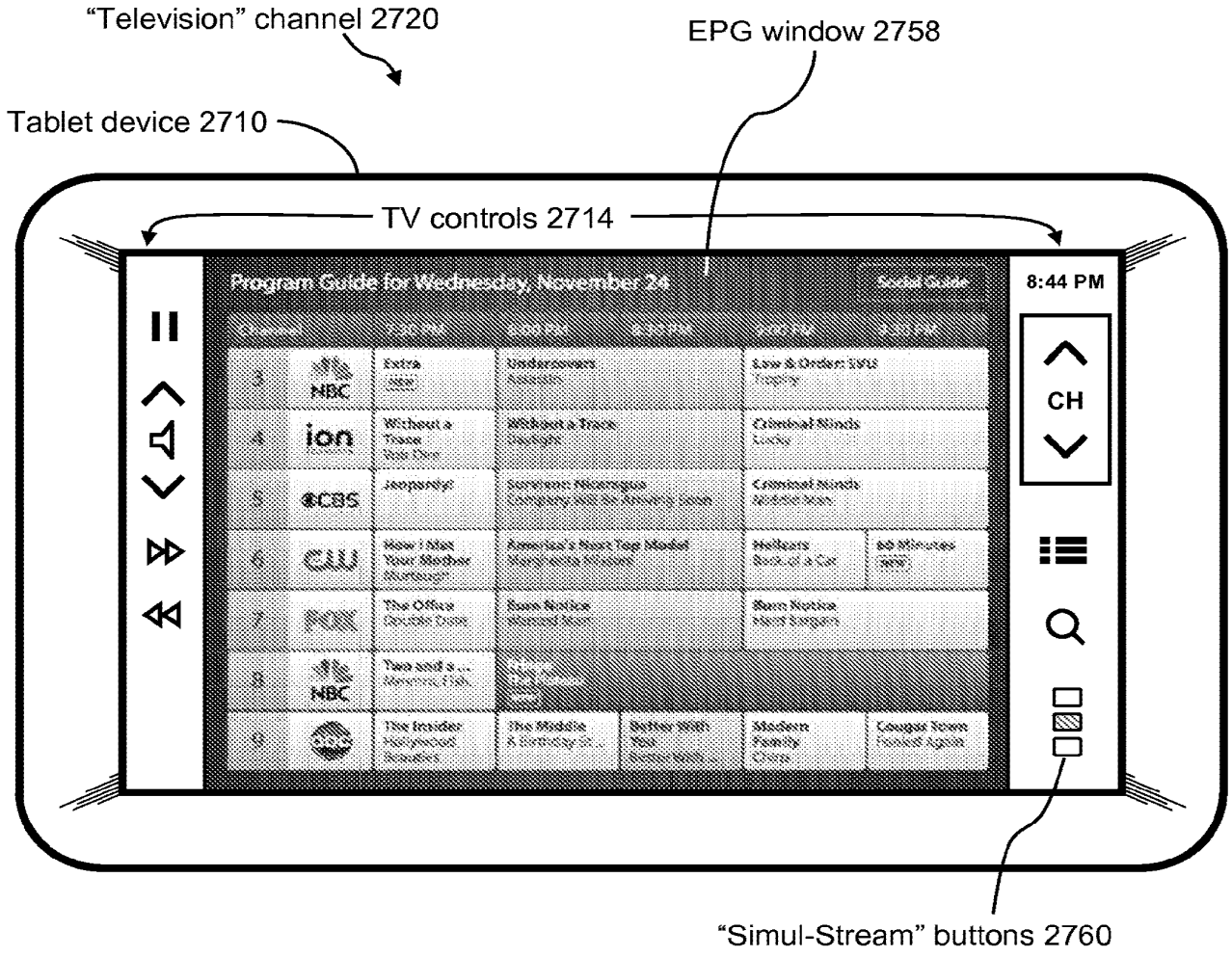

"Television" channel 2720
EPG window 2758
Tablet device 2710
TV controls 2714
Program Guide for Wednesday, November 24
8:44 PM
CH
"Simul-Stream" buttons 2760

FIG. 38

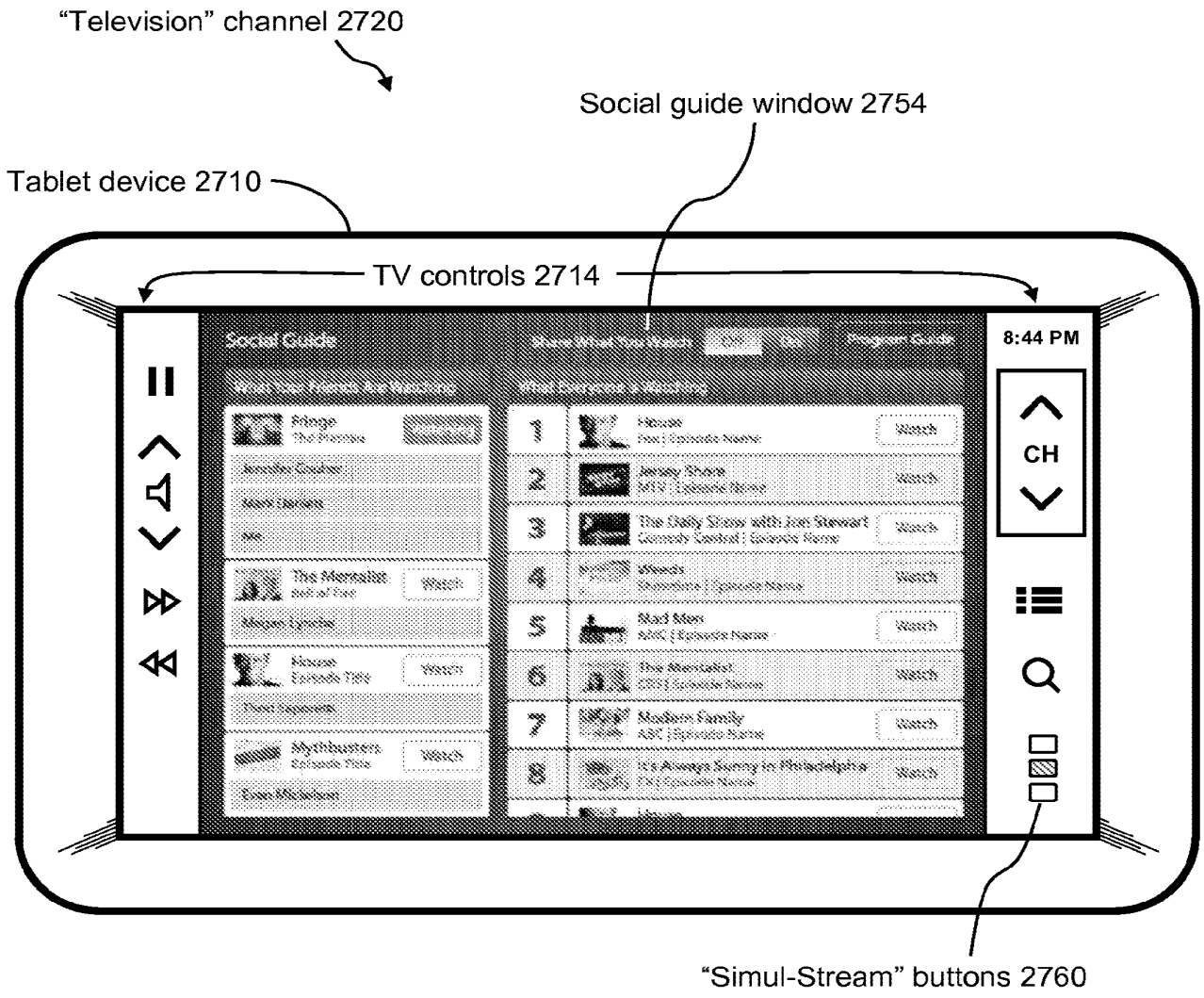

"Television" channel 2720
Social guide window 2754
Tablet device 2710
TV controls 2714
8:44 PM
CH
"Simul-Stream" buttons 2760

FIG. 39

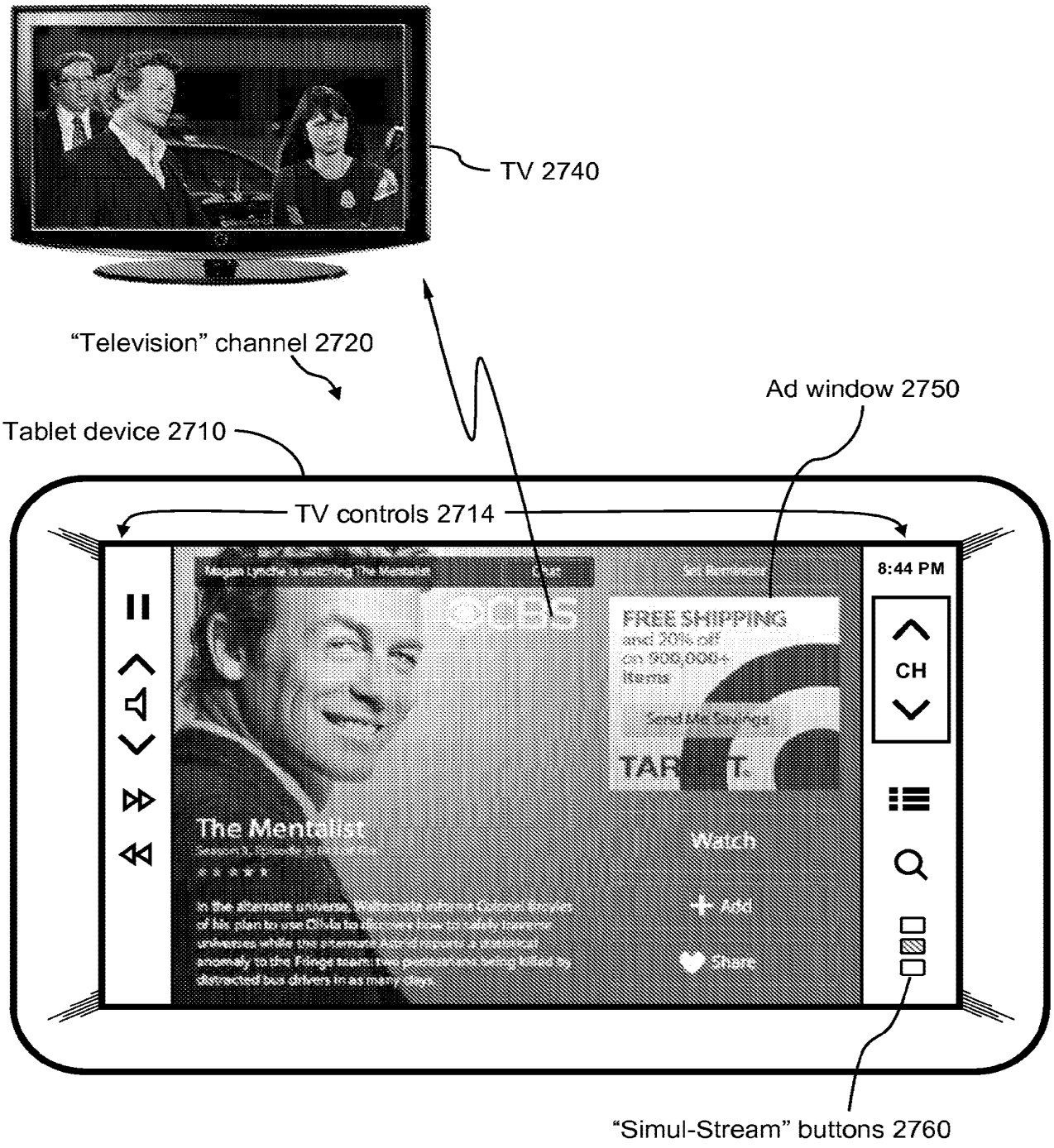

TV 2740
"Television" channel 2720
Ad window 2750
Tablet device 2710
TV controls 2714
8:44 PM
CH
FREE SHIPPING
The Mentalist
Watch
Add
Share
"Simul-Stream" buttons 2760

FIG. 40

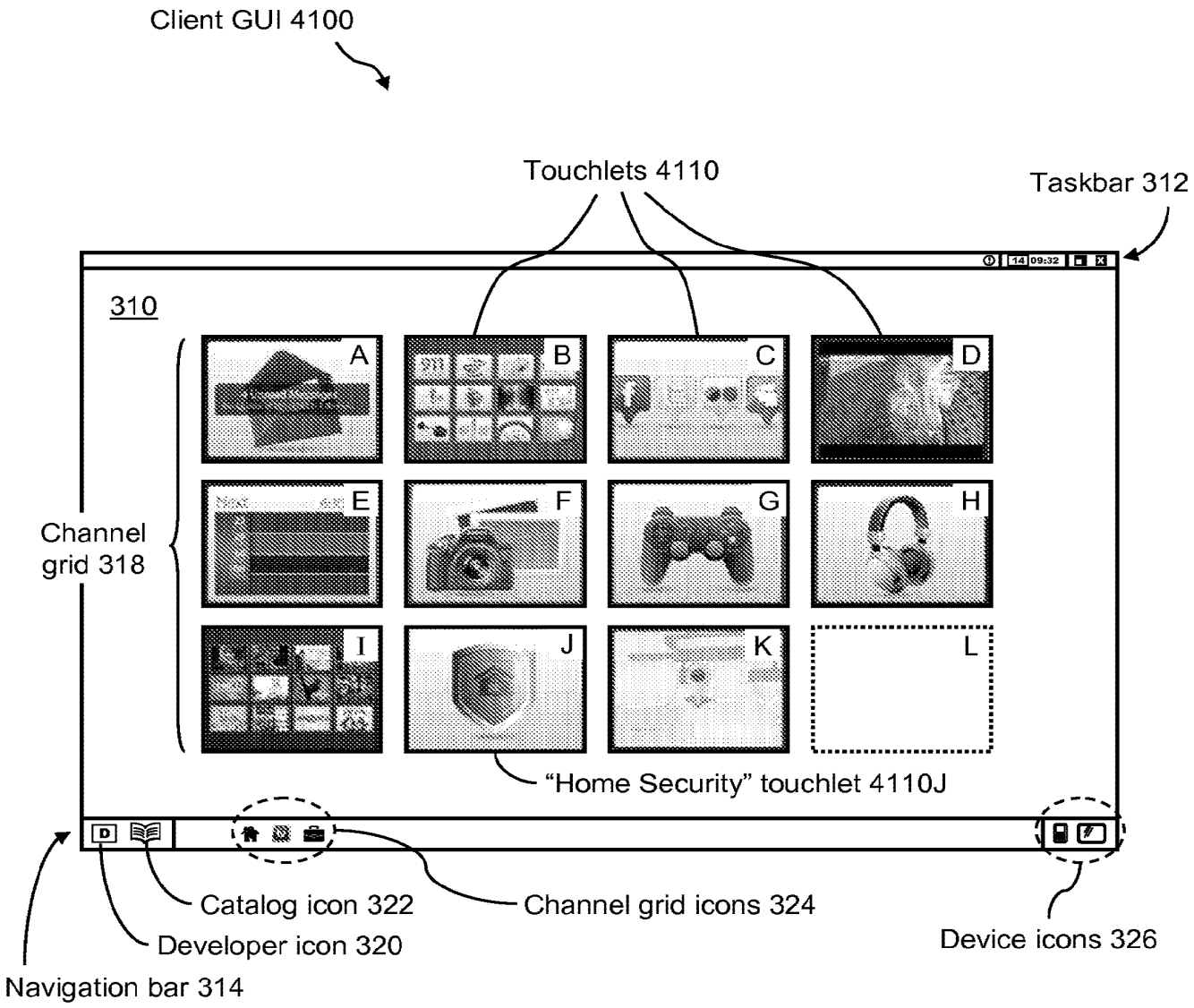

Client GUI 4100
Touchlets 4110
Taskbar 312
310
A
B
C
D
E
F
G
H
I
J
K
L
Channel grid 318
"Home Security" touchlet 4110J
Catalog icon 322
Channel grid icons 324
Developer icon 320
Device icons 326
Navigation bar 314

FIG. 41

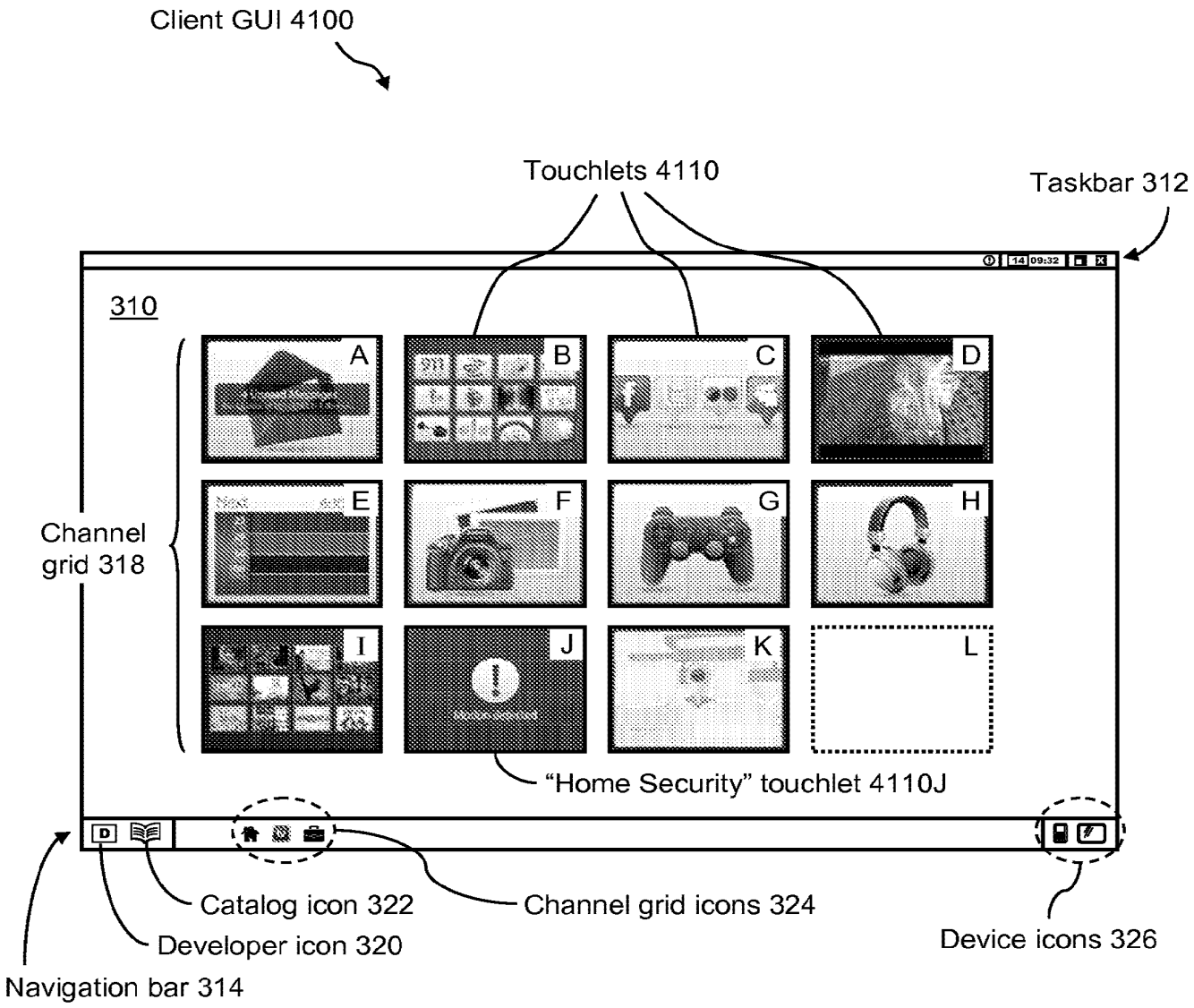

Client GUI 4100
Touchlets 4110
Taskbar 312
310
A
B
C
D
E
F
G
H
I
J
K
L
Channel grid 318
"Home Security" touchlet 4110J
Catalog icon 322
Channel grid icons 324
Developer icon 320
Device icons 326
Navigation bar 314

FIG. 42

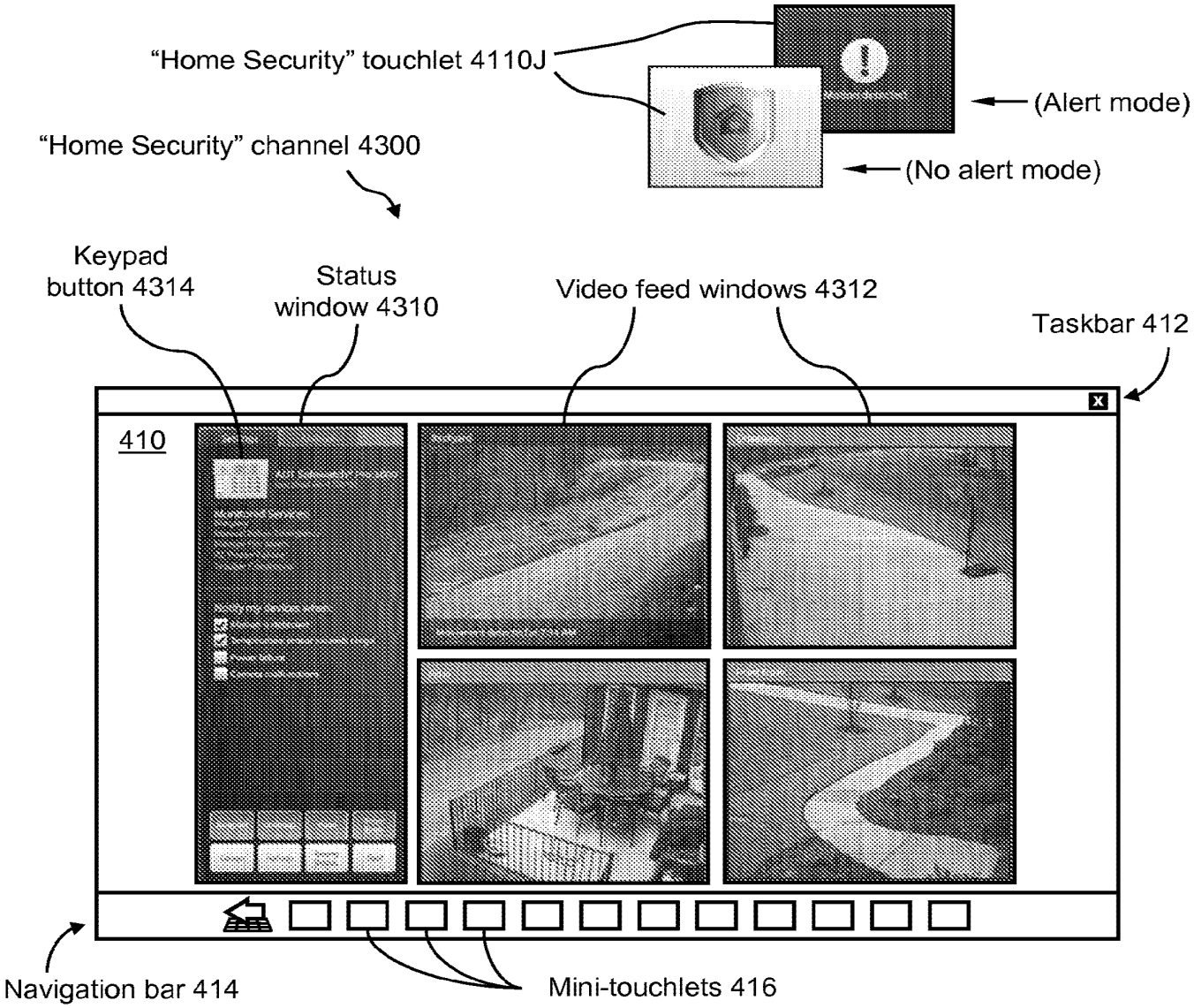

"Home Security" touchlet 4110J
(Alert mode)
(No alert mode)
"Home Security" channel 4300
Keypad button 4314
Status window 4310
Video feed windows 4312
Taskbar 412
410
Navigation bar 414
Mini-touchlets 416

FIG. 43

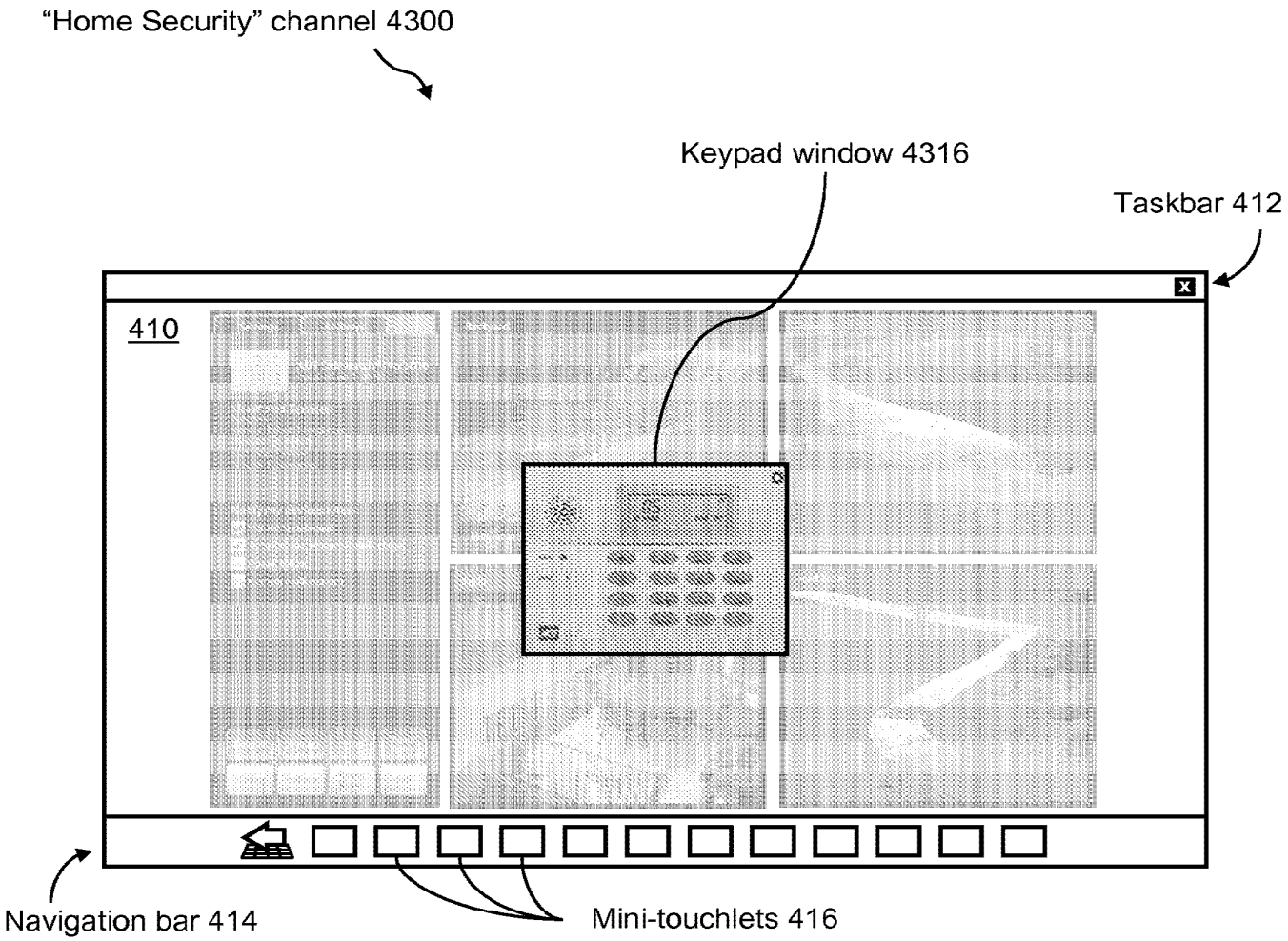

"Home Security" channel 4300
Keypad window 4316
Taskbar 412
410
Navigation bar 414
Mini-touchlets 416

FIG. 44

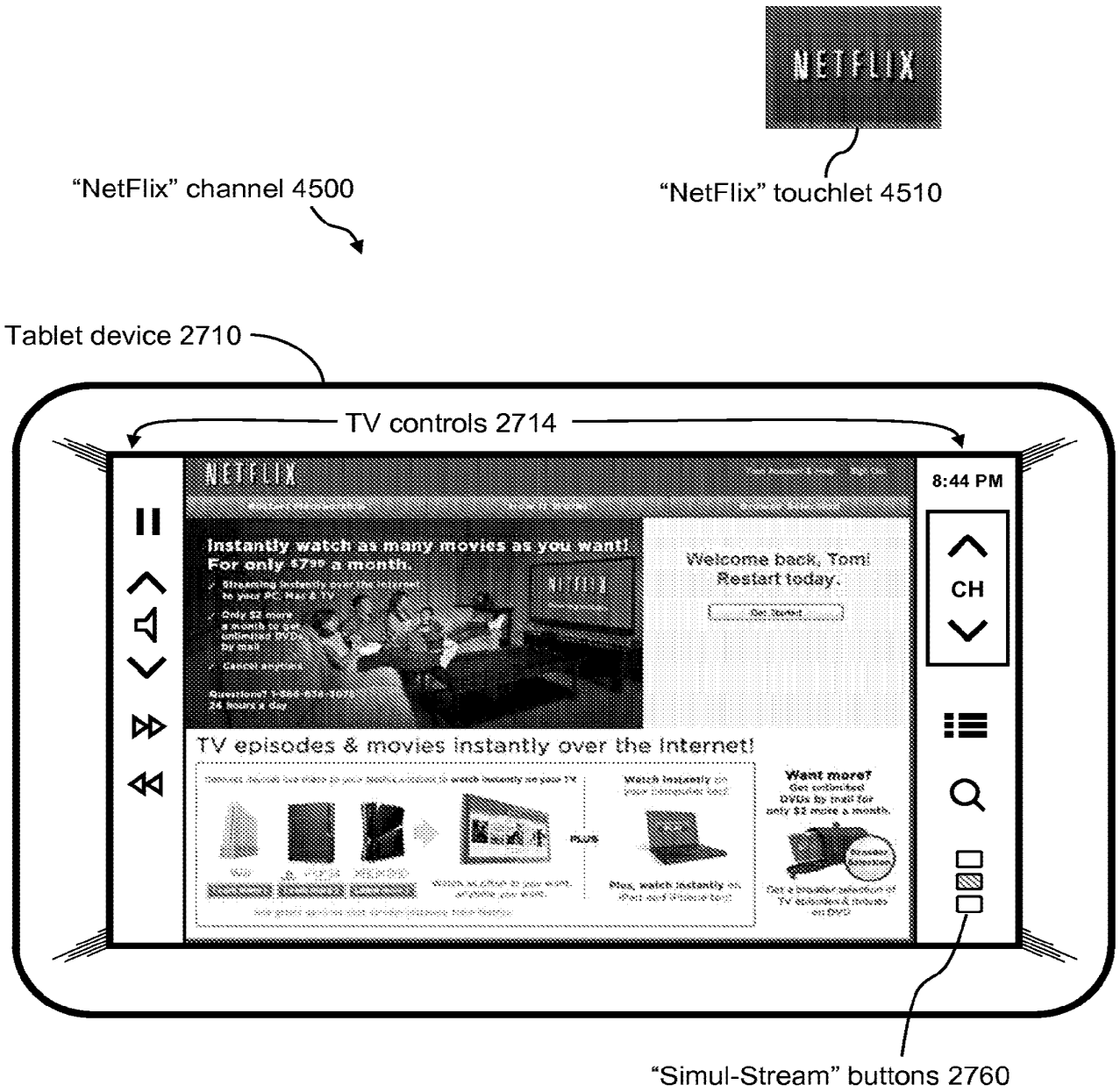

NETFLIX
"NetFlix" channel 4500
"NetFlix" touchlet 4510
Tablet device 2710
TV controls 2714
NETFLIX
8:44 PM
Instantly watch as many movies as you want!
For only $7.99 a month.
Welcome back, Tom!
Restart today.
CH
TV episodes & movies instantly over the Internet!
Want more?
"Simul-Stream" buttons 2760

FIG. 45

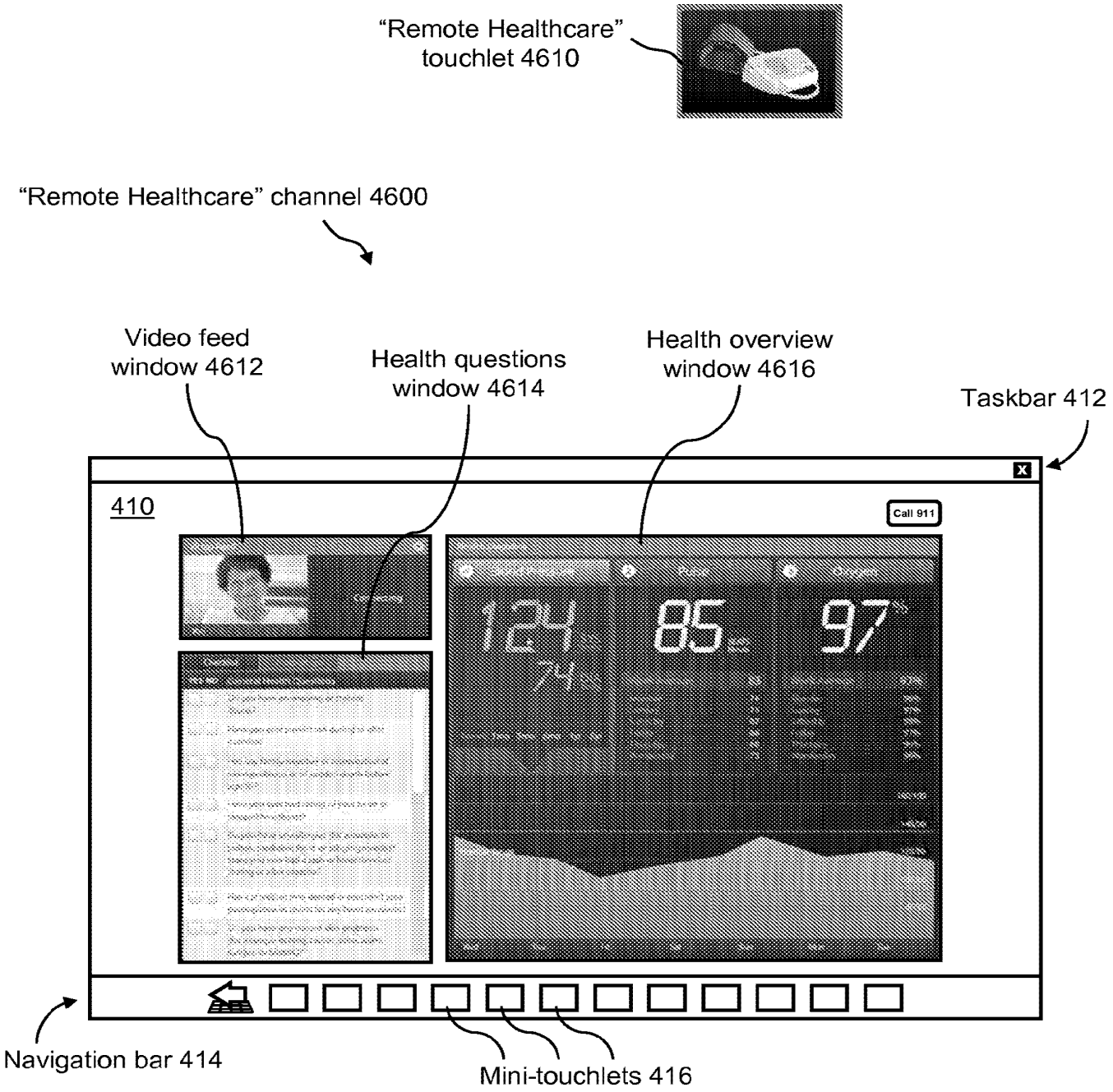

"Remote Healthcare" touchlet 4610
"Remote Healthcare" channel 4600
Video feed window 4612
Health questions window 4614
Health overview window 4616
Taskbar 412
410
Call 911
Navigation bar 414
Mini-touchlets 416

FIG. 46

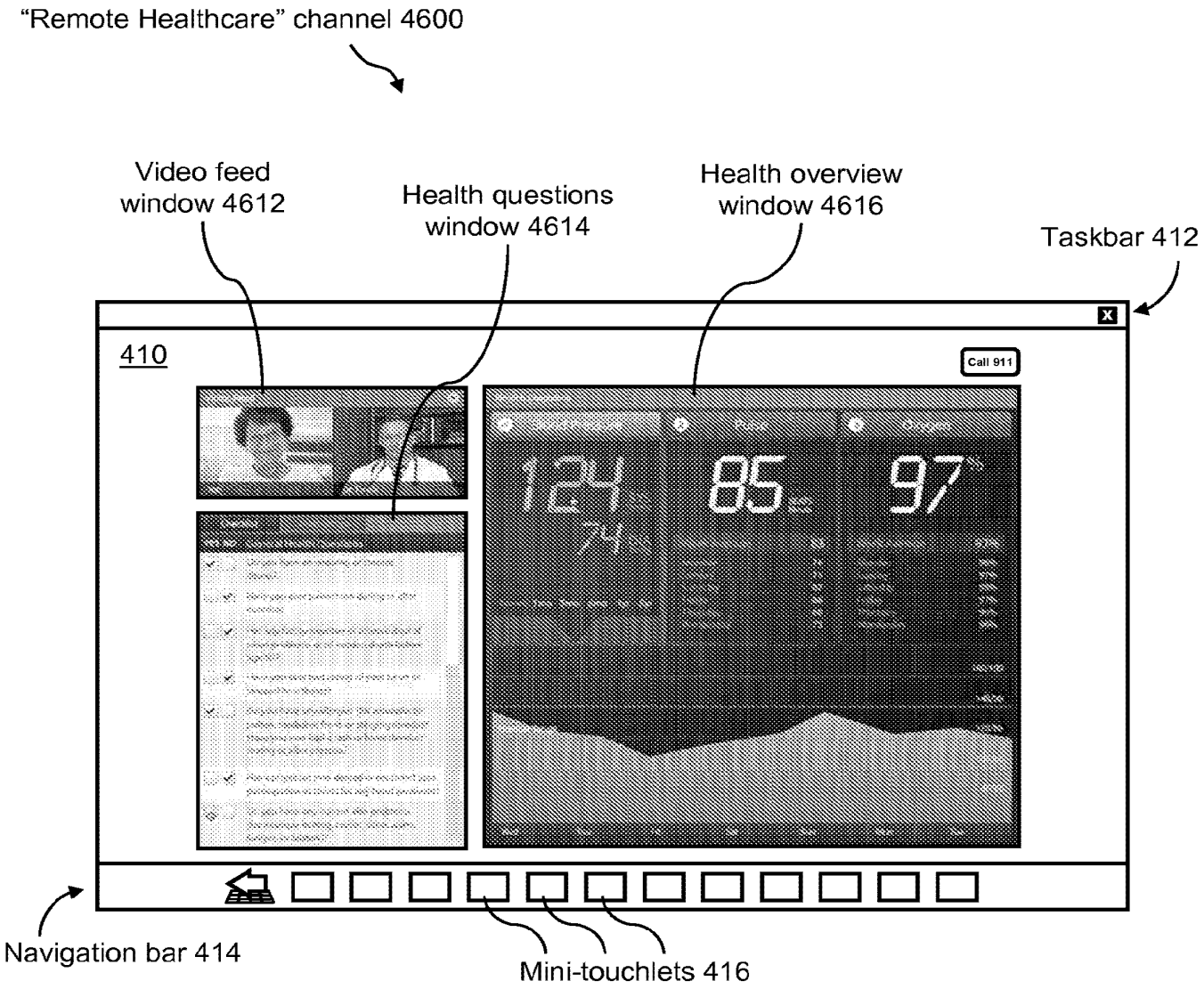

"Remote Healthcare" channel 4600
Video feed window 4612
Health questions window 4614
Health overview window 4616
Taskbar 412
410
Call 911
Navigation bar 414
Mini-touchlets 416

FIG. 47

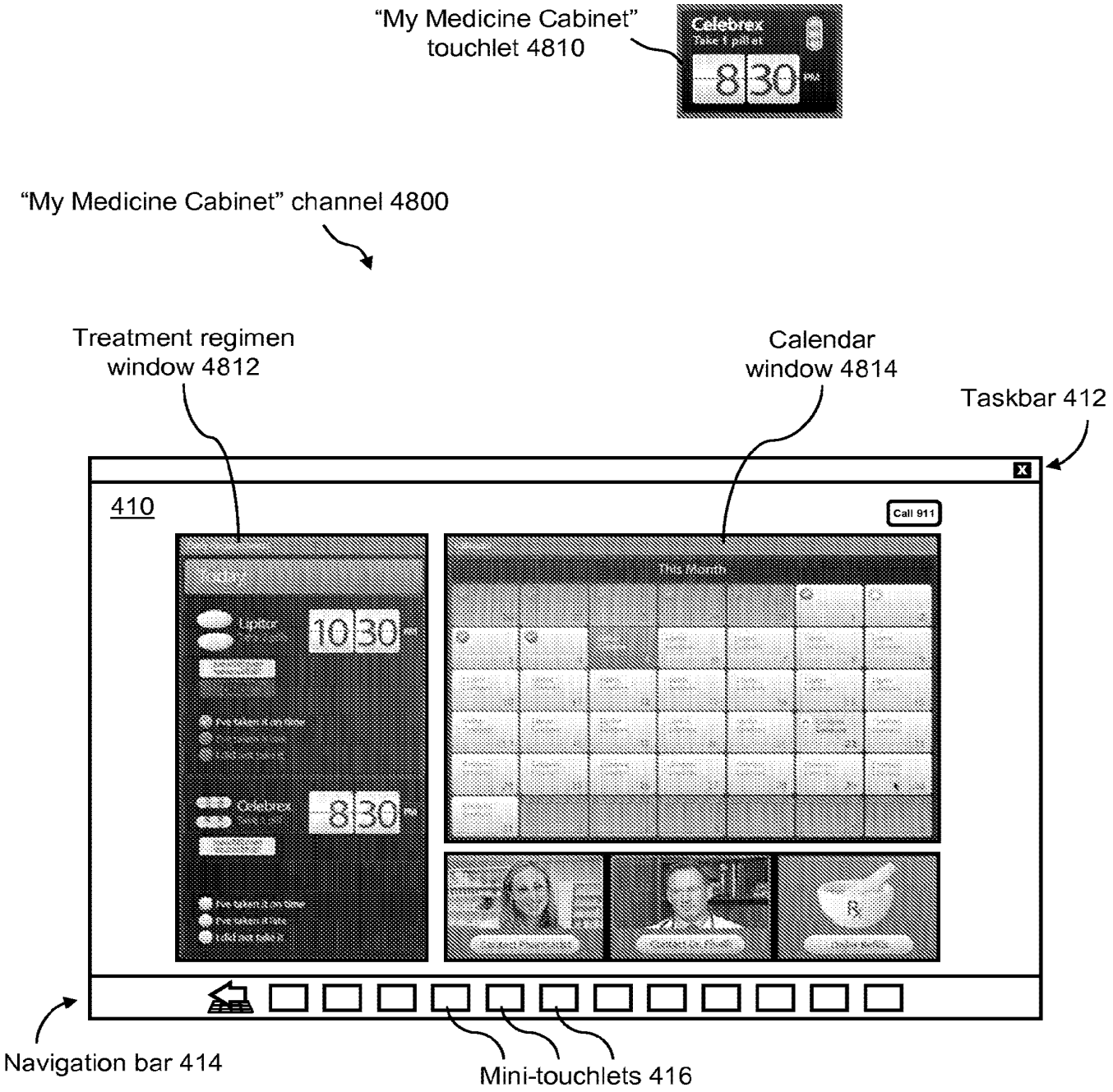

"My Medicine Cabinet" touchlet 4810
Celebrex
8 30 PM
"My Medicine Cabinet" channel 4800
Treatment regimen window 4812
Calendar window 4814
Taskbar 412
410
Call 911
10 30
8 30
Navigation bar 414
Mini-touchlets 416

FIG. 48

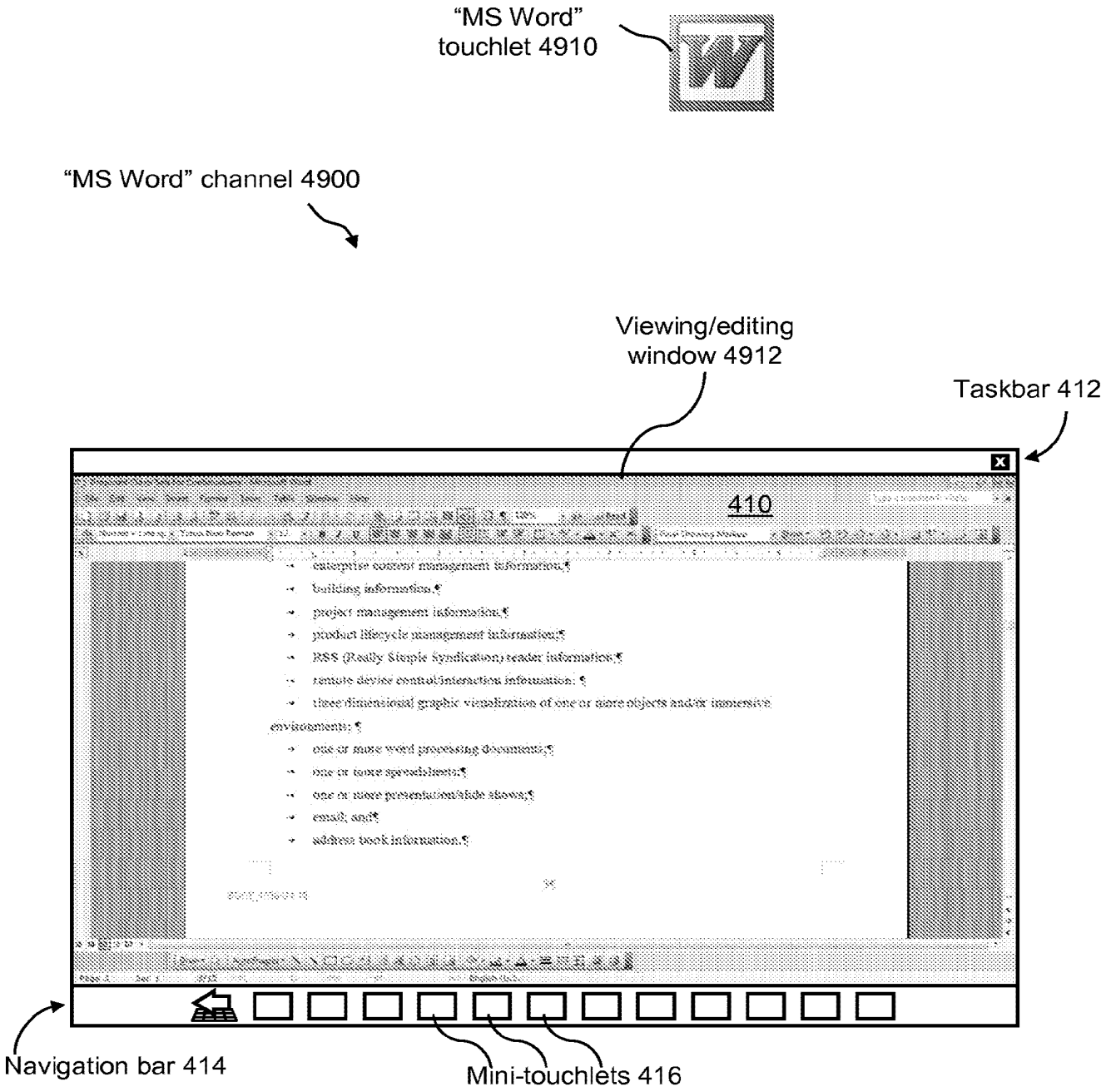

"MS Word" touchlet 4910
"MS Word" channel 4900
Viewing/editing window 4912
Taskbar 412
410
Navigation bar 414
Mini-touchlets 416

FIG. 49

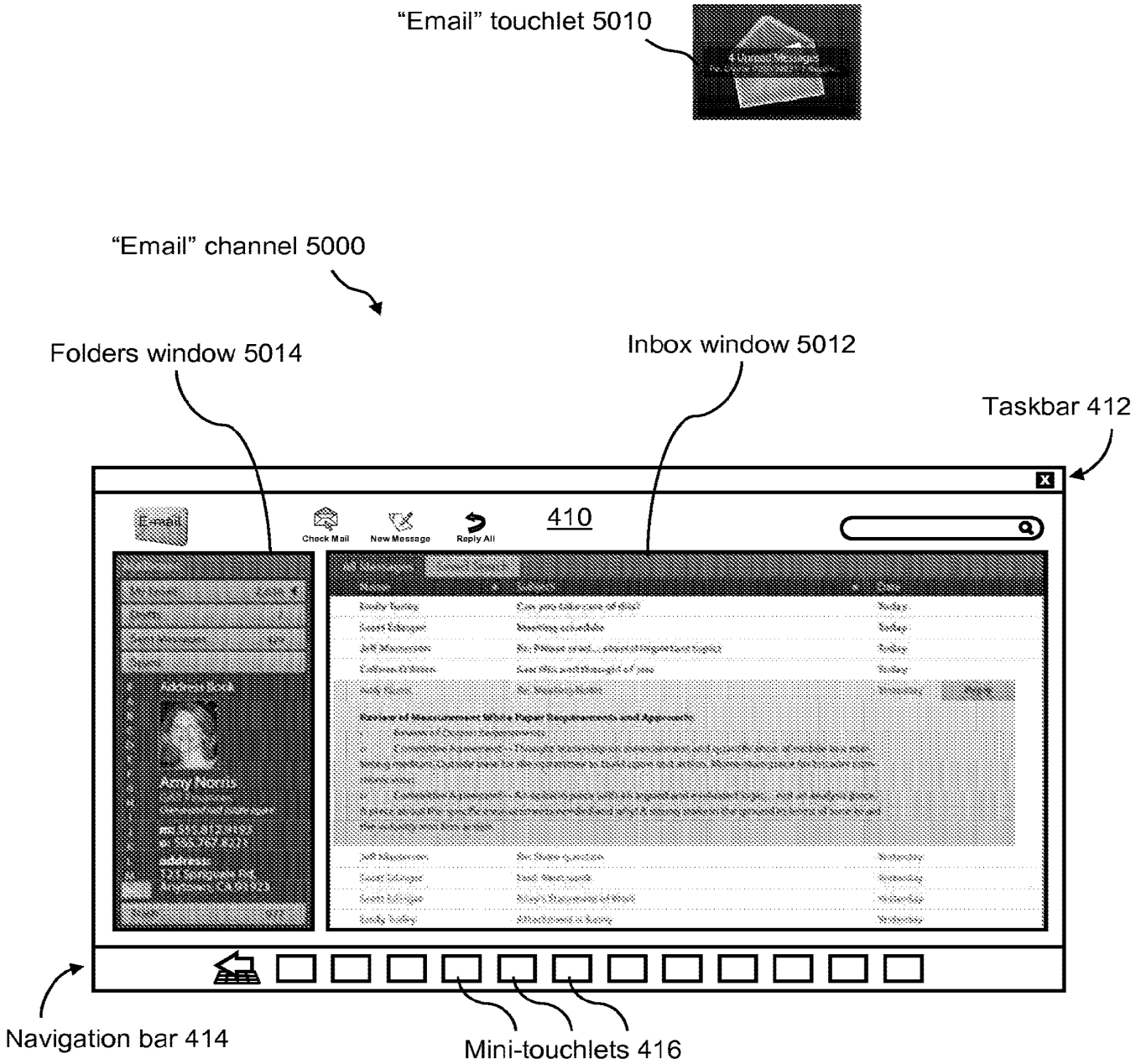

"Email" touchlet 5010
"Email" channel 5000
Folders window 5014
Inbox window 5012
Taskbar 412
E-mail
Check Mail
New Message
Reply All
410
Navigation bar 414
Mini-touchlets 416

FIG. 50

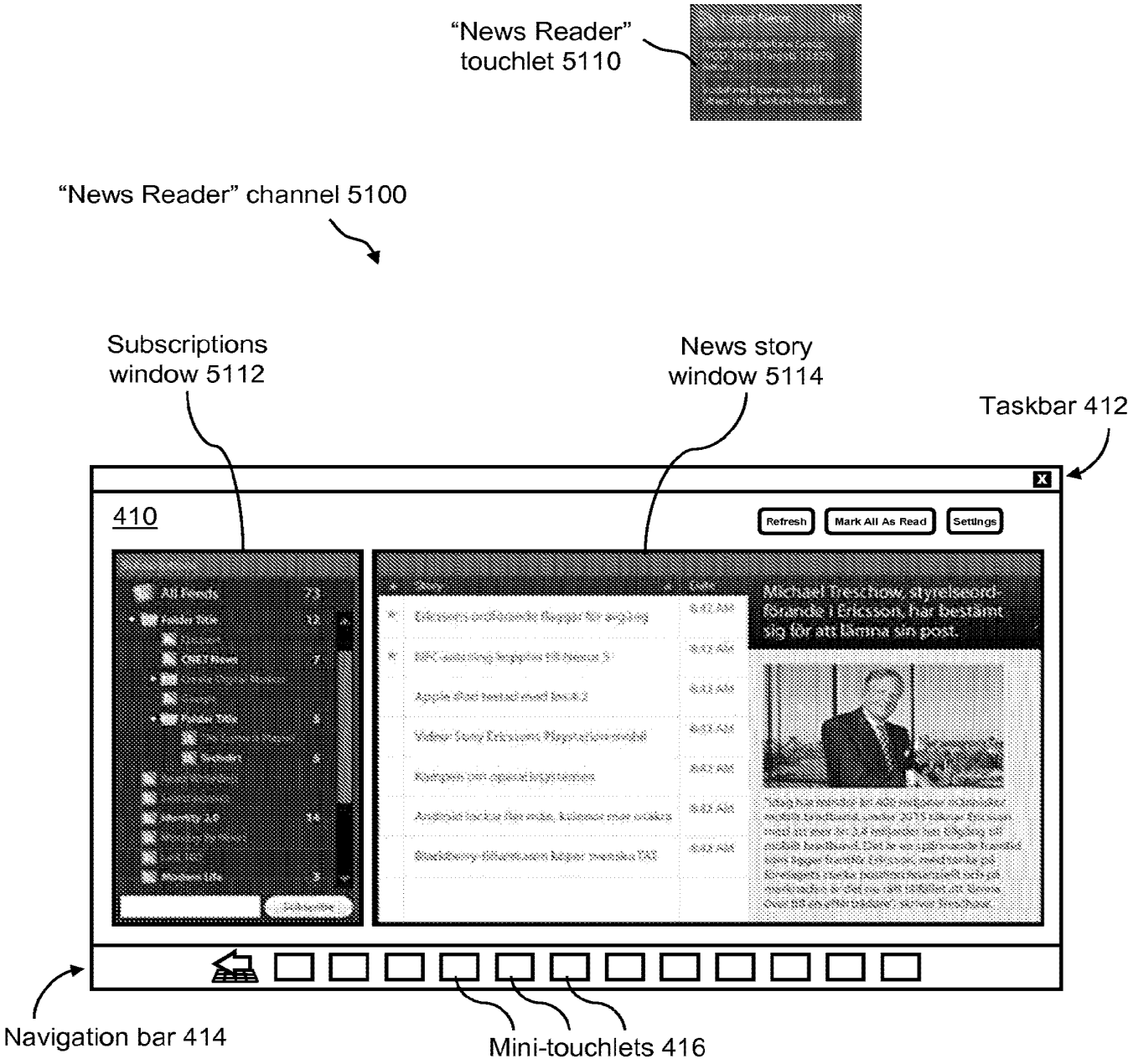

"News Reader" touchlet 5110
"News Reader" channel 5100
Subscriptions window 5112
News story window 5114
Taskbar 412
410
Refresh
Mark All As Read
Settings
Navigation bar 414
Mini-touchlets 416

FIG. 51

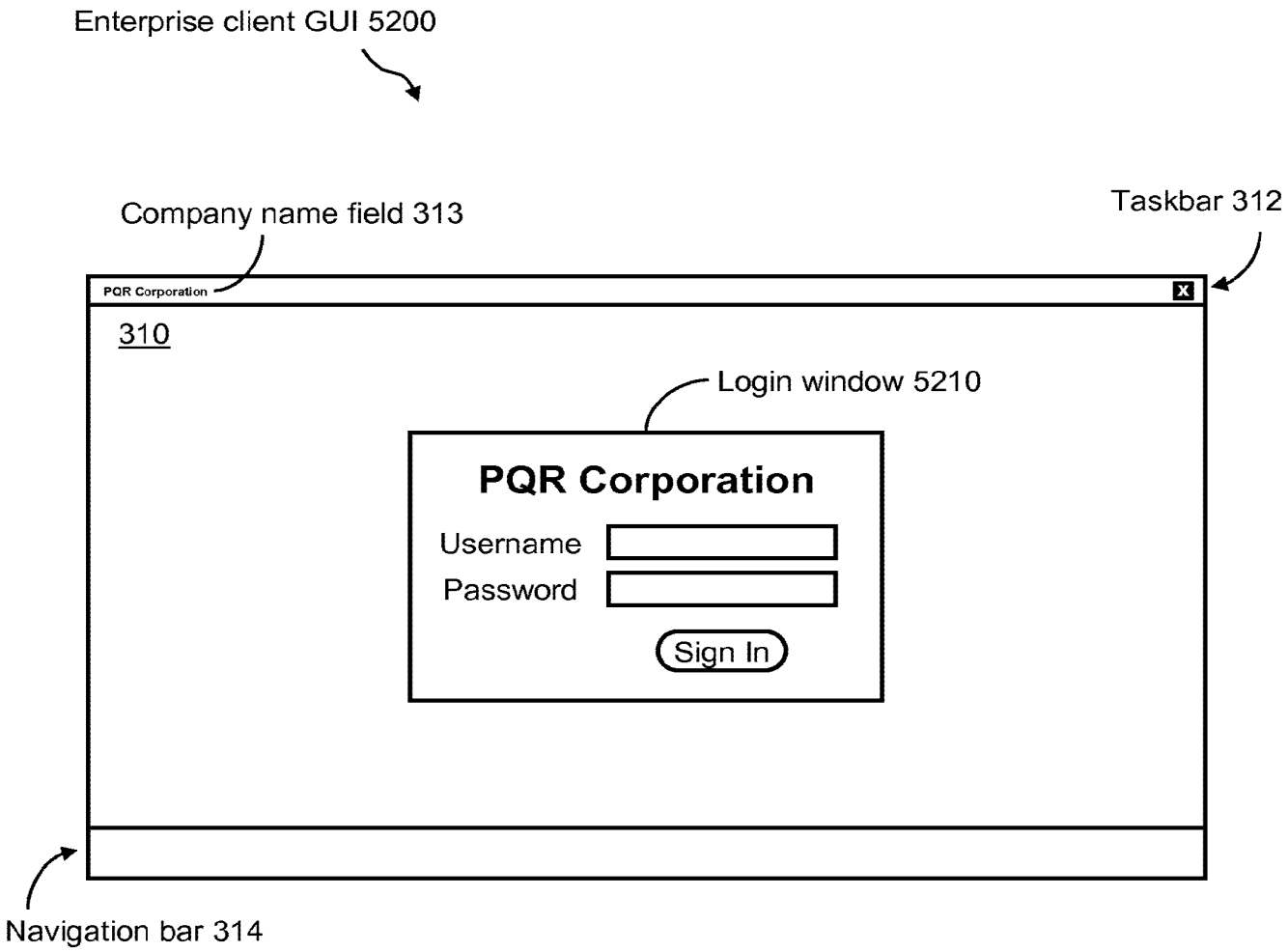

Enterprise client GUI 5200
Company name field 313
Taskbar 312
PQR Corporation
310
Login window 5210
PQR Corporation
Username
Password
Sign In
Navigation bar 314

FIG. 52

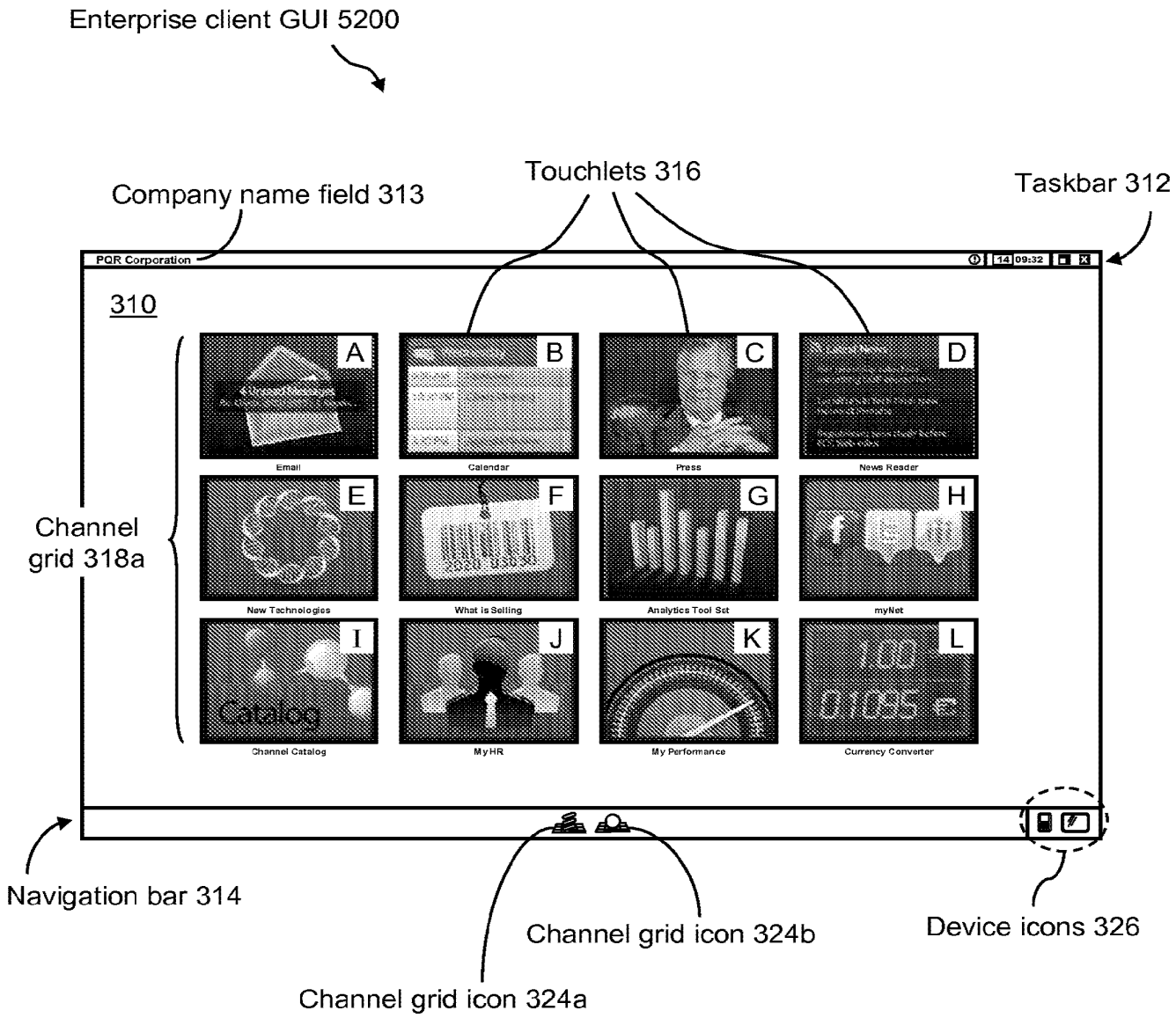

Enterprise client GUI 5200
Company name field 313
Touchlets 316
Taskbar 312
PQR Corporation
14 09:32
310
A
B
C
D
Email
Calendar
Press
News Reader
E
F
G
H
New Technologies
What is Selling
Analytics Tool Set
myNet
I
J
K
L
Catalog
Channel Catalog
MyHR
My Performance
Currency Converter
Channel grid 318a
Navigation bar 314
Channel grid icon 324b
Device icons 326
Channel grid icon 324a

FIG. 53

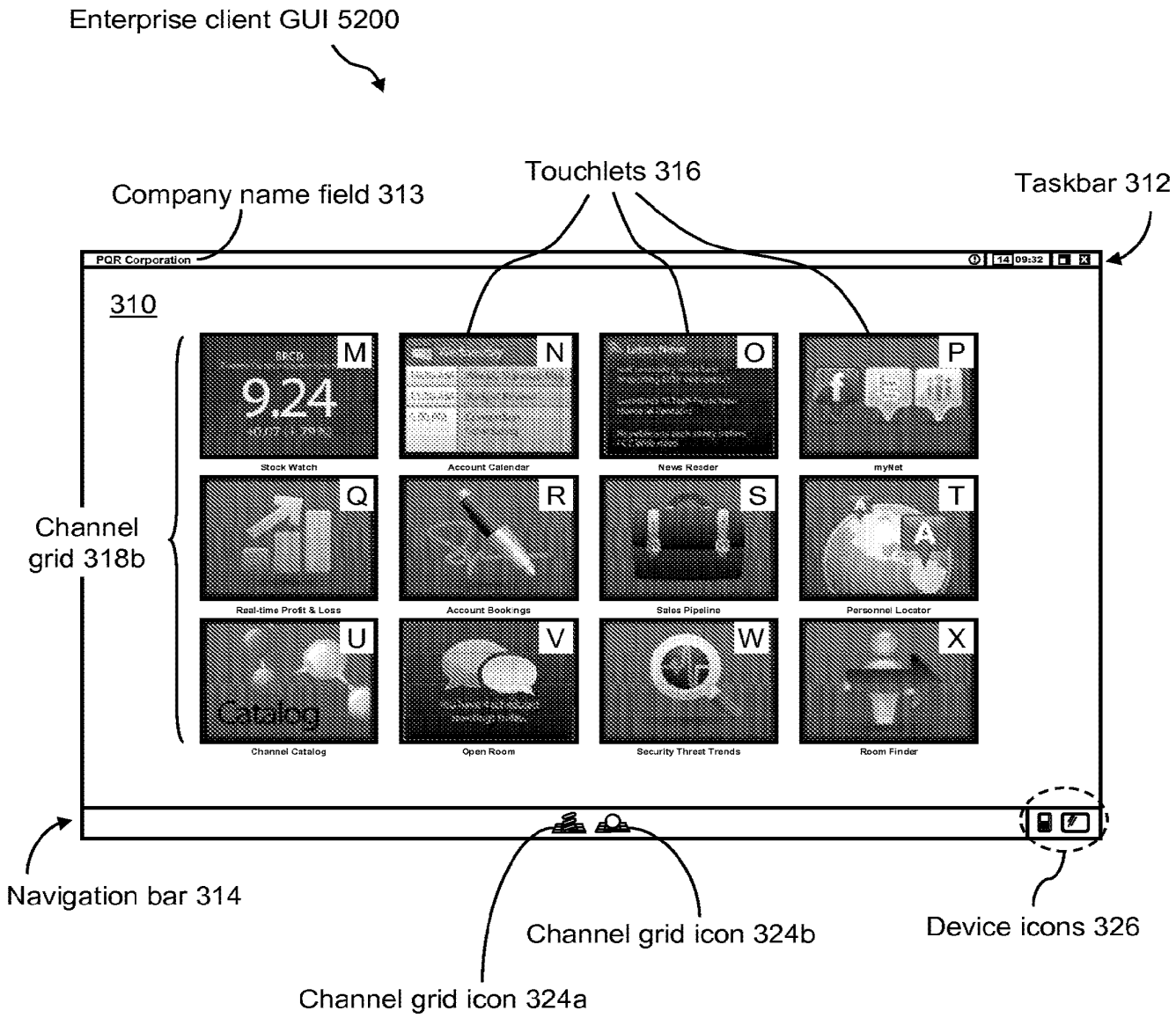

Enterprise client GUI 5200
Company name field 313
Touchlets 316
Taskbar 312
PQR Corporation
14 09:32
310
Channel grid 318b
M
9.24
Stock Watch
N
Account Calendar
O
News Reader
P
myNet
Q
Real-time Profit & Loss
R
Account Bookings
S
Sales Pipeline
T
Personnel Locator
U
Catalog
Channel Catalog
V
Open Room
W
Security Threat Trends
X
Room Finder
Navigation bar 314
Channel grid icon 324b
Device icons 326
Channel grid icon 324a

FIG. 54

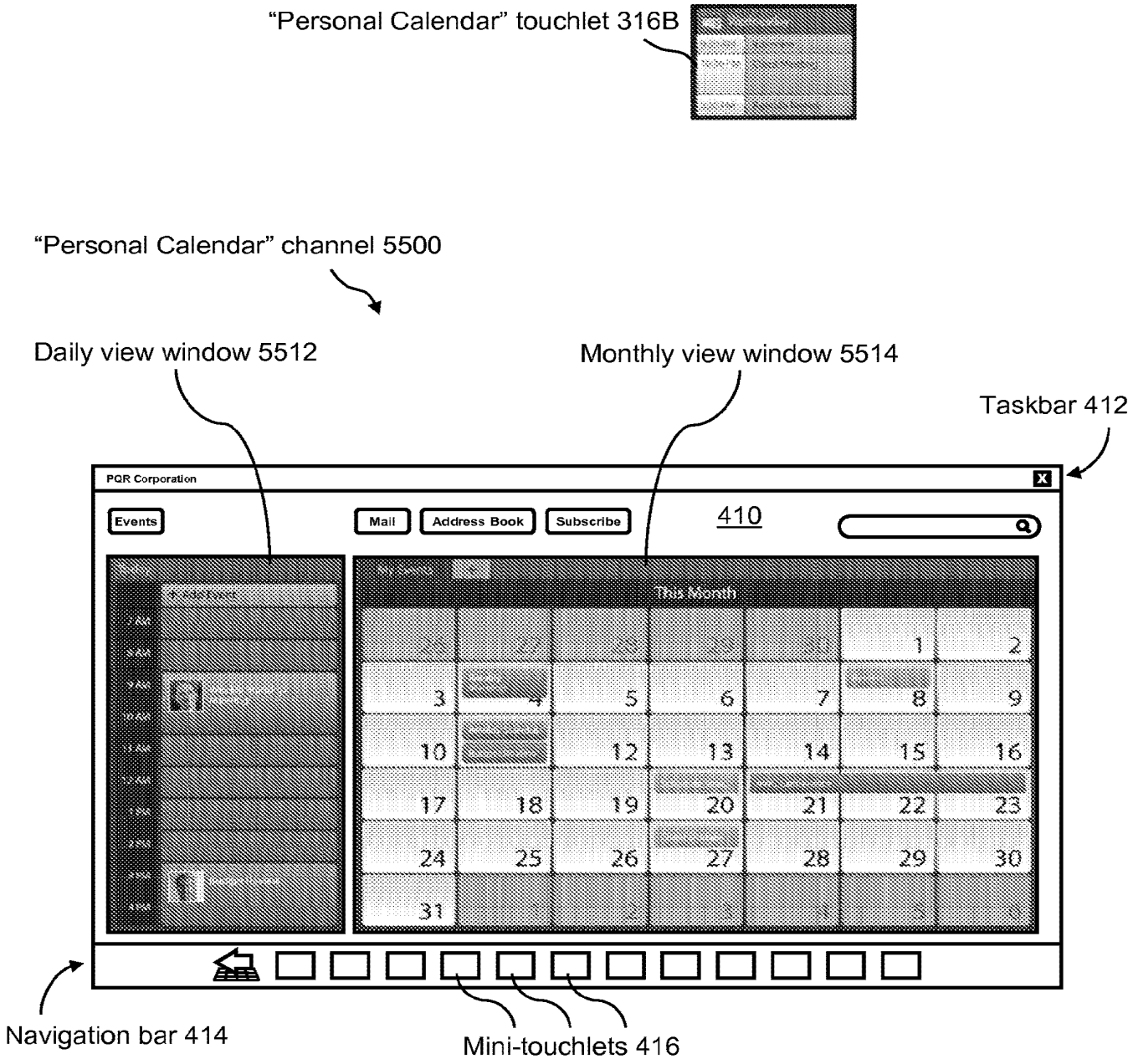

"Personal Calendar" touchlet 316B
"Personal Calendar" channel 5500
Daily view window 5512
Monthly view window 5514
Taskbar 412
PQR Corporation
Events
Mail
Address Book
Subscribe
410
This Month
Navigation bar 414
Mini-touchlets 416

FIG. 55

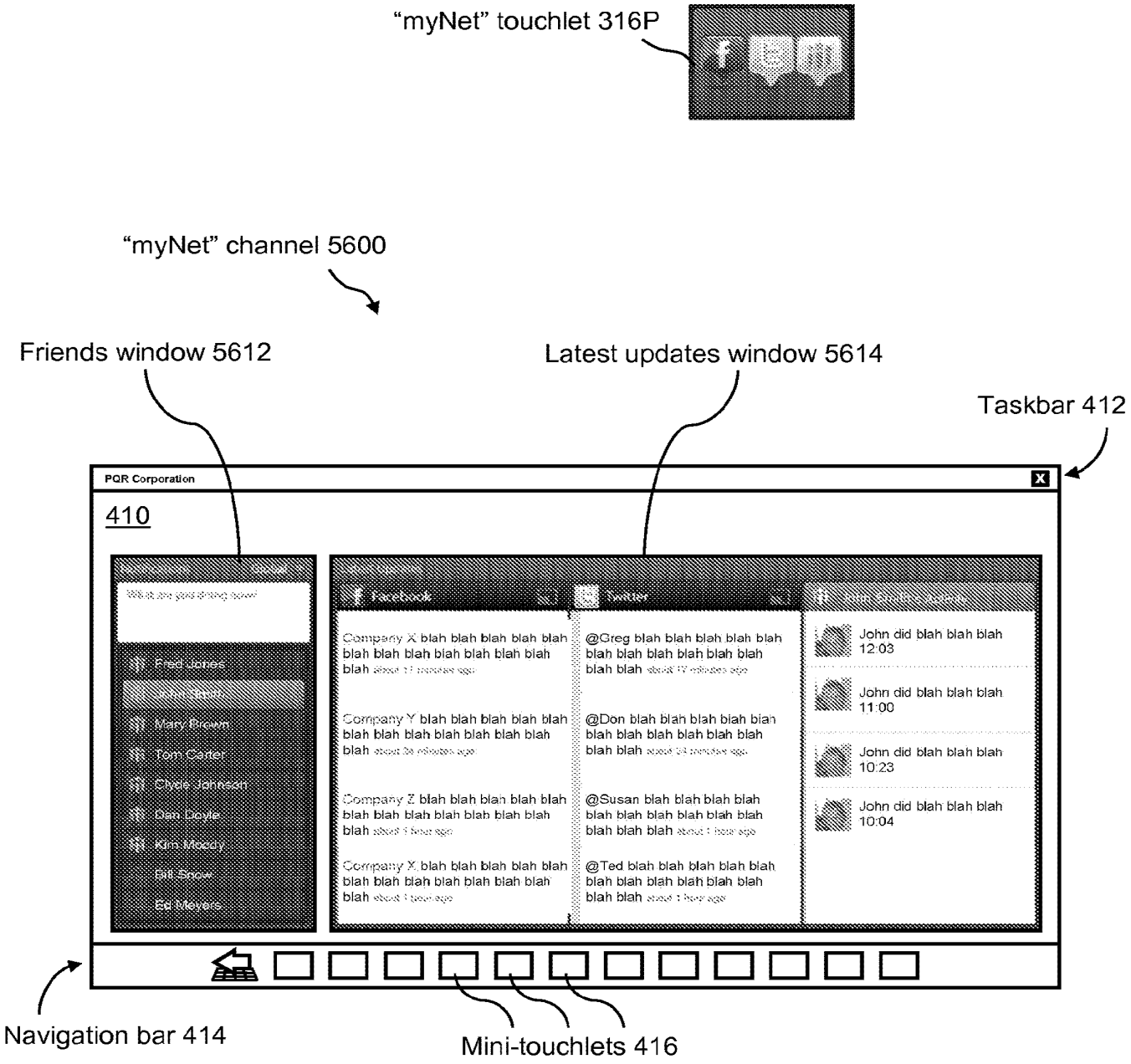

"myNet" touchlet 316P
"myNet" channel 5600
Friends window 5612
Latest updates window 5614
Taskbar 412
PQR Corporation
410
Fred Jones
John Doe
Mary Brown
Tom Carter
Clyde Johnson
Dan Doyle
Kim Moody
Bill Snow
Ed Meyers
Company X blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah
Company Y blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah
Company Z blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah
Company X blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah
@Greg blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah
@Don blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah
@Susan blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah
@Ted blah blah blah blah blah blah blah blah blah blah blah blah blah blah blah
John did blah blah blah 12:03
John did blah blah blah 11:00
John did blah blah blah 10:23
John did blah blah blah 10:04
Navigation bar 414
Mini-touchlets 416

FIG. 56

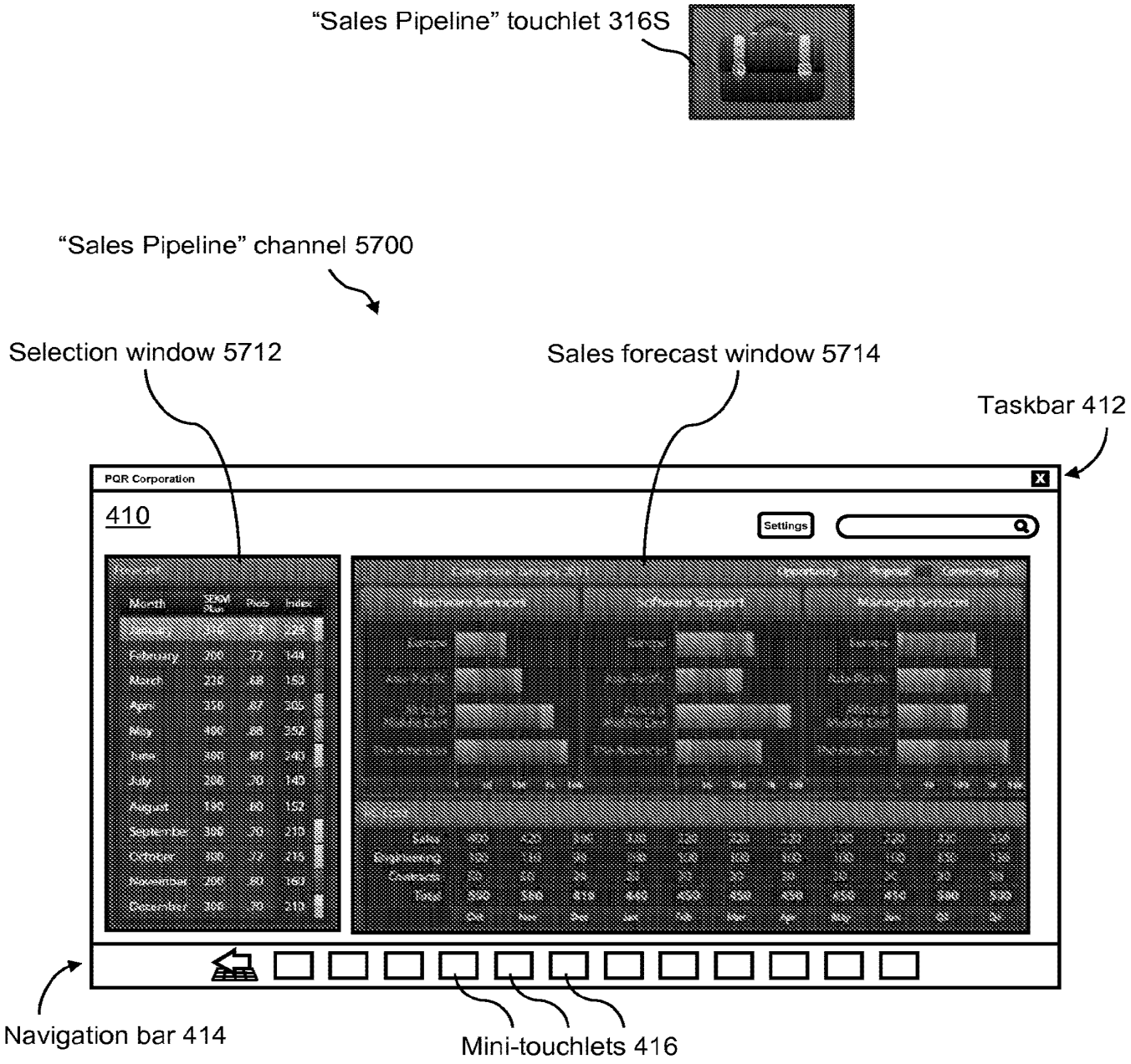

"Sales Pipeline" touchlet 316S
"Sales Pipeline" channel 5700
Selection window 5712
Sales forecast window 5714
Taskbar 412
PQR Corporation
410
Settings
Navigation bar 414
Mini-touchlets 416

FIG. 57

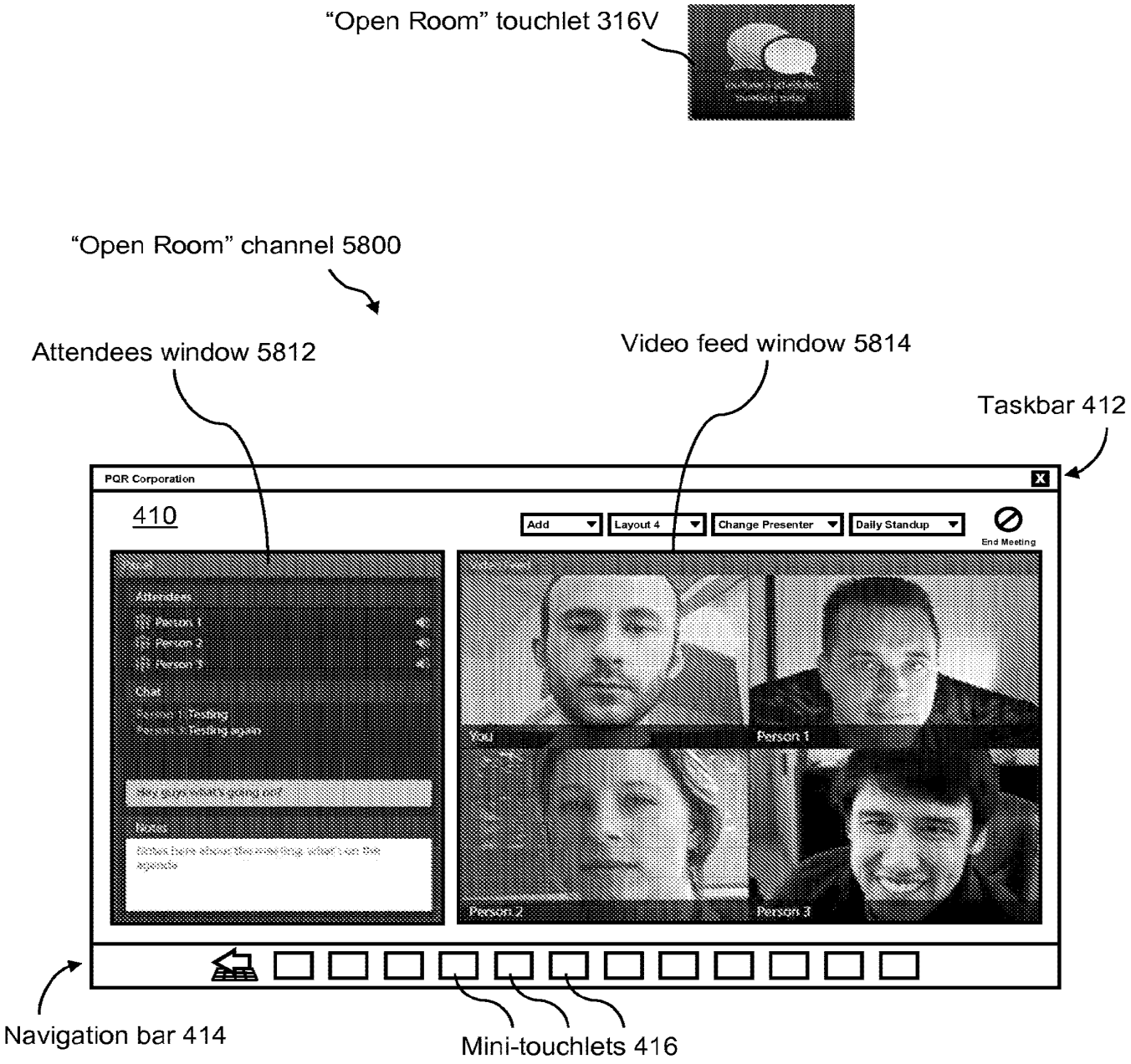

"Open Room" touchlet 316V
"Open Room" channel 5800
Attendees window 5812
Video feed window 5814
Taskbar 412
PQR Corporation
410
Add
Layout 4
Change Presenter
Daily Standup
End Meeting
Attendees
Person 1
Person 2
Person 3
Chat
Notes
You
Person 1
Person 2
Person 3
Navigation bar 414
Mini-touchlets 416

FIG. 58

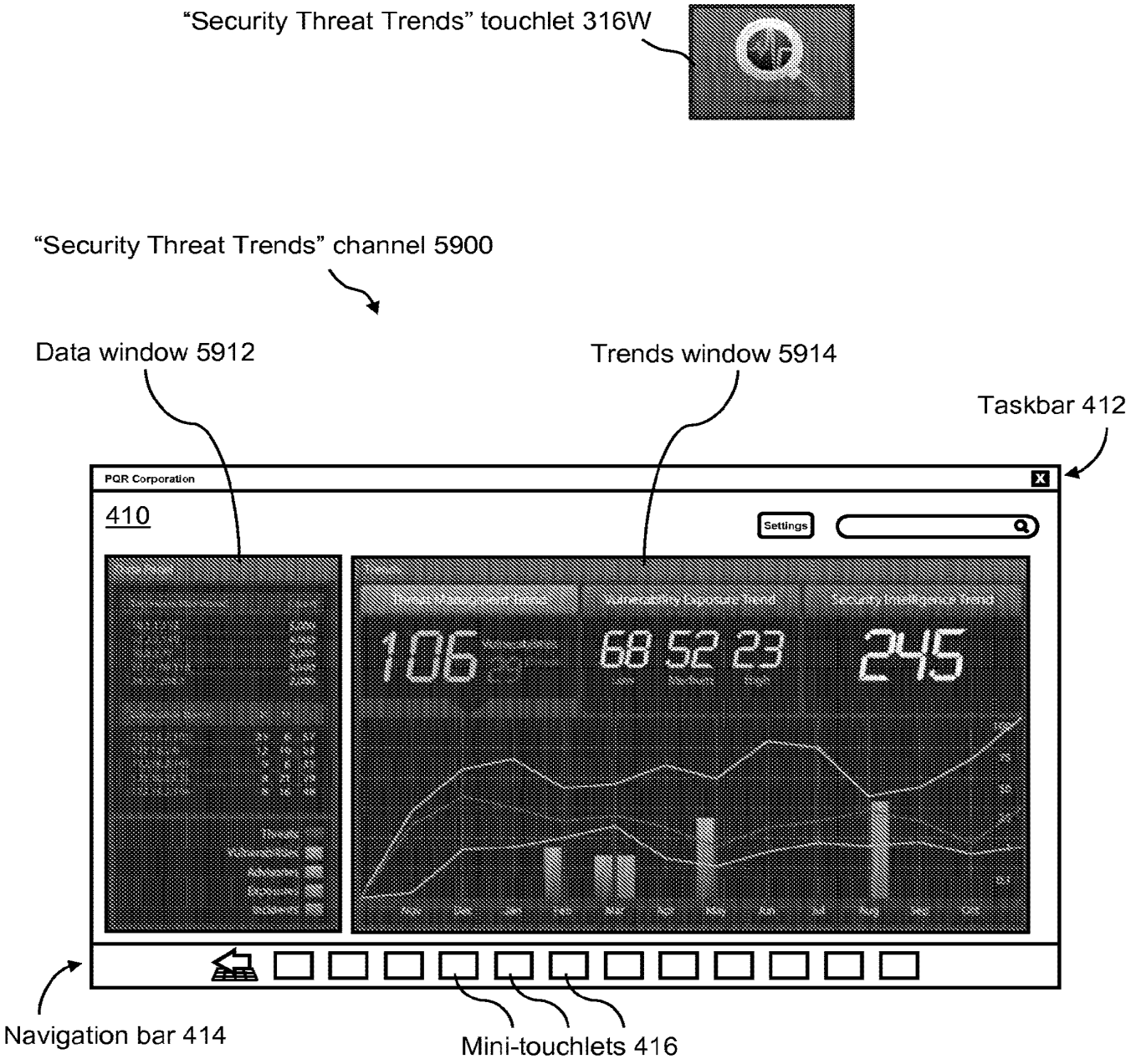

"Security Threat Trends" touchlet 316W
"Security Threat Trends" channel 5900
Data window 5912
Trends window 5914
Taskbar 412
PQR Corporation
410
Settings
106
68 52 23
245
Navigation bar 414
Mini-touchlets 416

FIG. 59

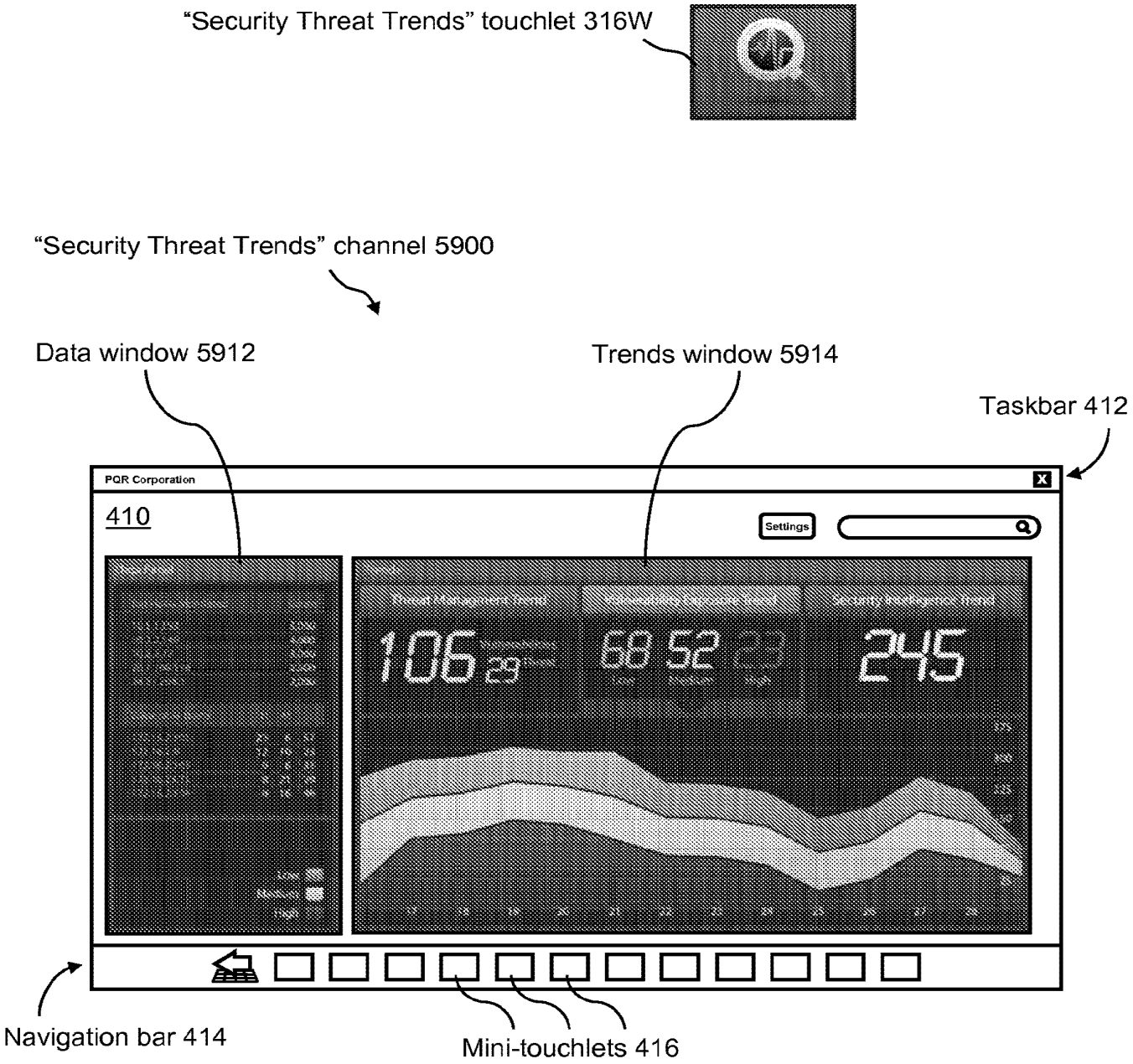

"Security Threat Trends" touchlet 316W
"Security Threat Trends" channel 5900
Data window 5912
Trends window 5914
Taskbar 412
PQR Corporation
410
Settings
106
68
52
245
Navigation bar 414
Mini-touchlets 416

FIG. 60

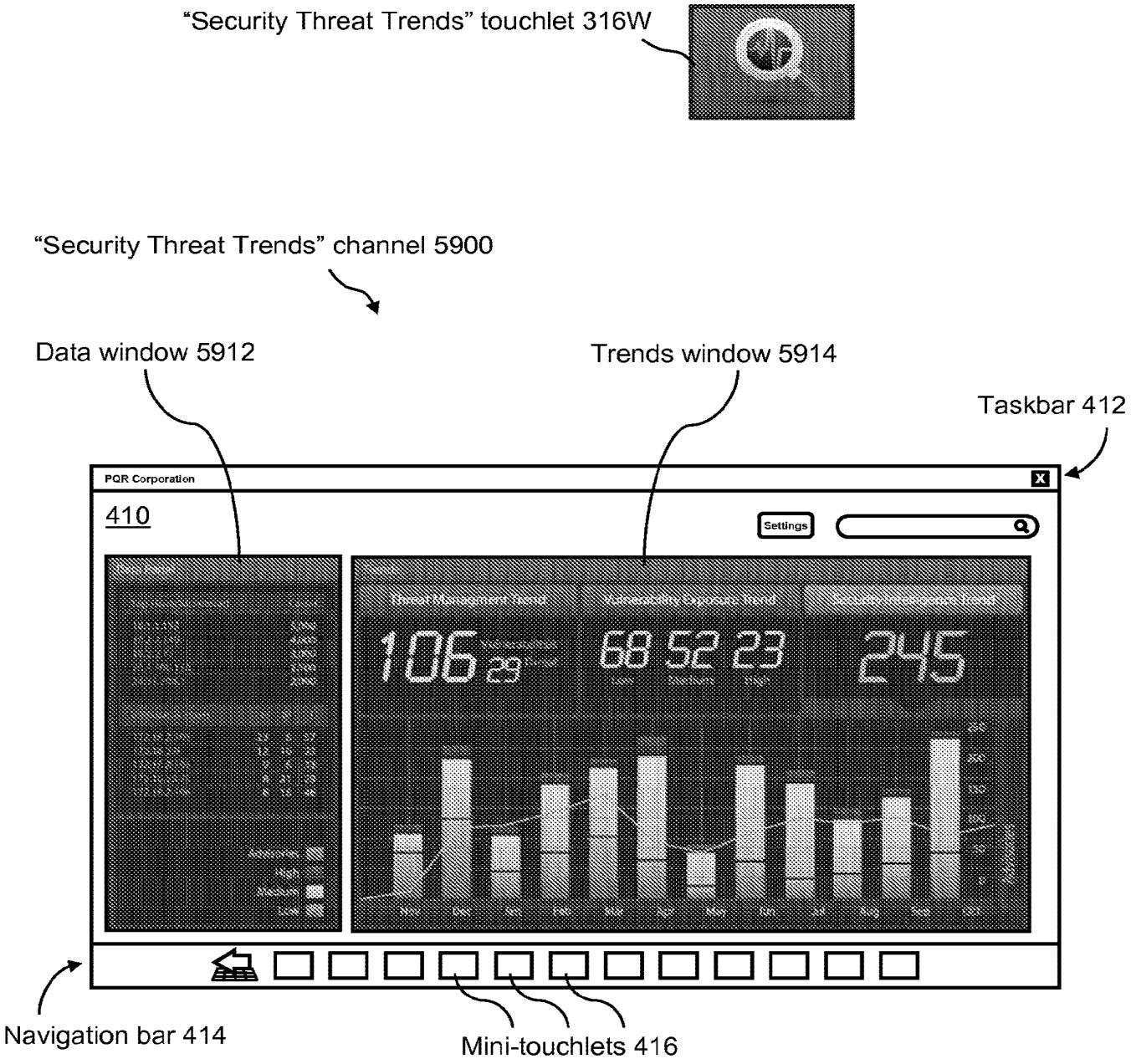

"Security Threat Trends" touchlet 316W
"Security Threat Trends" channel 5900
Data window 5912
Trends window 5914
Taskbar 412
PQR Corporation
410
Settings
106
68 52 23
245
Navigation bar 414
Mini-touchlets 416

FIG. 61

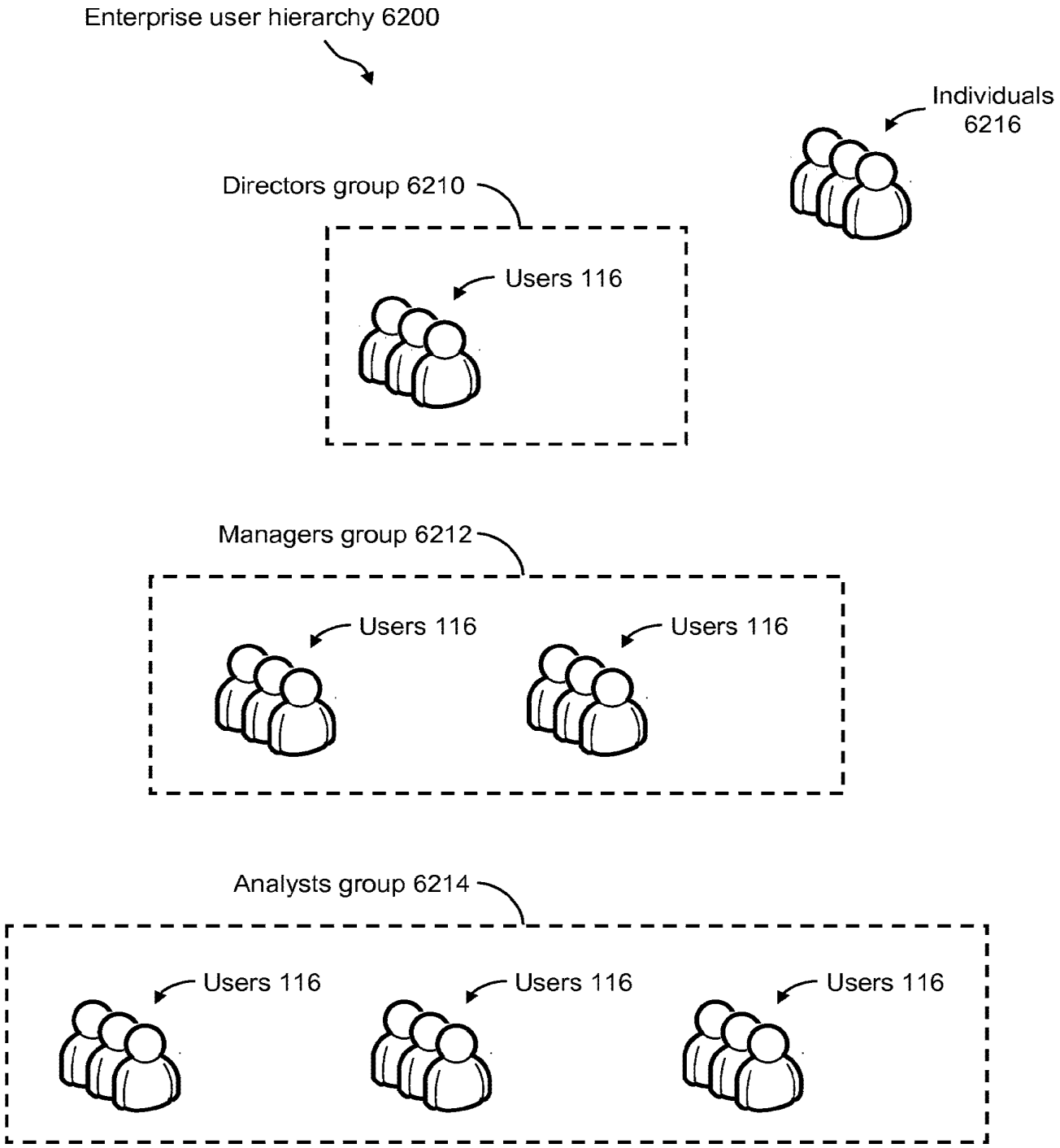

Enterprise user hierarchy 6200
Individuals 6216
Directors group 6210
Users 116
Managers group 6212
Users 116
Users 116
Analysts group 6214
Users 116
Users 116
Users 116

FIG. 62

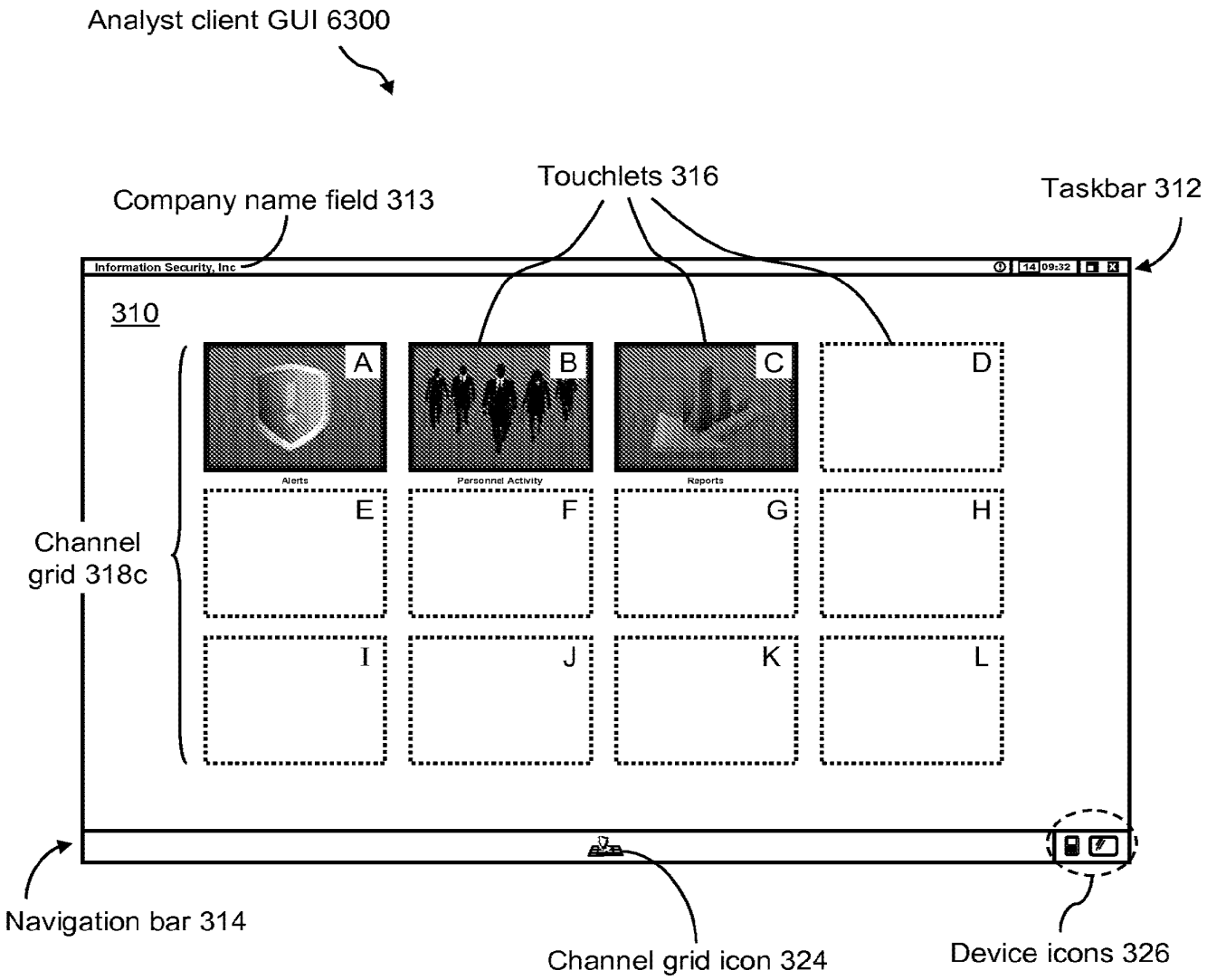

Analyst client GUI 6300
Company name field 313
Touchlets 316
Taskbar 312
Information Security, Inc
14 09:32
310
A
B
C
D
Alerts
Personnel Activity
Reports
E
F
G
H
I
J
K
L
Channel grid 318c
Navigation bar 314
Channel grid icon 324
Device icons 326

FIG. 63

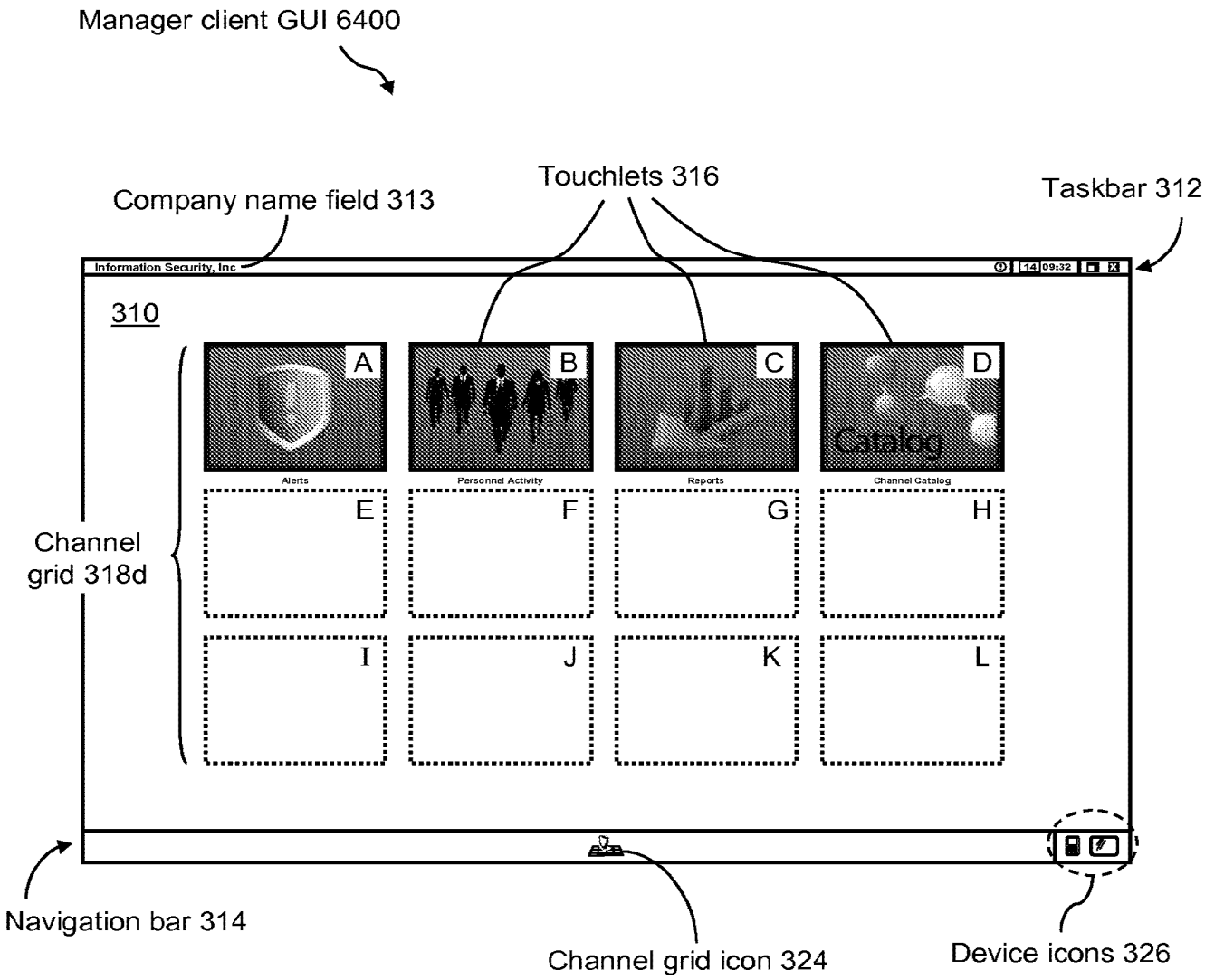

Manager client GUI 6400
Touchlets 316
Company name field 313
Taskbar 312
Information Security, Inc
14 09:32
310
A
B
C
D
Catalog
Alerts
Personnel Activity
Reports
Channel Catalog
E
F
G
H
I
J
K
L
Channel grid 318d
Navigation bar 314
Channel grid icon 324
Device icons 326

FIG. 64

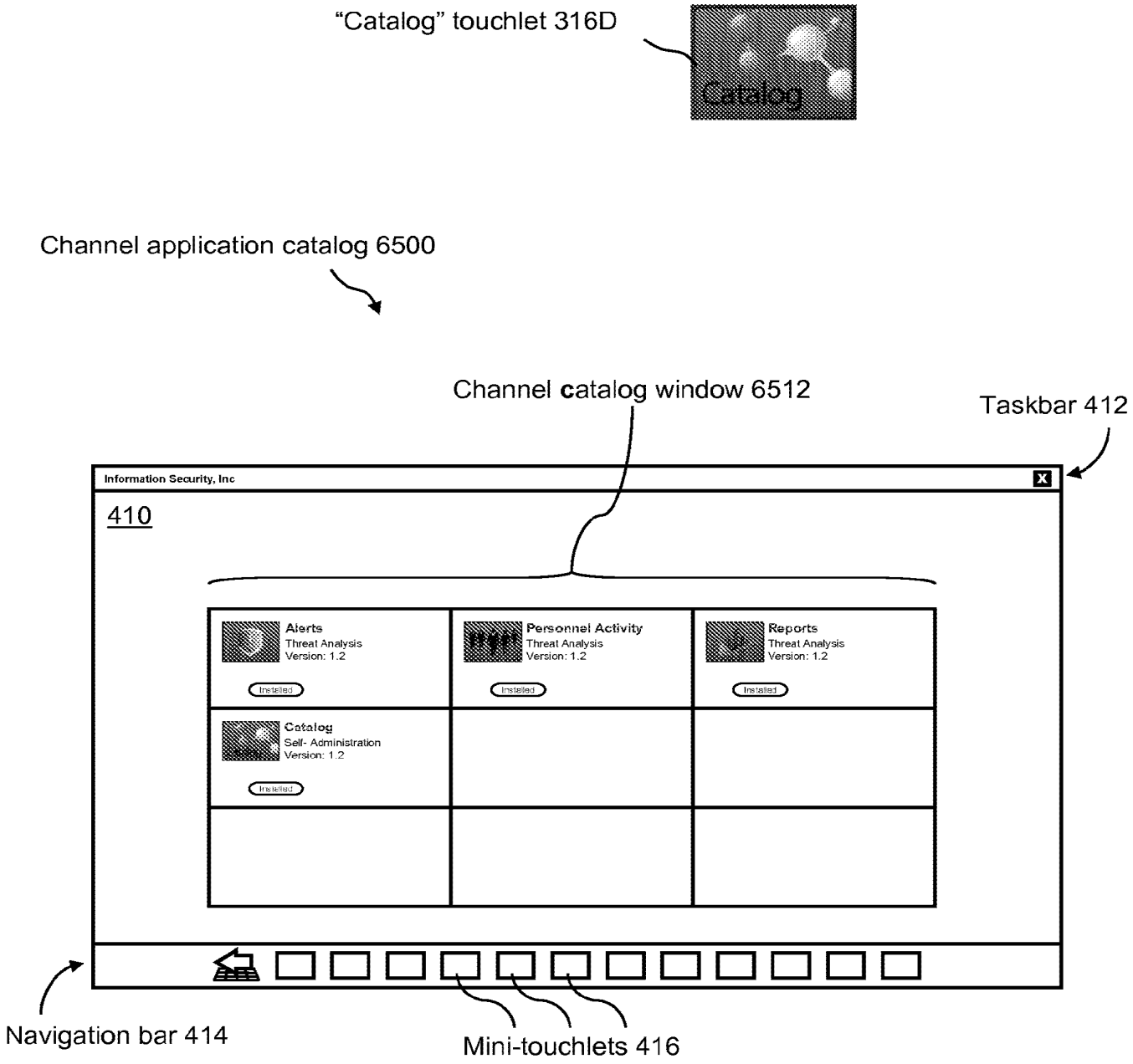

"Catalog" touchlet 316D
Catalog
Channel application catalog 6500
Channel catalog window 6512
Taskbar 412
Information Security, Inc
410
Alerts
Threat Analysis
Version: 1.2
Installed
Personnel Activity
Threat Analysis
Version: 1.2
Installed
Reports
Threat Analysis
Version: 1.2
Installed
Catalog
Self- Administration
Version: 1.2
Installed
Navigation bar 414
Mini-touchlets 416

FIG. 65

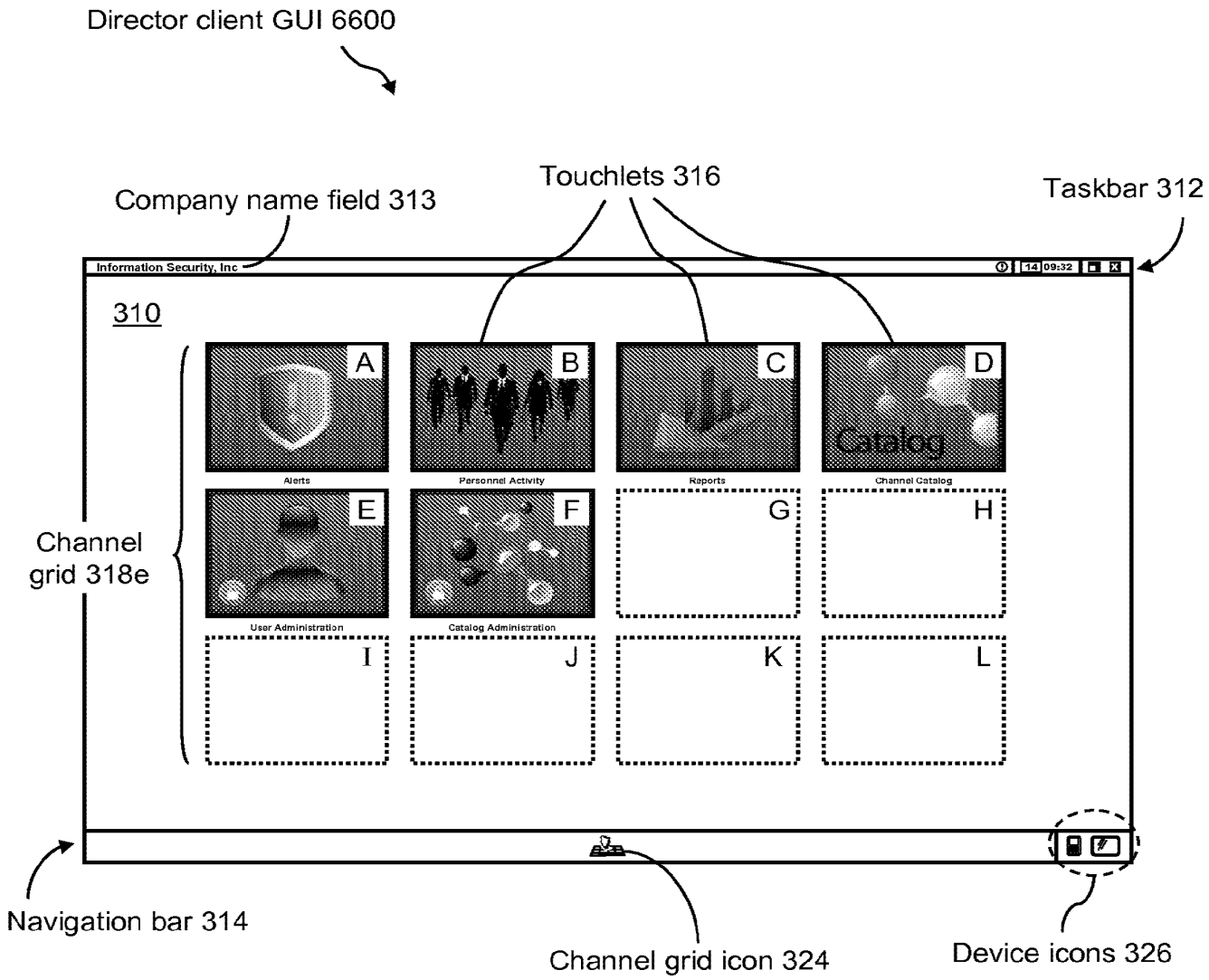

Director client GUI 6600
Company name field 313
Touchlets 316
Taskbar 312
Information Security, Inc
14 09:32
310
A
B
C
D
Catalog
Alerts
Personnel Activity
Reports
Channel Catalog
E
F
G
H
User Administration
Catalog Administration
I
J
K
L
Channel grid 318e
Navigation bar 314
Channel grid icon 324
Device icons 326

FIG. 66

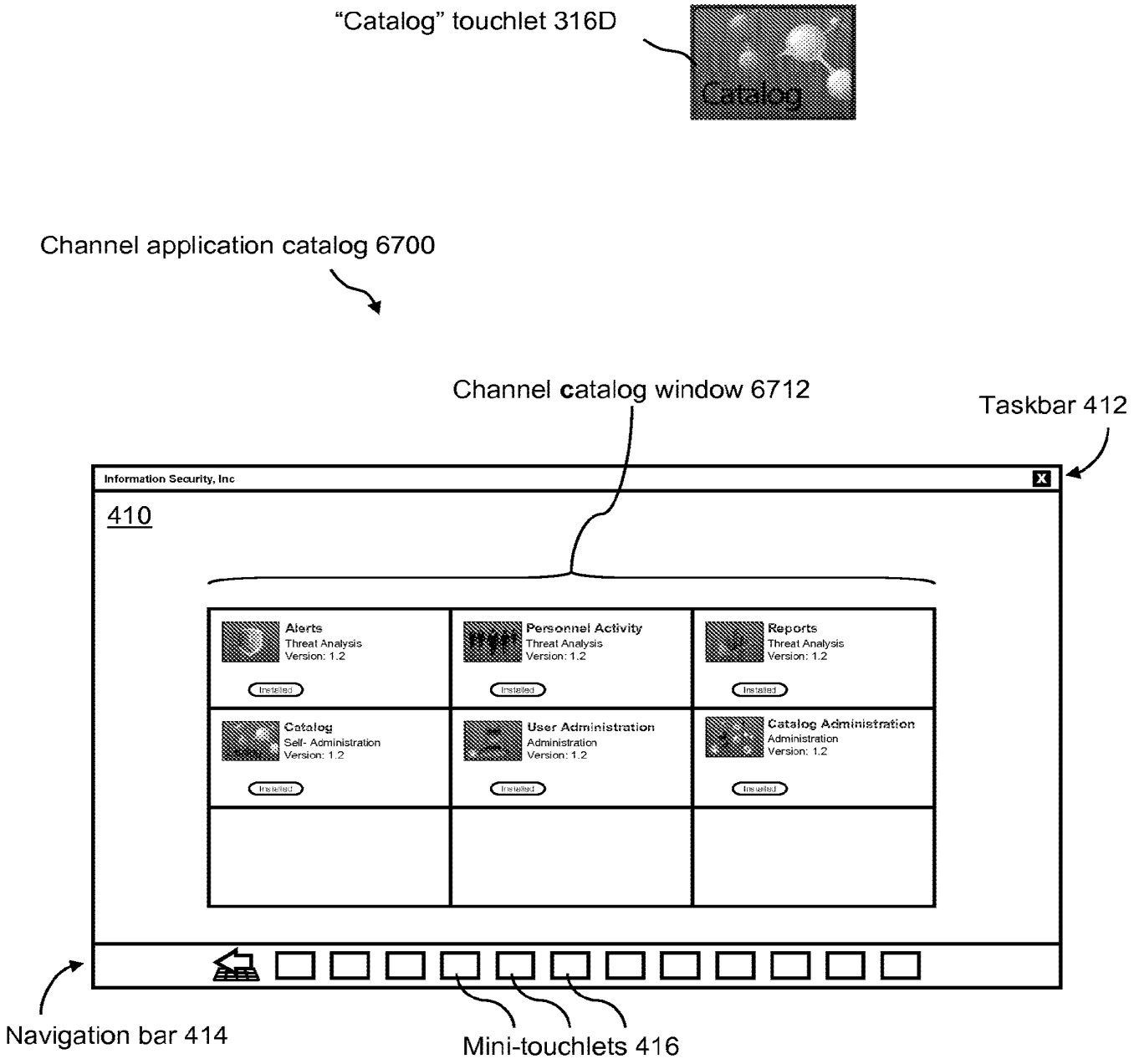

"Catalog" touchlet 316D
Catalog
Channel application catalog 6700
Channel catalog window 6712
Taskbar 412
Information Security, Inc
410
Alerts
Threat Analysis
Version: 1.2
Installed
Personnel Activity
Threat Analysis
Version: 1.2
Installed
Reports
Threat Analysis
Version: 1.2
Installed
Catalog
Self- Administration
Version: 1.2
Installed
User Administration
Administration
Version: 1.2
Installed
Catalog Administration
Administration
Version: 1.2
Installed
Navigation bar 414
Mini-touchlets 416

FIG. 67

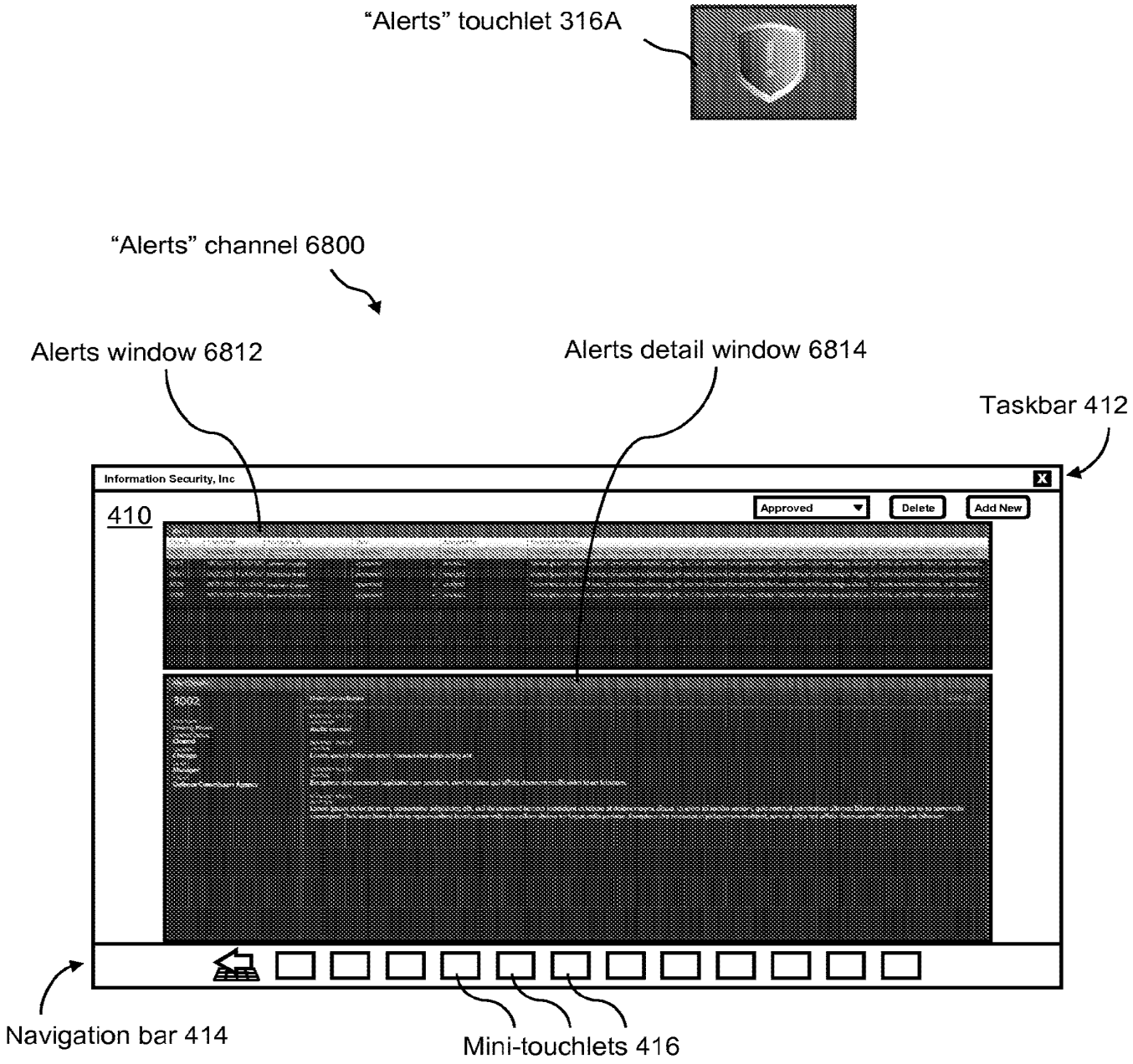

"Alerts" touchlet 316A
"Alerts" channel 6800
Alerts window 6812
Alerts detail window 6814
Taskbar 412
Information Security, Inc
410
Approved
Delete
Add New
Navigation bar 414
Mini-touchlets 416

FIG. 68

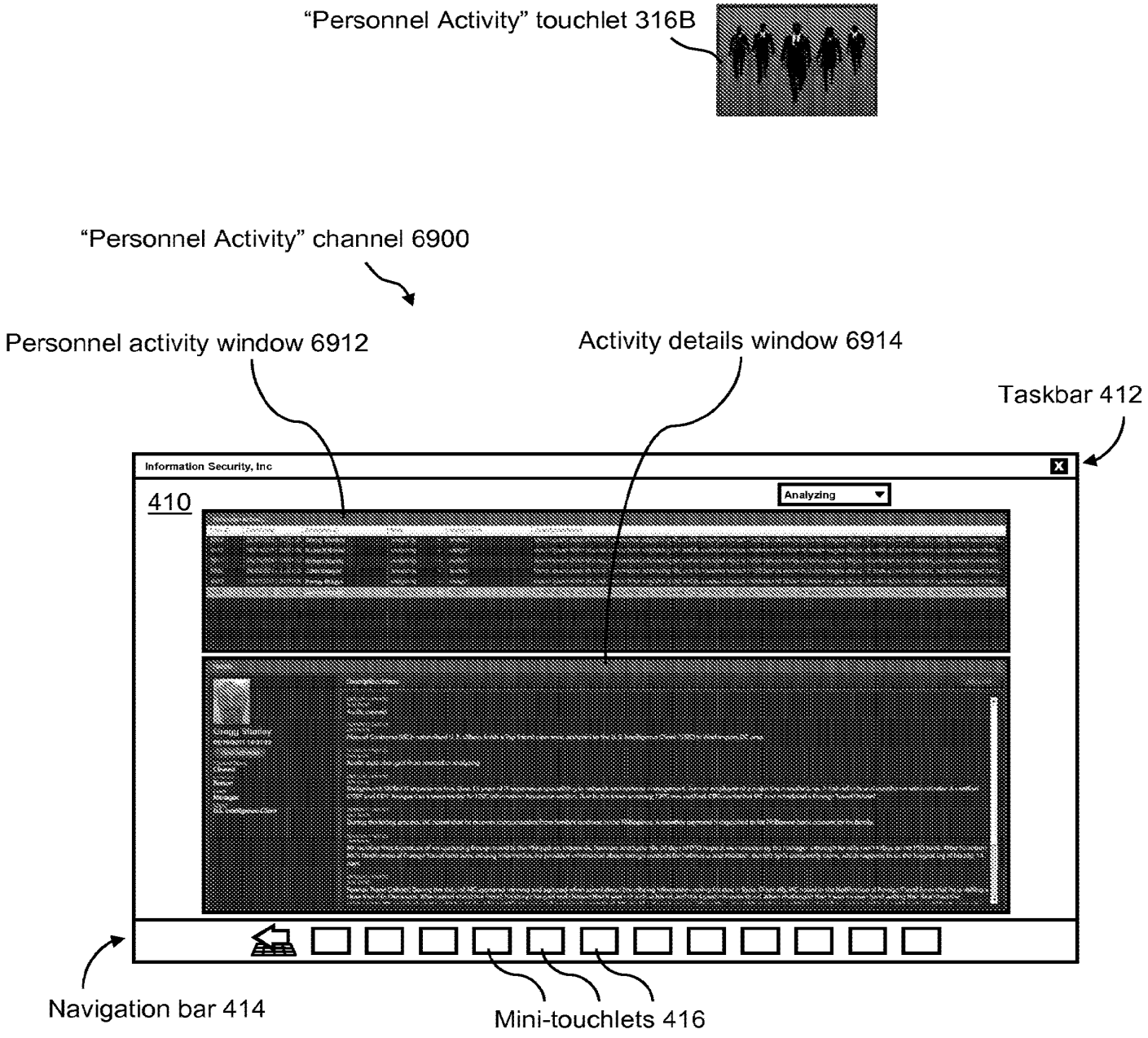

"Personnel Activity" touchlet 316B
"Personnel Activity" channel 6900
Personnel activity window 6912
Activity details window 6914
Taskbar 412
Information Security, Inc
410
Analyzing
Navigation bar 414
Mini-touchlets 416

FIG. 69

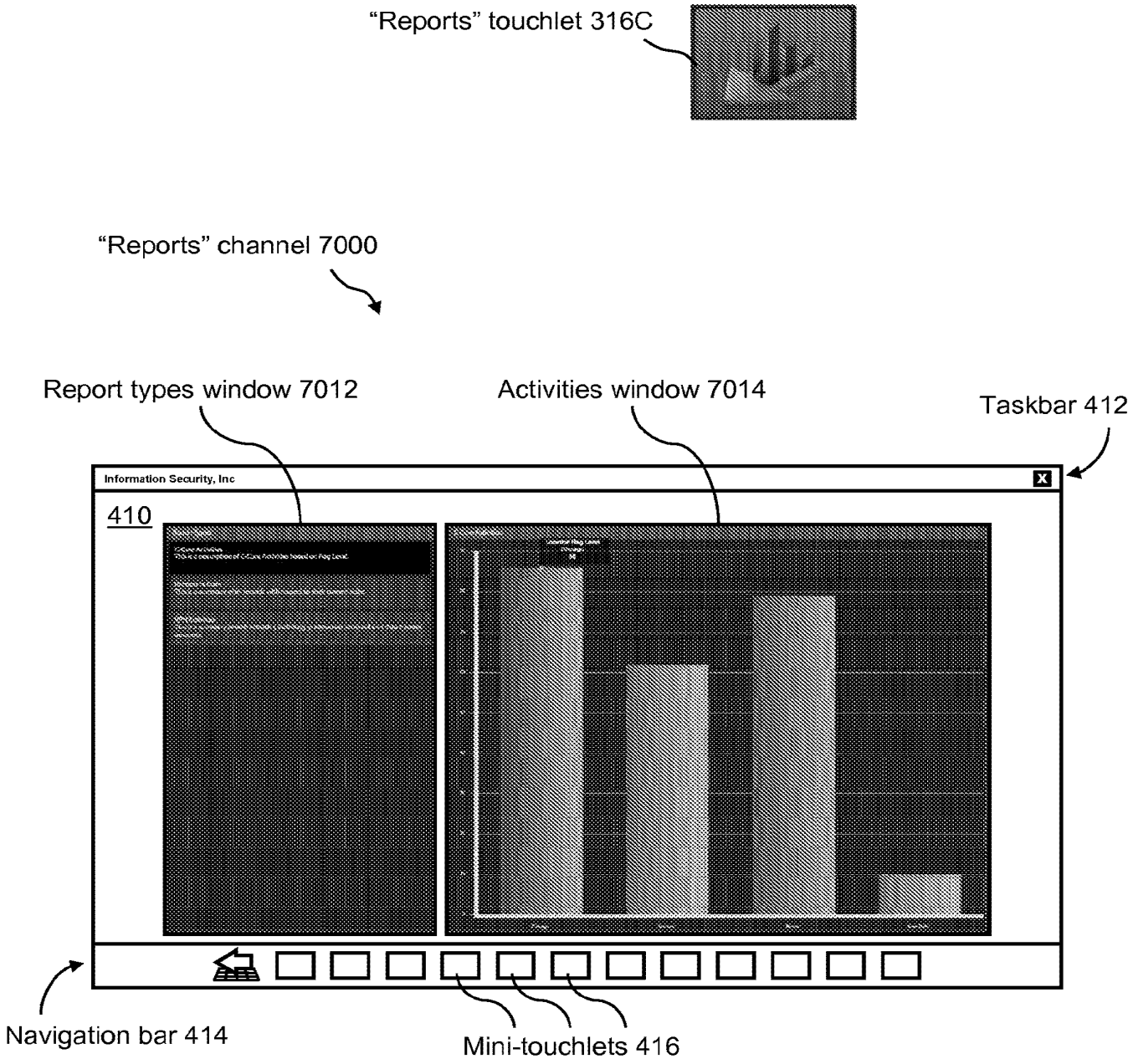

"Reports" touchlet 316C
"Reports" channel 7000
Report types window 7012
Activities window 7014
Taskbar 412
Information Security, Inc
410
Navigation bar 414
Mini-touchlets 416

FIG. 70

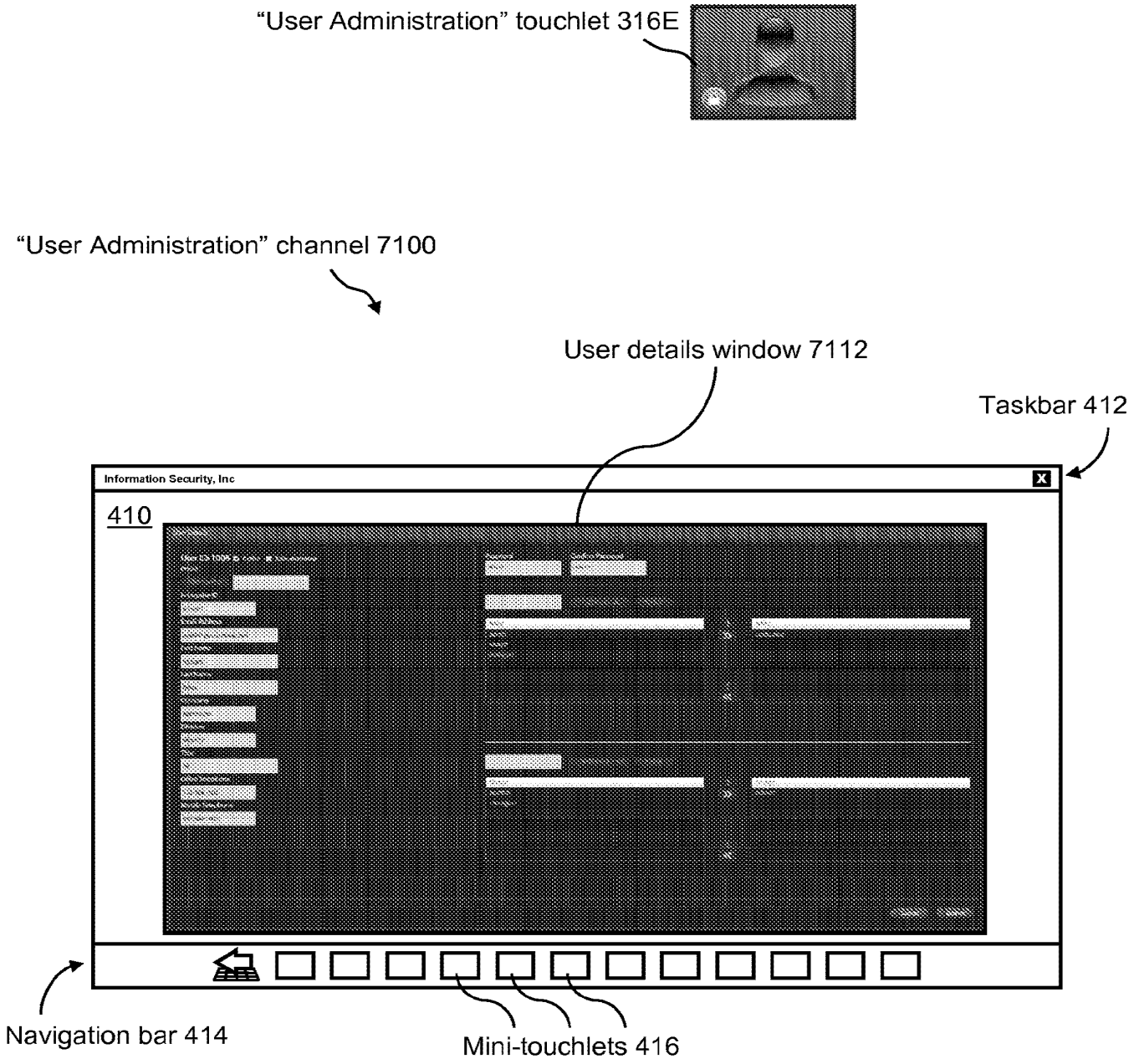

"User Administration" touchlet 316E
"User Administration" channel 7100
User details window 7112
Taskbar 412
Information Security, Inc
410
Navigation bar 414
Mini-touchlets 416

FIG. 71

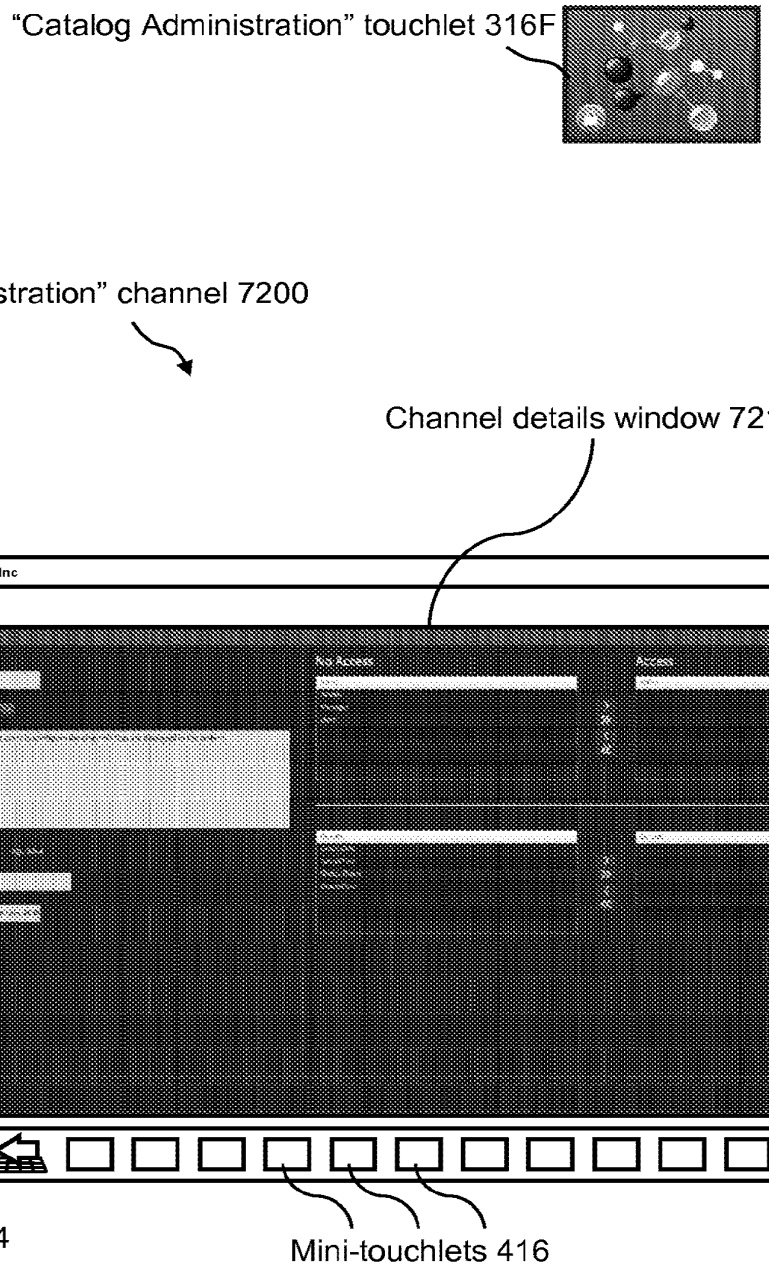

"Catalog Administration" touchlet 316F
"Catalog Administration" channel 7200
Channel details window 7212
Taskbar 412
Information Security, Inc
410
Navigation bar 414
Mini-touchlets 416

FIG. 72

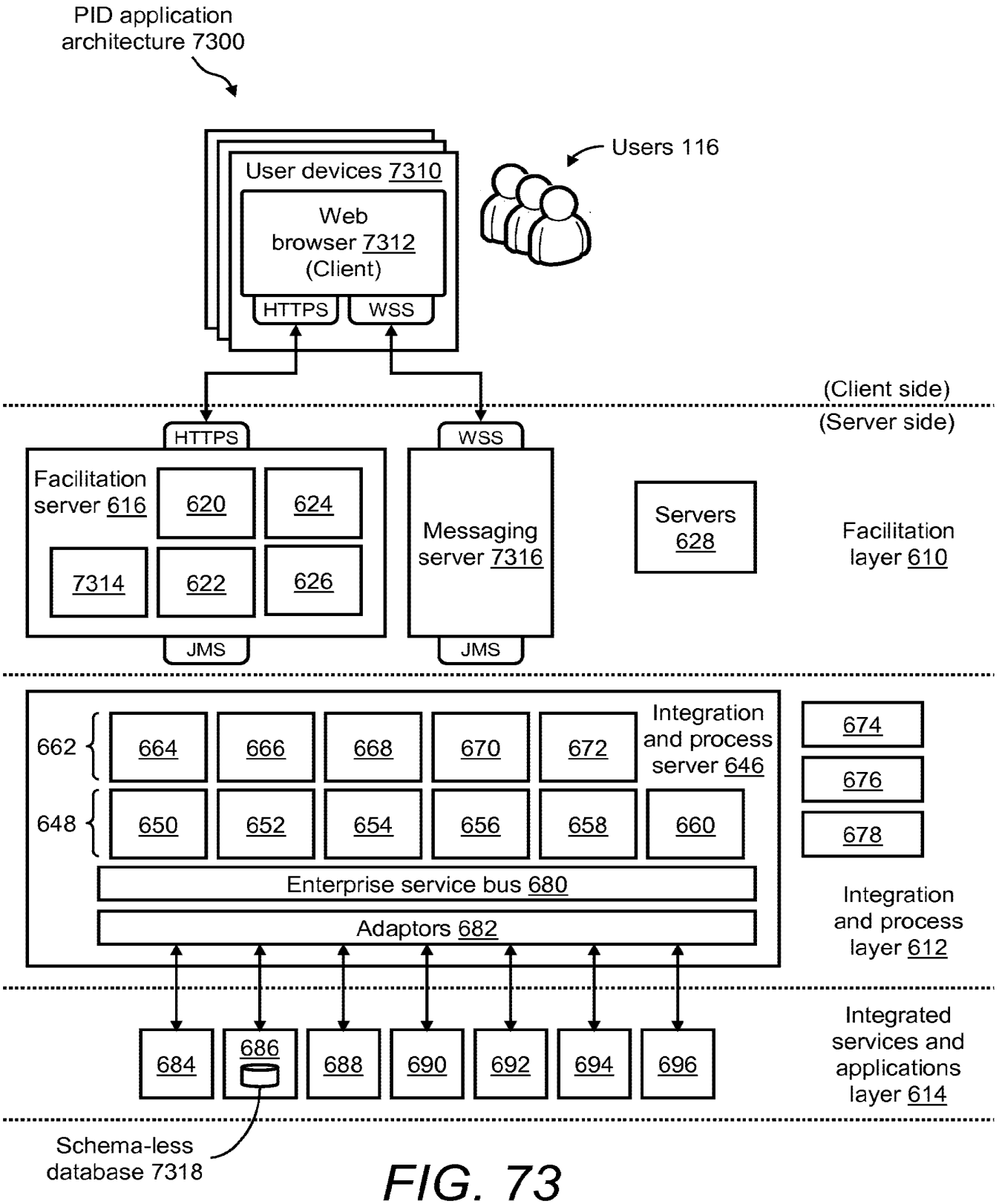

PID application architecture 7300
User devices 7310
Web browser 7312 (Client)
HTTPS
WSS
Users 116
(Client side)
(Server side)
HTTPS
WSS
Facilitation server 616
620
624
7314
622
626
JMS
Messaging server 7316
JMS
Servers 628
Facilitation layer 610
662
664
666
668
670
672
Integration and process server 646
648
650
652
654
656
658
660
Enterprise service bus 680
Adaptors 682
674
676
678
Integration and process layer 612
684
686
688
690
692
694
696
Integrated services and applications layer 614
Schema-less database 7318

FIG. 73

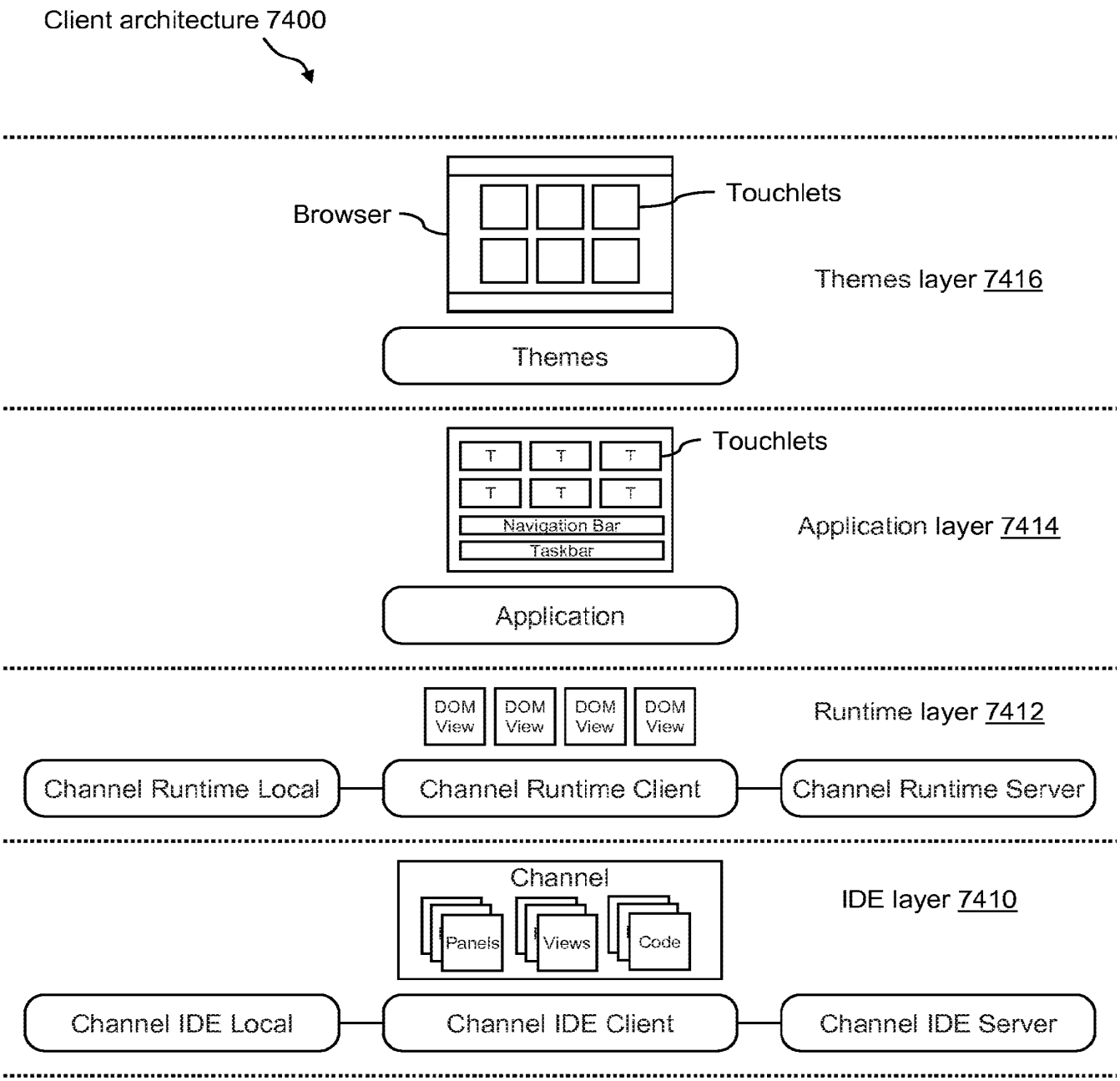

Client architecture 7400
Browser
Touchlets
Themes layer 7416
Themes
Touchlets
T
Navigation Bar
Taskbar
Application layer 7414
Application
DOM View
Runtime layer 7412
Channel Runtime Local
Channel Runtime Client
Channel Runtime Server
Channel
Panels
Views
Code
IDE layer 7410
Channel IDE Local
Channel IDE Client
Channel IDE Server

FIG. 74

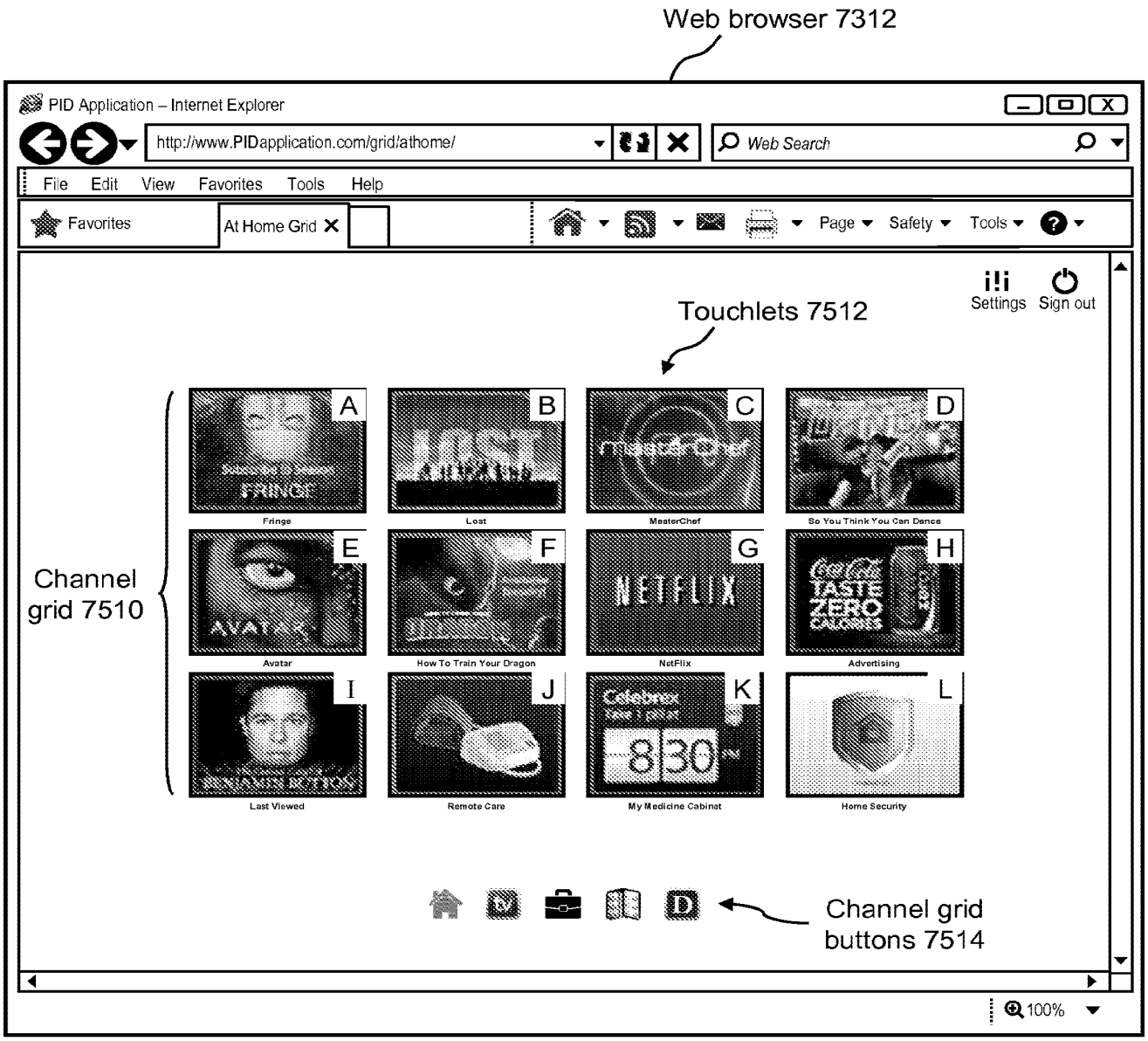

Web browser 7312
PID Application – Internet Explorer
http://www.PIDapplication.com/grid/athome/
Web Search
File Edit View Favorites Tools Help
Favorites
At Home Grid
Page Safety Tools
Settings
Sign out
Touchlets 7512
Channel grid 7510
A
B
C
D
Fringe
Lost
MasterChef
So You Think You Can Dance
E
F
G
H
Avatar
How To Train Your Dragon
NetFlix
Advertising
I
J
K
L
Last Viewed
Remote Care
My Medicine Cabinet
Home Security
Channel grid buttons 7514
100%

FIG. 75

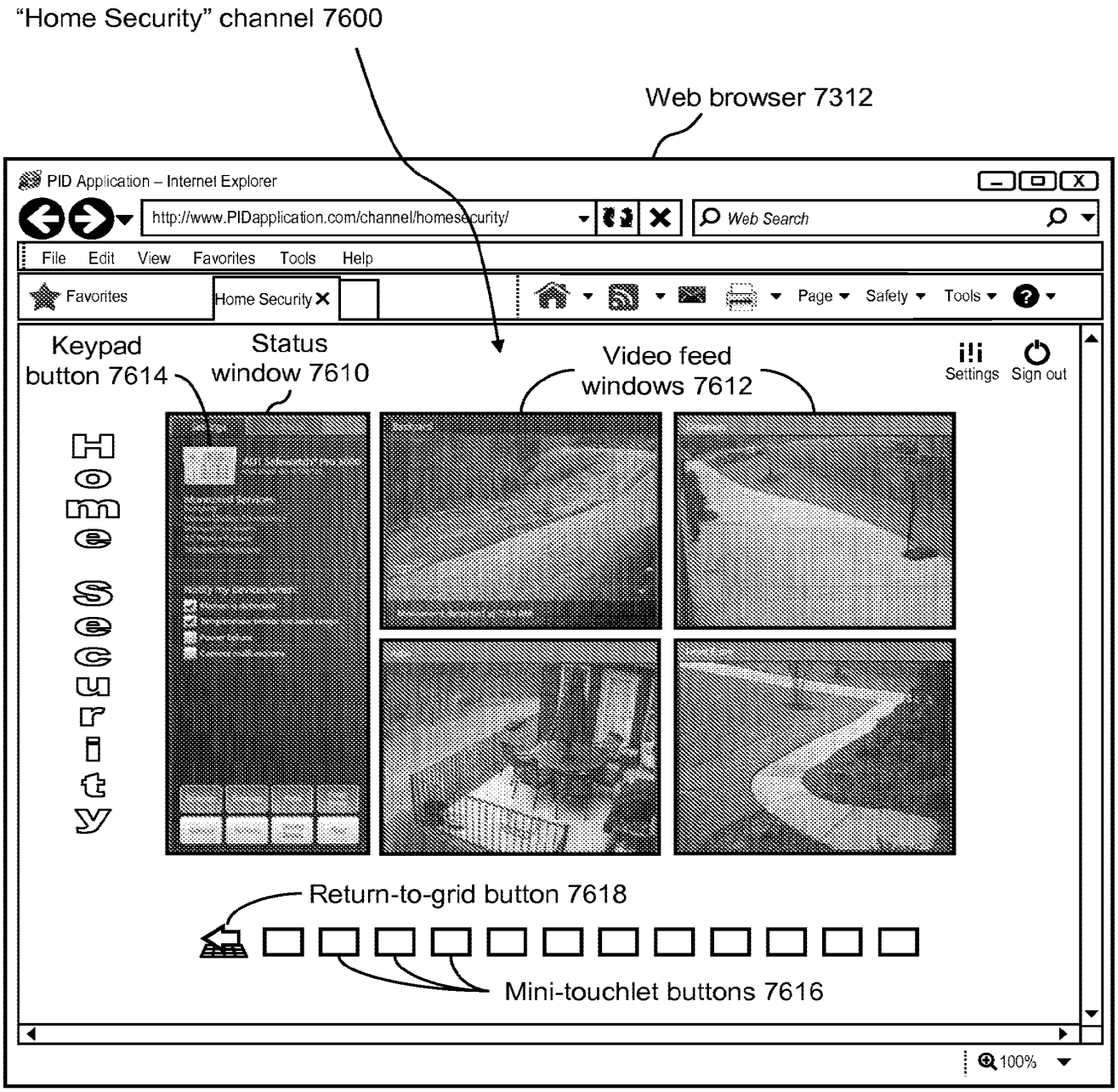

"Home Security" channel 7600
Web browser 7312
PID Application – Internet Explorer
http://www.PIDapplication.com/channel/homesecurity/
Web Search
File Edit View Favorites Tools Help
Favorites
Home Security
Page Safety Tools
Keypad button 7614
Status window 7610
Video feed windows 7612
Settings
Sign out
Home Security
Return-to-grid button 7618
Mini-touchlet buttons 7616
100%

FIG. 76

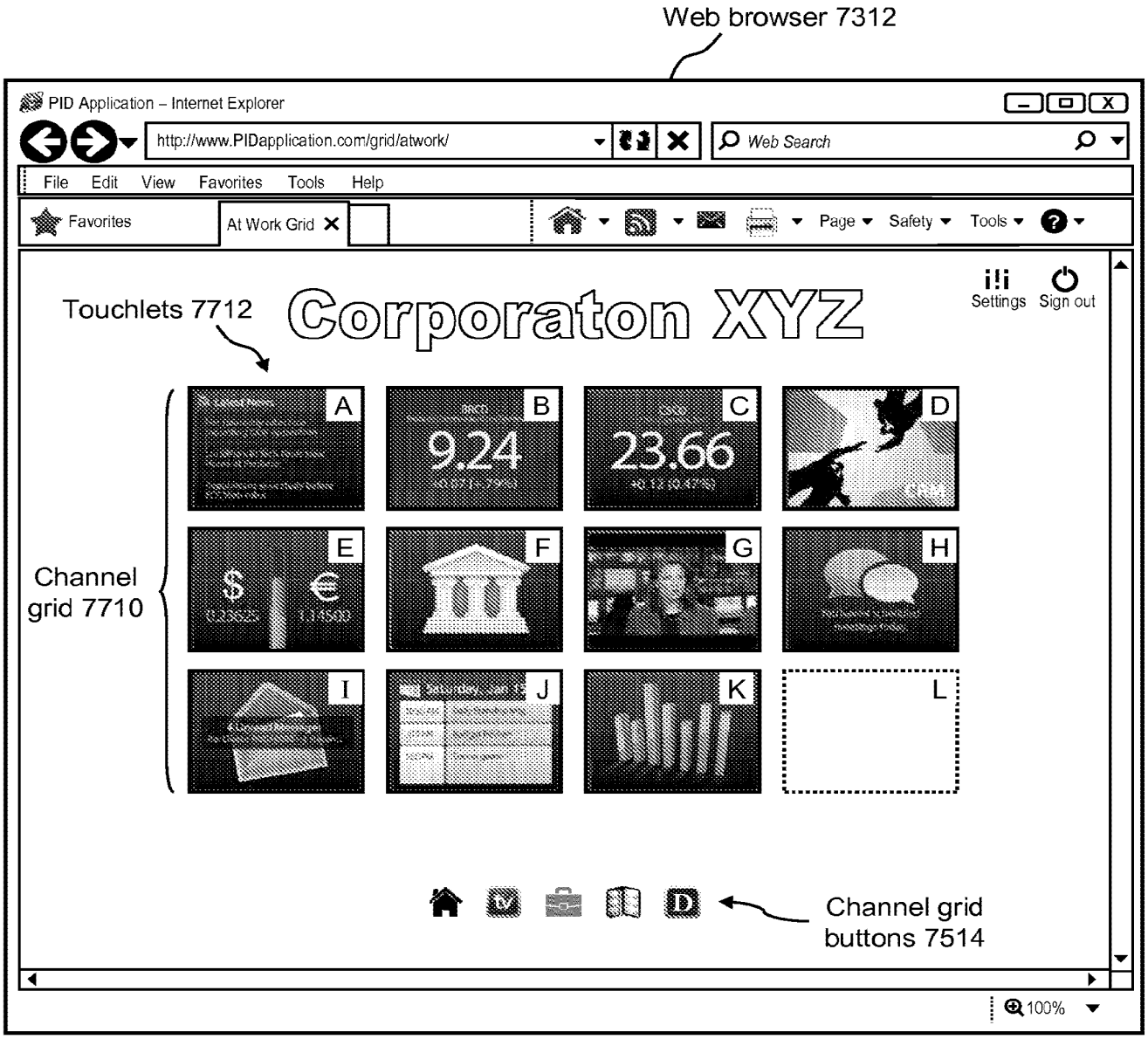

Web browser 7312
PID Application – Internet Explorer
http://www.PIDapplication.com/grid/atwork/
Web Search
File Edit View Favorites Tools Help
Favorites
At Work Grid
Page Safety Tools
Settings
Sign out
Touchlets 7712
Corporaton XYZ
Channel grid 7710
A
B
9.24
C
23.66
D
E
F
G
H
I
J
K
L
Channel grid buttons 7514
100%

FIG. 77

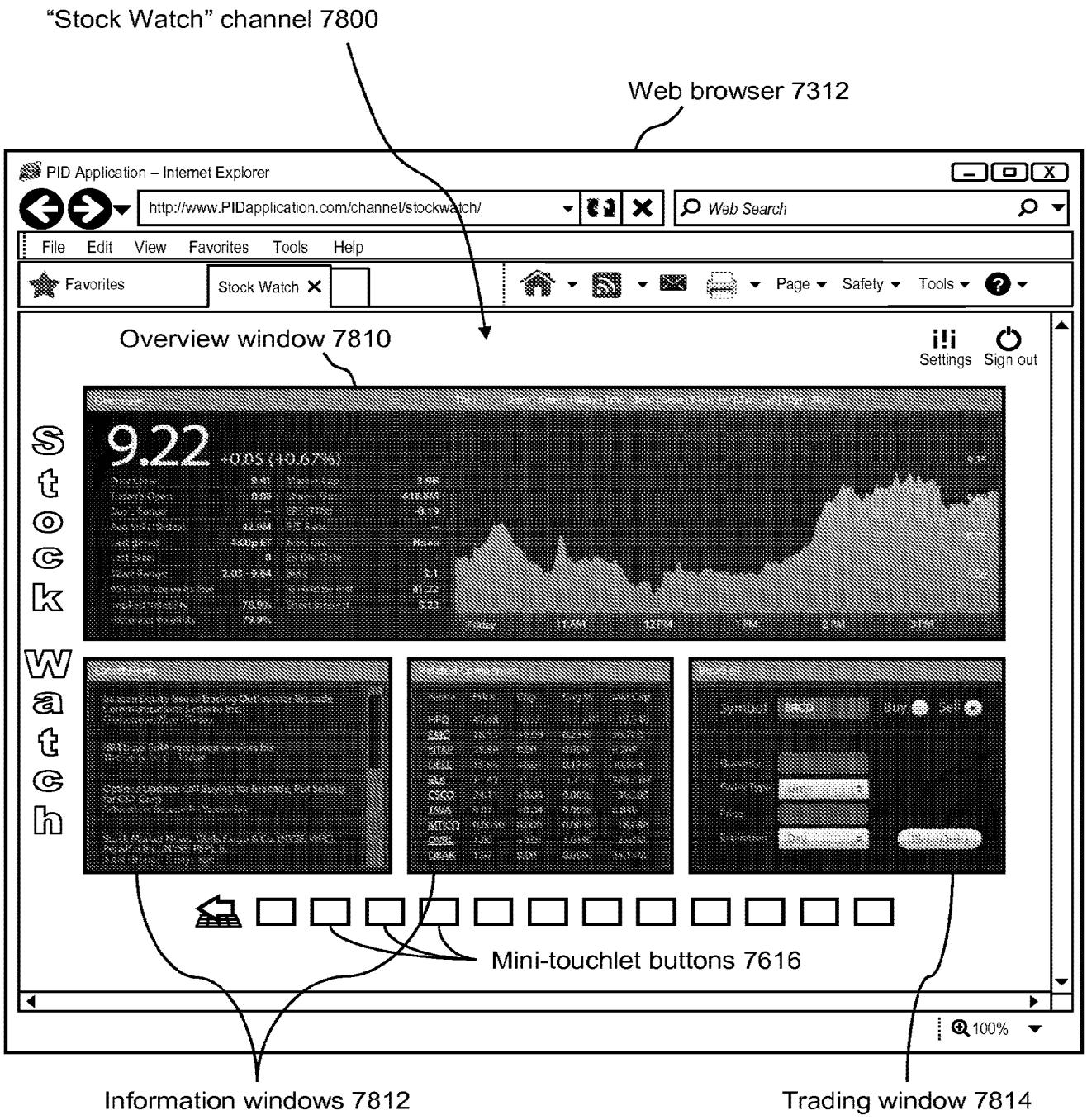

"Stock Watch" channel 7800
Web browser 7312
PID Application – Internet Explorer
http://www.PIDapplication.com/channel/stockwatch/
Web Search
File Edit View Favorites Tools Help
Favorites
Stock Watch
Page Safety Tools
Overview window 7810
Settings
Sign out
Stock Watch
9.22
+0.05 (+0.67%)
Mini-touchlet buttons 7616
100%
Information windows 7812
Trading window 7814

FIG. 78

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/022406

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04H 6/32 (2012.01)
USPC - 725/14
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - H04H 6/32, H04N 7/16, H04N 17/00 (2012.01)
USPC - 725/9, 725/14, 725/25

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent, Google Patents, and ACM

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2005/0114881 A1 (PHILYAW et al) 26 May 2005 (26.05.2005) entire document	1-20
Y	US 2010/0254370 A1 (JANA et al) 07 October 2010 (07.10.2010) entire document	1-20
Y	US 2010/0281107 A1 (FALLOWS et al) 04 November 2010 (04.11.2010) entire document	2-3
Y	US 2010/0031334 A1 (SHAIKH) 04 February 2010 (04.02.2010) entire document	18
A	US 2009/0025025 A1 (VLECK et al) 22 January 2009 (22.01.2009) entire document	1-20

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
30 April 2012	10 MAY 2012
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

RECEIVED
APR 21 2014
SHERIDAN ROSS PC
DOCKETING DEPT

From the INTERNATIONAL SEARCHING AUTHORITY

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

PCT

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

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-426-PCT	Date of mailing *(day/month/year)* 16 APR 2014 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/55494	International filing date *(day/month/year)* 18 August 2013 (18.08.2013)
Applicant Flextronics AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-426-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55494	International filing date *(day/month/year)* 18 August 2013 (18.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 4 sheets.

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

   ☐ the text is approved as submitted by the applicant.

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

PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION

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

   ☒ the text is approved as submitted by the applicant.

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

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

   a. the figure of the **drawings** to be published with the abstract is Figure No. 1a

   ☐ as suggested by the applicant.

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

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

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

VIZIO Ex. 1002, Page 3134 of 3573
VIZIO v. MMT, IPR2024-00722

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55494

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Group I: Claims 1-2; Group II: Claims 3-4; Group II: Claims 5-6; Group IV: Claims 7-8; Group V: Claims 9-10; Group VI: Claims 11-12; Group VII: Claims 13-14

-***-Please see Supplemental Page-***-

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1 and 2

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

VIZIO Ex. 1002, Page 3135 of 3573
VIZIO v. MMT, IPR2024-00722

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55494

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/0482 (2014.01)
USPC - 715/851
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) Classification(s): G06F 3/01, 3/048, 3/0482 (2014.01)
USPC Classification(s): 715/738, 851, 854; 348/14.03

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

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); ProQuest; IEEE; Google/Google Scholar

Keywords: intelligent, smart, hybrid, tv, television, reverse, back, navigation, user interface, second user interface, media, content

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012/0174039 A1 (RHOADS, J. et al.) 05 July 2012; claims 5, 6, 22, paragraphs [0006], [0026], [0028], [0049].	1-2
A	US 2012/0173979 A1 (LEE, K.) 05 July 2012; the entire document.	1-2
A	US 2011/0131506 A1 (CALISSENDORFF, E.) 02 June 2011; the entire document.	1-2

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

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
24 March 2014 (24.03.2014)	16 APR 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55494

-***-Continued from Box No. III - Observations where unity of invention is lacking-***-

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1-2 are directed toward a method for providing a user interface in an intelligent television.
Group II: Claims 3-4 are directed toward a method for providing a user interface in an intelligent television.
Group III: Claims 5-6 are directed toward a method for providing a user interface in an intelligent television.
Group IV: Claims 7-8 are directed toward a method for providing a user interface in an intelligent television.
Group V: Claims 9-10 are directed toward a method for providing a user interface in an intelligent television.
Group VI: Claims 11-12 are directed toward a method for providing one of two types of user interfaces in an intelligent television.
Group VII: Claims 13-14 are directed toward a method for providing a user interface in an intelligent television.

The inventions listed as Groups I-VII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The special technical features of Group I include a first series of user interfaces; receiving a back selection to reverse a navigation, which are not present in Groups II-VII.

The special technical features of Group II include a first navigation bar; a second navigation bar; rendering a horizontal navigation bar; and rendering a different user interface for the second navigation bar, which are not present in Groups I and III-VII.

The special technical features of Group III include a notification for a user; dismissing the notification; and providing a missing notification icon in the user interface, which are not present in Groups I-II and IV-VII.

The special technical features of Group IV include the user interface including at least two regions; and providing an action based on a location within one of the least two regions, which are not present in Groups I-III and V-VII.

The special technical features of Group V include determining a selection characteristic; determining a content characteristic; and based on the selection characteristic and the content characteristic, affecting change in the user interface, which are not present in Groups I-IV and VI-VII.

The special technical features of Group VI include determining a type of user interface selection; a first type of selection; and a second type of selection, which are not present in Groups I-V and VII.

The special technical features of Group VII include receiving a selection for an unrelated search that does not apply to the first content; and providing a search panel above a portion of the content to search for a second content, which are not present in Groups I-VI.

The common technical feature shared by Groups I-VII is a method and system for providing a user interface in an intelligent television, the method and system comprising: receiving, by a processor of the intelligent television, a selection associated with content in the intelligent television; presenting a second user interface different than a first user interface. However, this common feature is previously disclosed by US 2012/0210239 A1 (Kim). Kim discloses a method and system for providing a user interface in an intelligent television (a first GUI (user interface) displayed on a screen of a Smart TV; paragraphs [0121] and [0247]), the method and system comprising: receiving, by a processor (paragraph [0177]) of the intelligent television, a selection associated with content in the intelligent television (first user action (selection); paragraph [0249]); presenting a second user interface different than a first user interface (second GUI; paragraph [0249]).

Since the common technical feature is previously disclosed by the Kim reference, this common feature is not special and so Groups I-VII lack unity.

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VIZIO v. MMT, IPR2024-00722

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

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

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)* 16 APR 2014

Applicant's or agent's file reference	FOR FURTHER ACTION
6583-426-PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55494	18 August 2013 (18.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/0482 (2014.01)
USPC - 715/851

Applicant Flextronics AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	24 March 2014 (24.03.2014)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55494

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

VIZIO Ex. 1002, Page 3139 of 3573
VIZIO v. MMT, IPR2024-00722

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55494

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the appicable time limit:

   ☐ paid additional fees

   ☐ paid additional fees under protest and, where applicable, the protest fee

   ☐ paid additional fees under protest but the applicable protest fee was not paid

   ☒ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

   ☐ complied with

   ☒ not complied with for the following reasons:

Group I: Claims 1-2; Group II: Claims 3-4; Group II: Claims 5-6; Group IV: Claims 7-8; Group V: Claims 9-10; Group VI: Claims 11-12; Group VII: Claims 13-14

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1-2 are directed toward a method for providing a user interface in an intelligent television.
Group II: Claims 3-4 are directed toward a method for providing a user interface in an intelligent television.
Group III: Claims 5-6 are directed toward a method for providing a user interface in an intelligent television.
Group IV: Claims 7-8 are directed toward a method for providing a user interface in an intelligent television.
Group V: Claims 9-10 are directed toward a method for providing a user interface in an intelligent television.
Group VI: Claims 11-12 are directed toward a method for providing one of two types of user interfaces in an intelligent television.
Group VII: Claims 13-14 are directed toward a method for providing a user interface in an intelligent television.

The inventions listed as Groups I-VII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The special technical features of Group I include a first series of user interfaces; receiving a back selection to reverse a navigation, which are not present in Groups II-VII. The special technical features of Group II include a first navigation bar; a second navigation bar; rendering a horizontal navigation bar; and rendering a different user interface for the second navigation bar, which are not present in Groups I and III-VII. The special technical features of Group III include a notification for a user; dismissing the notification; and providing a missing notification icon in the user interface, which are not present in Groups I-II and IV-VII. The special technical features of Group IV include the user interface including at least two regions; and providing an action based on a location within one of the least two regions, which are not present in Groups I-III and V-VII. The special technical features of Group V include determining a selection characteristic; determining a content characteristic; and based on the selection characteristic and the content characteristic, affecting change in the user interface, which are not present in Groups I-IV and VI-VII. The special technical features of Group VI include determining a type of user interface selection; a first type of selection; and a second type of selection, which are not present in Groups I-V and VII. The special technical features of Group VII include receiving a selection for an unrelated search that does not apply to the first content; and providing a search panel above a portion of the content to search for a second content, which are not present in Groups I-VI.

The common technical feature shared by Groups I-VII is a method and system for providing a user interface in an intelligent television, the method and system comprising: receiving, by a processor of the intelligent television, a selection associated with content in the intelligent television; presenting a second user interface different than a first user interface. However, this common feature is previously disclosed by US 2012/0210239 A1 (Kim). Kim discloses a method and system for providing a user interface in an intelligent television (a first GUI (user interface) displayed on a screen of a Smart TV; paragraphs [0121] and [0247]), the method and system comprising: receiving, by a processor (paragraph [0177]) of the intelligent television, a selection associated with content in the intelligent television (first user action (selection); paragraph [0249]); presenting a second user interface different than a first user interface (second GUI; paragraph [0249]).

Since the common technical feature is previously disclosed by the Kim reference, this common feature is not special and so Groups I-VII lack unity.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

   ☐ all parts

   ☒ the parts relating to claims Nos. 1 and 2

VIZIO Ex. 1002, Page 3140 of 3573
VIZIO v. MMT, IPR2024-00722

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55494

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

1. Statement

Novelty (N)	Claims	None	YES
	Claims	1-2	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-2	NO
Industrial applicability (IA)	Claims	1-2	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-2 lack novelty under PCT Article 33(2) as being anticipated by US 2012/0174039 A1 to Rhoads et al. (hereinafter "Rhoads").

As to claim 1, Rhoads discloses a method for providing a user interface in an intelligent television, the method comprising: receiving, by a processor of the intelligent television, a selection associated with content in the intelligent television (receiving by the control circuitry of a smart TV comprising a microprocessor (receiving, by a processor of the intelligent television) a user selection of a media identifier from multiple media identifiers by the smart TV (a selection associated with content in the intelligent television), paragraphs [0006], [0026], [0049]); in response to the selection, presenting the user interface associated with the content, wherein the user interface is associated with a first series of user interfaces (in response to the user's indication (in response to the selection), the media guidance application may provide a display screen with media guidance data (presenting the user interface associated with the content); an options region may allow the user to access different types of content, media guidance application displays, and/or media guidance application features (wherein the user interface is associated with a first series of user interfaces), paragraph [0028]); receiving a back selection to reverse a navigation through the first series of user interfaces (the navigation indicator may allow a user to navigate back (receiving a back selection to reverse a navigation) through a hierarchical structure of media identifiers to the location of the media asset (through the first series of user interfaces), paragraph [0023]); and presenting a second user interface, wherein the second user interface is in a second series of user interfaces (a second navigation indicator is displayed (and presenting a second user interface) that represents a path navigating through the hierarchy of the interactive media guidance application to the second media asset (wherein the second user interface is in a second series of user interfaces), claims 5, 6), and wherein the first series of user interfaces is different from the second series of user interfaces (wherein the first navigation indicator comprises a first navigation cue that identifies which media identifier to select from a first portion of the plurality of media identifiers (wherein the first series of user interfaces) second navigation cue that identifies which media identifier to select from a second portion of the plurality of media identifier (is different from a second series of user interfaces), claim 22).

As to claim 2, Rhoads discloses an intelligent television system comprising: a memory operable to store social media data (memory storage may be used to store various types of content including social media content (a memory operable to store social media data), paragraphs [0025], [0051]); a processor in communication with the memory (a processor with an application stored in memory (a processor in communication with the memory), paragraph [0049]), the processor operable to: execute a user interface application (the processor executes instruction for the media guidance application (executes a user interface application), paragraph [0049]), the user interface application operable receive, by a processor of the intelligent television, a selection associated with content in the intelligent television (the media guidance application (the user interface application) receives by the control circuitry of a smart TV comprising a microprocessor (operable to receive, by a processor of the intelligent television) a user selection of a media identifier from multiple media identifiers by the smart TV (a selection associated with content in the intelligent television), paragraphs [0006], [0026], [0049]); in response to the selection, present the user interface associated with the content, wherein the user interface is associated with a first series of user interfaces (in response to the user's indication (in response to the selection), the media guidance application may provide a display screen with media guidance data (present the user interface associated with the content); an options region may allow the user to access different types of content, media guidance application displays, and/or media guidance application features (wherein the user interface is associated with a first series of user interfaces), paragraph [0028]); receive a back selection to reverse a navigation through the first series of user interfaces (the navigation indicator may allow a user to navigate back (receive a back selection to reverse a navigation) through a hierarchical structure of media identifiers to the location of the media asset (through the first series of user interfaces), paragraph [0023]); and present a second user interface, wherein the second user interface is in a second series of user interfaces (a second navigation indicator is displayed (and present a second user interface) that represents a path navigating through the hierarchy of the interactive media guidance application to the second media asset (wherein the second user interface is in a second series of user interfaces), claims 5, 6), and wherein the first series of user interfaces is different from the second series of user interfaces (wherein the first navigation indicator comprises a first navigation cue that identifies which media identifier to select from a first portion of the plurality of media identifiers (wherein the first series of user interfaces) second navigation cue that identifies which media identifier to select from a second portion of the plurality of media identifier (is different from a second series of user interfaces), claim 22).

Claims 1-2 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

VIZIO Ex. 1002, Page 3141 of 3573
VIZIO v. MMT, IPR2024-00722

PATENT COOPERATION TREATY

RECEIVED
APR 21 2014
SHERIDAN ROSS P.C.
DOCKETING DEPT.

From the INTERNATIONAL SEARCHING AUTHORITY

To: TADD F. WISON
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

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

(PCT Rule 44.1)

	Date of mailing *(day/month/year)* 17 APR 2014
Applicant's or agent's file reference 6583-434-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US2013/055342	International filing date *(day/month/year)* 16 August 2013
Applicant FLEXTRONICS AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-434-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US2013/055342	International filing date *(day/month/year)* 16 August 2013	(Earliest) Priority Date *(day/month/year)* 17 August 2012
Applicant FLEXTRONICS AP, LLC		

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

This international search report consists of a total of 5 sheets.

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

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☒ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 14

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

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VIZIO v. MMT, IPR2024-00722

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055342

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:
See Extra Sheet.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
1-2

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

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VIZIO v. MMT, IPR2024-00722

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2013/055342

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - H04N 5/445 (2014.01)
USPC - 725/56
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) - G06F 3/033; H04N 5/445; 21/262; H04H 6/32 (2014.01)
USPC -345/156, 682; 725/56

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
CPC - G06F 3/033; H04N 5/445; 21/262; H04H 6/32 (2014.01)

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Google, Orbit, Google Patents

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2012/0144416 A1 (WETZER et al) 07 June 2012 (07.06.2012) entire document	1, 2
A	US 2012/0154449 A1 (RAMAGEM et al) 21 June 2012 (21.06.2012) entire document	1, 2
A	WO 2012/103121 A1 (WETZER et al) 02 August 2012 (02.08.2012) entire document	1, 2
A	US 2011/0246495 A1 (MALLINSON) 06 October 2011 (06.10.2011) entire document	1, 2

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
09 April 2014	17 APR 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/210 (second sheet) (July 2009)

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/US2013/055342

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-2, drawn to a method for providing an indication of a linkage to a poster of social media, an intelligent television, comprising: providing a first visual indicia for a first posting and a second visual indicia for a second posting wherein the first and second visual indicia are different and indicate the linkage between a first poster of the first posting or a second poster of the second posting.
Group II, claims 3-4, drawn to a method for providing a rooting section for an intelligent television, comprising: based on a received selection of sporting content, providing a first visual representation of one or more of the social media postings associated with a first team affiliation and providing a second visual representation of one or more of the social media postings associated with a second team affiliation.
Group III, claims 5-6, drawn to a method for providing social media on an intelligent television, comprising: identifying a user of the intelligent television and registering the user with one or more social media sites, and providing social media posting associated with the user on an user interface of the intelligent television.
Group IV, claims 7-8, drawn to a method for providing social media information on an intelligent television, comprising: determining the availability of social media for the selected programming and providing a visual representation of one or more of the social media postings associated with selected programming.
Group V, claims 9-10, drawn to a method for providing social media information on an intelligent television, comprising: receiving a second selection to change a volume of social media, and changing an amount of social media presented in response to the second selection.
Group VI, claims 11-12, drawn to a method for providing social media information on an intelligent television, the comprising: the intelligent television discovering a device also connected to the network, connecting the device to the intelligent television, a user pushes a social media message from the device, and displaying the social media message on the intelligent television.
Group VII, claims 13-14, drawn to a method for providing media on an intelligent television, comprising: retrieving available media from one or more social media sources and from one or more local sources and presenting together media from both one or more social media sources and one or more local sources.
Group VIII, claims 15-16, drawn to a method for providing social media on an intelligent television, comprising: receiving a programming change input and providing determining the type of programming changing input one of two or more user interfaces that include a presentation of social media information.
Group IX, claims 17-18, drawn to a method for providing social media on an intelligent television, comprising: pausing the media playback on the intelligent television while the media continues to be presented in real-time and during the pause, receiving one or more social media postings associated with the media, and storing the one or more social media postings in a time sequence correlated to the media presentation.
Group X, claims 19-20, drawn to a method for providing social media on an intelligent television, comprising: receiving a selection of a control device on a remote control associated with an intelligent television and determining whether the selection is a first type or a second type, and providing a first user interface at the bottom of a display of the intelligent television wherein the first user interface provides at least one social media posting if the selection is a first type, and providing a second user interface at the top of the display of the intelligent television, wherein the second user interface provides information associated with content being presented in the display if the selection is a second type.
Group XI, claims 21-22, drawn to a method for publishing social media by an intelligent television, the comprising: receiving a selection of a control device associated with the intelligent television and automatically publishing information about the content to a social media site based on the selection.
Group XII, claim 23-24, drawn to a method for providing social media on an intelligent television, comprising: determining a state associated with a social media posting and providing a user interface for the social media application, having the social media posting displayed based on the state.

The inventions listed as Groups I-XII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: providing a first visual indicia for a first posting and a second visual indicia for a second posting wherein the first and second visual indicia are different and indicate the linkage between a first poster of the first posting or a second poster of the second posting as claimed therein is not present in the invention of Groups II-XII. The special technical feature of the Group II invention: based on a received selection of sporting content, providing a first visual representation of one or more of the social media postings associated with a first team affiliation and providing a second visual representation of one or more of the social media postings associated with a second team affiliation as claimed therein is not present in the invention of Groups I, III-XII. The special technical feature of the Group III invention: identifying a user of the intelligent television and registering the user with one or more social media sites, and providing social media posting associated with the user on an user interface of the intelligent television as claimed therein is not present in the invention of Groups I, II, IV-XII. The special technical feature of the Group IV invention: determining the availability of social media for the selected programming and providing a visual representation of one or more of the social media postings associated with selected programming as claimed therein is not present in the invention of Groups I, II, III or V-XII. The special technical feature of the Group V invention: receiving a second selection to change a volume of social media, and changing an amount of social media presented in response to the second selection as claimed therein is not present in the invention of Groups I-IV, VI-XII. The special technical feature of the Group VI invention: the intelligent television discovering a device also connected to the network, connecting the device to the intelligent television, a user pushes a social media message from the device, and displaying the social media message on the intelligent television as claimed therein is not present in the invention of Groups I-V, VII-XII. The special technical feature of the Group VII invention: retrieving available media from one or more social media sources and from one or more local sources and presenting together media from both one or more social media sources and one or more local sources as claimed therein is not present in the invention of Groups I-VI or VIII-XII. The special technical feature of the Group VIII invention: receiving a programming change input and providing determining the type of programming changing input one of two or more user interfaces that include a presentation of social media information as claimed therein is not present in the invention of Groups I-VII or IX-XII.

[See Continuation on Next Extra Sheet]

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VIZIO v. MMT, IPR2024-00722

The special technical feature of the Group IX invention: pausing the media playback on the intelligent television while the media continues to be presented in real-time and during the pause, receiving one or more social media postings associated with the media, and storing the one or more social media postings in a time sequence correlated to the media presentation as claimed therein is not present in the invention of Groups I-VIII or X-XII. The special technical feature of the Group X invention: receiving a selection of a control device on a remote control associated with an intelligent television and determining whether the selection is a first type or a second type, and providing a first user interface at the bottom of a display of the intelligent television wherein the first user interface provides at least one social media posting if the selection is a first type, and providing a second user interface at the top of the display of the intelligent television, wherein the second user interface provides information associated with content being presented in the display if the selection is a second type as claimed therein is not present in the invention of Groups I-IX or XI-XII. The special technical feature of the Group XI invention: receiving a selection of a control device associated with the intelligent television and automatically publishing information about the content to a social media site based on the selection as claimed therein is not present in the invention of Groups I-X or XII. The special technical feature of the Group XII invention: determining a state associated with a social media posting and providing a user interface for the social media application, having the social media posting displayed based on the state as claimed therein is not present in the invention of Groups I-XI.

Groups I- XII lack unity of invention because even though the inventions of these groups require the technical feature of visual representation of social media posting on an intelligent TV, this technical feature is not a special technical feature as it does not make a contribution over the prior art in view of US 2012/0154449 A1 (RAMAGEM et al) 21 June 2012 (21.06.2012).

US 2012/0154449 A1 to RAMAGEM et al discloses a visual whiteboard as an application or component for operation on a smart TV (para. 0007) and social networking techniques, devices, systems and software which can be used in conjunction with social networks associated with a television (para 0002) and teaches visual representation of social media posting on an intelligent TV (content identifiers or other group information can be posted to the visual whiteboard by the authorized users for subsequent display on the corresponding smart [intelligent] TV, para 0007; receiving media items from various media sources and service providers, para 0021; mechanism for direct sharing of information via the social graph ...finding a funny cat video posted on a large site like Digg, para 0038; that a content identifier (hyperlink to a video), and various notes posted to the visual whiteboard by authorized group members, para 0055; see also para 0030, 0031 for using the visual whiteboard operating on an intelligent TV and enabling an active user engaging in various aspects of social networking on the intelligent TV, including searching for updates from social networks [that implies receiving and visual representation of social postings on the intelligent TV).

Since none of the special technical features of the Group I-XII inventions are found in more than one of the inventions, unity of invention is lacking.

VIZIO Ex. 1002, Page 3147 of 3573
VIZIO v. MMT, IPR2024-00722

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: TADD F. WISON
SHERIDAN ROSS P.C.
1560 BROADWAY
SUITE 1200
DENVER, CO 80202

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	17 APR 2014
Applicant's or agent's file reference 6583-434-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055342	16 August 2013	17 August 2012

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/445 (2014.01)
USPC - 725/56

Applicant FLEXTRONICS AP, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [X] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1*bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	09 April 2014	Blaine R. Copenheaver PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055342

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

VIZIO Ex. 1002, Page 3149 of 3573
VIZIO v. MMT, IPR2024-00722

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055342

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the appicable time limit:

   ☐ paid additional fees

   ☐ paid additional fees under protest and, where applicable, the protest fee

   ☐ paid additional fees under protest but the applicable protest fee was not paid

   ☒ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

   ☐ complied with

   ☒ not complied with for the following reasons:

See Supplemental Box

4. Consequently, this opinion has been established in respect of the following parts of the international application:

   ☐ all parts

   ☒ the parts relating to claims Nos. 1-2

Form PCT/ISA/237 (Box No. IV) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055342

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	None	YES
	Claims	1, 2	NO
Inventive step (IS)	Claims	None	YES
	Claims	1, 2	NO
Industrial applicability (IA)	Claims	1, 2	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-2 lack novelty under PCT Article 33(2) as being anticipated by Wetzer et al., hereinafter referred to as Wetzer.

Regarding claims 1, 2, Wetzer discloses a method for providing an indication of a linkage to a poster of social media [claim 1] (further fig.29 F shows a gettogether session interface wherein participants who accept the invitation join a session, that allows participants to chat with each other through the text chat interface, further the interface shows messages 2927 between users, wherein a message from a first user is displayed with the name of that user i.e. "Jennifer Coulter" [first visual indicia indicate the linkage between a first poster of the first posting] and a message from a second user is displayed with the name of that user i.e. "Mark Daniels", para 0209, 0210), the method comprising, and an intelligent television (user device 118 (e.g., an intelligent TV) is a user platform operated by a user to facilitate display of and interaction with secure user-centric information, Fig 1, para 0050, 0059) system [claim 2] comprising: a memory operable to store social media data; a processor in communication with the memory, the processor operable to (user devices 118 serve as a platform operated by a user 116 to facilitate display and interaction, the user devices 118 of user 116 includes a portable device/tablet and an intelligent television, mobile device, para 0059; fig.22 shows an alert notification appears in the display of the tablet device 1310, indicating that a friend is also watching Fringe [an intelligent television used to view social media notifications is interpreted as stores social media data with a processor in communication to a memory], para 0014, 0195): receiving, by a processor of an intelligent television (user device 118 (e.g., an intelligent TV) is a user platform operated by a user to facilitate display of and interaction with secure user-centric information, Fig 1, para 0050, 0059), two or more social media postings (user devices 118 serve as a platform operated by a user 116 to facilitate display and interaction, the user devices 118 of user 116 includes a portable device/tablet and an intelligent television, mobile device, para 0059; fig.29A shows a user 116 watching a show on TV 1340 using a tablet device 1310, further fig.29C shows an interface where a user invites other users/participants who are contacts of the user 116, para 0202, 0203; further fig.29 F shows a gettogether session interface wherein participants who accept the invitation join a session, that allows participants to chat with each other through the text chat interface, further the interface shows messages 2927 between users "Jennifer Coulter" and "Mark Daniels" [two or more social media postings] , para 0209, 0210); execute a user interface application in communication with the social media application, the user interface application operable to [claim 2] (further fig.29 F shows a gettogether session interface wherein participants who accept the invitation join a session, that allows participants to chat with each other through the text chat interface, further the interface shows messages 2927 between users "Jennifer Coulter" and "Mark Daniels" [two or more social media postings] , para 0209, 0210): providing a visual representation of the social media postings (further fig.29 F shows a gettogether session interface wherein participants who accept the invitation join a session, that allows participants to chat with each other through the text chat interface, further the interface shows messages 2927 between users "Jennifer Coulter" and "Mark Daniels" [providing a visual representation of two or more social media postings] , para 0209, 0210); in the visual representation, providing a first visual indicia for a first posting and a second visual indicia for a second posting (further fig.29 F shows a gettogether session interface wherein participants who accept the invitation join a session, that allows participants to chat with each other through the text chat interface, further the interface shows messages 2927 between users, wherein a message from a first user is displayed with the name of that user i.e. "Jennifer Coulter" [first visual indicia for a first posting] and a message from a second user is displayed with the name of that user i.e. "Mark Daniels" [second visual indicia for a second posting], para 0209, 0210); and wherein the first and second visual indicia are different and indicate the linkage between a first poster of the first posting or a second poster of the second posting (further fig.29 F shows a gettogether session interface wherein participants who accept the invitation join a session, that allows participants to chat with each other through the text chat interface, further the interface shows messages 2927 between users, wherein a message from a first user is displayed with the name of that user i.e. "Jennifer Coulter" [first visual indicia indicate the linkage between a first poster of the first posting] and a message from a second user is displayed with the name of that user i.e. "Mark Daniels" [second visual indicia different from first visual indicia], the chat session messages between the users provides the users to communicate with each other by sending texts, pictures and videos, para 0209, 0210).

Claims 1-2 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

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VIZIO v. MMT, IPR2024-00722

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US2013/055342

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fees must be paid.

Group I, claims 1-2, drawn to a method for providing an indication of a linkage to a poster of social media, an intelligent television comprising: providing a first visual indicia for a first posting and a second visual indicia for a second posting wherein the first and second visual indicia are different and indicate the linkage between a first poster of the first posting or a second poster of the second posting.
Group II, claims 3-4, drawn to a method for providing a rooting section for an intelligent television, comprising: based on a received selection of sporting content, providing a first visual representation of one or more of the social media postings associated with a first team affiliation and providing a second visual representation of one or more of the social media postings associated with a second team affiliation.
Group III, claims 5-6, drawn to a method for providing social media on an intelligent television, comprising: identifying a user of the intelligent television and registering the user with one or more social media sites, and providing social media posting associated with the user on an user interface of the intelligent television.
Group IV, claims 7-8, drawn to a method for providing social media information on an intelligent television, comprising: determining the availability of social media for the selected programming and providing a visual representation of one or more of the social media postings associated with selected programming.
Group V, claims 9-10, drawn to a method for providing social media information on an intelligent television, comprising: receiving a second selection to change a volume of social media, and changing an amount of social media presented in response to the second selection.
Group VI, claims 11-12, drawn to a method for providing social media information on an intelligent television, the comprising: the intelligent television discovering a device also connected to the network, connecting the device to the intelligent television, a user pushes a social media message from the device, and displaying the social media message on the intelligent television.
Group VII, claims 13-14, drawn to a method for providing media on an intelligent television, comprising: retrieving available media from one or more social media sources and from one or more local sources and presenting together media from both one or more social media sources and one or more local sources.
Group VIII, claims 15-16, drawn to a method for providing social media on an intelligent television, comprising: receiving a programming change input and providing determining the type of programming changing input one of two or more user interfaces that include a presentation of social media information.
Group IX, claims 17-18, drawn to a method for providing social media on an intelligent television, comprising: pausing the media playback on the intelligent television while the media continues to be presented in real-time and during the pause, receiving one or more social media postings associated with the media, and storing the one or more social media postings in a time sequence correlated to the media presentation.
Group X, claims 19-20, drawn to a method for providing social media on an intelligent television, comprising: receiving a selection of a control device on a remote control associated with an intelligent television and determining whether the selection is a first type or a second type, and providing a first user interface at the bottom of a display of the intelligent television wherein the first user interface provides at least one social media posting if the selection is a first type, and providing a second user interface at the top of the display of the intelligent television, wherein the second user interface provides information associated with content being presented in the display if the selection is a second type.
Group XI, claims 21-22, drawn to a method for publishing social media by an intelligent television, the comprising: receiving a selection of a control device associated with the intelligent television and automatically publishing information about the content to a social media site based on the selection.
Group XII, claim 23-24, drawn to a method for providing social media on an intelligent television, comprising: determining a state associated with a social media posting and providing a user interface for the social media application, having the social media posting displayed based on the state.

The inventions listed as Groups I-XII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: the special technical feature of the Group I invention: providing a first visual indicia for a first posting and a second visual indicia for a second posting wherein the first and second visual indicia are different and indicate the linkage between a first poster of the first posting or a second poster of the second posting as claimed therein is not present in the invention of Groups II-XII. The special technical feature of the Group II invention: based on a received selection of sporting content, providing a first visual representation of one or more of the social media postings associated with a first team affiliation and providing a second visual representation of one or more of the social media postings associated with a second team affiliation as claimed therein is not present in the invention of Groups I, III-XII. The special technical feature of the Group III invention: identifying a user of the intelligent television and registering the user with one or more social media sites, and providing social media posting associated with the user on an user interface of the intelligent television as claimed therein is not present in the invention of Groups I, II, IV-XII. The special technical feature of the Group IV invention: determining the availability of social media for the selected programming and providing a visual representation of one or more of the social media postings associated with selected programming as claimed therein is not present in the invention of Groups I, II, III or V-XII. The special technical feature of the Group V invention: receiving a second selection to change a volume of social media, and changing an amount of social media presented in response to the second selection as claimed therein is not present in the invention of Groups I-IV, VI-XII. The special technical feature of the Group VI invention: the intelligent television discovering a device also connected to the network, connecting the device to the intelligent television, a user pushes a social media message from the device, and displaying the social media message on the intelligent television as claimed therein is not present in the invention of Groups I-V, VII-XII. The special technical feature of the Group VII invention: retrieving available media from one or more social media sources and from one or more local sources and presenting together media from both one or more social media sources and one or more local sources as claimed therein is not present in the invention of Groups I-VI or VIII-XII. The special technical feature of the Group VIII invention: receiving a programming change input and providing determining the type of programming changing input one of two or more user interfaces that include a presentation of social media information as claimed therein is not present in the invention of Groups I-VII or IX-XII.

[See Continuation on Next Extra Sheet]

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VIZIO v. MMT, IPR2024-00722

Supplemental Box

In case **the space in any of the preceding boxes is not sufficient.**
Continuation of:

The special technical feature of the Group IX invention: pausing the media playback on the intelligent television while the media continues to be presented in real-time and during the pause, receiving one or more social media postings associated with the media, and storing the one or more social media postings in a time sequence correlated to the media presentation as claimed therein is not present in the invention of Groups I-VIII or X-XII. The special technical feature of the Group X invention: receiving a selection of a control device on a remote control associated with an intelligent television and determining whether the selection is a first type or a second type, and providing a first user interface at the bottom of a display of the intelligent television wherein the first user interface provides at least one social media posting if the selection is a first type, and providing a second user interface at the top of the display of the intelligent television, wherein the second user interface provides information associated with content being presented in the display if the selection is a second type as claimed therein is not present in the invention of Groups I-IX or XI-XII. The special technical feature of the Group XI invention: receiving a selection of a control device associated with the intelligent television and automatically publishing information about the content to a social media site based on the selection as claimed therein is not present in the invention of Groups I-X or XII. The special technical feature of the Group XII invention: determining a state associated with a social media posting and providing a user interface for the social media application, having the social media posting displayed based on the state as claimed therein is not present in the invention of Groups I-XI.

Groups I- XII lack unity of invention because even though the inventions of these groups require the technical feature of visual representation of social media posting on an intelligent TV, this technical feature is not a special technical feature as it does not make a contribution over the prior art in view of US 2012/0154449 A1 (RAMAGEM et al) 21 June 2012 (21.06.2012).

US 2012/0154449 A1 to RAMAGEM et al discloses a visual whiteboard as an application or component for operation on a smart TV (para. 0007) and social networking techniques, devices, systems and software which can be used in conjunction with social networks associated with a television (para 0002) and teaches visual representation of social media posting on an intelligent TV (content identifiers or other group information can be posted to the visual whiteboard by the authorized users for subsequent display on the corresponding smart [intelligent] TV, para 0007; receiving media items from various media sources and service providers, para 0021; mechanism for direct sharing of information via the social graph ...finding a funny cat video posted on a large site like Digg, para 0038; that a content identifier (hyperlink to a video), and various notes posted to the visual whiteboard by authorized group members, para 0055; see also para 0030, 0031 for using the visual whiteboard operating on an intelligent TV and enabling an active user engaging in various aspects of social networking on the intelligent TV, including searching for updates from social networks [that implies receiving and visual representation of social postings on the intelligent TV).

Since none of the special technical features of the Group I-XII inventions are found in more than one of the inventions, unity of invention is lacking.

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VIZIO v. MMT, IPR2024-00722

Am 1

PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

To: Kendria E. Pearson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

NOTIFICATION OF TRANSMITTAL OF THE INTERNATIONAL SEARCH REPORT AND THE WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY, OR THE DECLARATION

(PCT Rule 44.1)

Applicant's or agent's file reference 6583-464-PCT	Date of mailing *(day/month/year)* 10 MAR 2014 **FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No. PCT/US13/55592	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)
Applicant Flextronics AP, LLC	

1. ☒ The applicant is hereby notified that the international search report and the written opinion of the International Searching Authority have been established and are transmitted herewith.

   Filing of amendments and statement under Article 19:
   The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):

   When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report.

   Where? Directly to the International Bureau of WIPO, 34 chemin des Colombettes 1211 Geneva 20, Switzerland, Facsimile No.: +41 22 338 82 70

   For more detailed instructions, see *PCT Applicant's Guide*, International Phase, paragraphs 9.004 – 9.011.

2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect and the written opinion of the International Searching Authority are transmitted herewith.

3. ☐ **With regard to any protest** against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:

   ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with any request to forward the texts of both the protest and the decision thereon to the designated Offices.

   ☐ no decision has been made yet on the protest; the applicant will be notified as soon as a decision is made.

4. **Reminders**

   The applicant may submit comments on an informal basis on the written opinion of the International Searching Authority to the International Bureau. The International Bureau will send a copy of such comments to all designated Offices unless an international preliminary examination report has been or is to be established. Following the expiration of 30 months from the priority date, these comments will also be made available to the public.

   Shortly after the expiration of **18 months** from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau before the completion of the technical preparations for international publication (Rules 90*bis*.1 and 90*bis*.3).

   Within **19 months** from the priority date, but only in respect of some designated Offices, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase **until 30 months** from the priority date (in some Offices even later); otherwise, the applicant must, **within 20 months** from the priority date, perform the prescribed acts for entry into the national phase before those designated Offices.

   In respect of other designated Offices, the time limit of **30 months** (or later) will apply even if no demand is filed within 19 months.

   For details about the applicable time limits, Office by Office, see www.wipo.int/pct/en/texts/time_limits.html and the *PCT Applicant's Guide*, National Chapters.

Name and mailing address of the ISA/ Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer Shane Thomas PCT Helpdesk: 571-272-4300 Telephone No. PCT OSP: 571-272-7774

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-464-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55592	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 2 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

☒ the international application in the language in which it was filed.

☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

b. ☐ This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (see Box No. II).

3. ☐ **Unity of invention is lacking** (see Box No. III).

4. With regard to the **title**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

USER INTERFACE FOR AN INTELLIGENT TELEVISION

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 14

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☒ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

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VIZIO v. MMT, IPR2024-00722

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55592

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/0481 (2014.01)
USPC - 715/848
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8) Classification(s): H04N 21/47; G06F 3/01, 3/0481 (2014.01)
USPC Classification(s): 725/811, 838, 848

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
MicroPatent (US-G, US-A, EP-A, EP-B, WO, JP-bib, DE-C,B, DE-A, DE-T, DE-U, GB-A, FR-A); ProQuest; IEEE; Google/Google Scholar

Keywords: GUI, Fibonacci, Timeline, Grid, Thumbnail, Smart TV, Favorite, Icon, Select

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2011/0131506 A1, (CALLISENDORFF, E.), 02 June 2011; figures 5a-5d, paragraphs [0025], [0032], [0047], [0077], [0091], [0110], [0112], [0113], [0120]	1 --- 2-20
Y	US 2011/0252446 A1, (JEONG, Y. et al.), 13 October 2011; Claim 20, figures [0020], [0145], [0163], [0444]	2-5, 13-14, 17-20
Y	US 2010/0241962 A1, (PETERSON, T. et al.), 23 September 2010; figure 7, paragraphs [0011], [0037], [0039], [0060]	3-5, 12-16, 18
Y	US 2005/0091596 A1, (ANTHONY, C. et al.), 28 April 2005; paragraphs [0042], [0043], [0044], [0046], [0047], [0063]	6-11, 15, 19

☐ Further documents are listed in the continuation of Box C. ☐

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
05 February 2014 (05.02.2014)	10 MAR 2014
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Kendria E. Pearson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	10 MAR 2014
Applicant's or agent's file reference: 6583-464-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55592	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/0481 (2014.01)
USPC - 715/848

Applicant: Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	05 February 2014 (05.02.2014)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55592

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55592

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	2-20	YES
	Claims	1	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1 lacks novelty under PCT Article 33(2) as being anticipated by US 2011/0131506 A1 (Calissendorff).

As to claim1, Calissendorff discloses a method for providing multiple types of user interfaces in an intelligent television (a method to dynamically adapt a user interface to the available context in a smart TV (method for providing multiple types of user interfaces in an intelligent television), paragraph [0025], [0120]), the method comprising: receiving a selection for the user interface (the presentation model locates the command associated with the action (receiving a selection for the user interface), paragraph [0077]), wherein the user interface provides content (the presentation model uses the available content to generate the interface for the user (wherein the user interface provides content), paragraph [0091]); determining a type of content to provide (content is determined by which available items fulfill the criteria of a presentation group (determining a type of content to provide), paragraph [0047]); determining a type of user interface based on the type of content to provide, wherein a first type of content corresponds to a first user interface (available content with the known context is used to generate the user interface (determining a type of user interface based on the type of content to provide, wherein the first type of content corresponds to a first user interface), paragraph [0072]), a second type of content corresponds to a second user interface (when a change in context is detected, the available content is used to generate a new user interface (a second type of content corresponds to a second user interface), paragraphs [0110], [0112]), and a third type of content corresponds to a third user interface (when the user moves into a different context B or C, the interface will update to the new context (and a third type of content corresponds to a third user interface), figures 5a-5d, paragraph [0058]); providing the first user interface for the first type of content (presenting the user interface of content (providing the first user interface for the first type of content), paragraph [0073]); providing the second user interface for the second type of content (presenting the user interface of the new content (providing the second user interface for the second type of content), paragraph [0113]); and providing the third user interface for the third type of content (the presentation model ensures that each item is presented (providing the third user interface for the third type of content), paragraph [0032]).

Claims 2, 17 and 20 lack an inventive step under PCT Article 33(3) as being obvious over Calissendorff in view of US 2011/0252466 A1 to Jeong et al. (hereinafter "Jeong").

As to claim 2, Calissendorff discloses the method as defined in claim 1. However, Calissendorff fails to disclose a method wherein the first type of content is for a selection main screen with a limited amount of content. Jeong discloses a method wherein the first type of content is for a selection main screen with a limited amount of content (the home screen (selection main screen) may further include an application menu with at least one application that can be executed (wherein the first type of content is for a selection main screen with a limited amount of content), paragraph [0145]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the first type of content is for a selection main screen with a limited amount of content, as taught by Jeong, for the benefit of presenting a main screen that is simple to navigate.

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As to claim 17, Calissendorff discloses a method comprising: receive a selection for the user interface (the presentation model locates the command associated with the action (receive a selection for the user interface), paragraph [0077]), wherein the user interface provides content (the presentation model uses the available content to generate the interface for the user (wherein the user interface provides content), paragraph [0091]); determine a type of content to provide (content is determined by which available items fulfill the criteria of a presentation group (determine a type of content to provide), paragraph [0047]); determine a type of user interface based on the type of content to provide, wherein a first type of content corresponds to a first user interface (available content with the known context is used to generate the user interface (determine a type of user interface based on the type of content to provide, wherein the first type of content corresponds to a first user interface), paragraph [0072]), a second type of content corresponds to a second user interface (when a change in context is detected, the available content is used to generate a new user interface (a second type of content corresponds to a second user interface), paragraphs [0110], [0112]), and a third type of content corresponds to a third user interface (when the user moves into a different context B or C, the interface will update to the new context (and a third type of content corresponds to a third user interface), figures 5a-5d, paragraph [0058]); provide the first user interface for the first type of content (presenting the user interface of content (provide the first user interface for the first type of content), paragraph [0073]); provide the second user interface for the second type of content (presenting the user interface of the new content (provide the second user interface for the second type of content), paragraph [0113]); provide the third user interface for the third type of content (the presentation model ensures that each item is presented (provide the third user interface for the third type of content), paragraph [0032]). However, Calissendorff fails to disclose a method comprising: computer readable medium having stored thereon processor executable instructions that cause a computing system to execute a method, the instructions comprising: instructions to. Jeong discloses a method comprising: computer readable medium having stored thereon processor executable instructions that cause a computing system to execute a method, the instructions comprising: instructions to (a non-transitory computer readable medium including instructions configured to perform the display method (computer readable medium having stored thereon processor executable instructions that cause a computing system to execute a method, the instructions comprising: instructions to), claim 20). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include computer readable medium having stored thereon processor executable instructions that cause a computing system to execute a method, the instructions comprising: instructions to, as taught by Jeong, for the benefit of executing instructions to perform the method.

As to claim 20, Calissendorff and Jeong disclose the computer readable medium as defined in claim 17. Calissendorff further discloses the computer readable medium wherein the third type of content is for a collection of content, and wherein the third user interface is for a linear view (the presentation group (wherein the third type of content is for a collection of content) is in a linear view (wherein the third user interface is for a linear view), figure 3d).

Claims 12 and 16 lack an inventive step under PCT Article 33(3) as being obvious over Calissendorff in view of US 2010/0241962 A1 to Peterson et al. (hereinafter "Peterson").

As to claim 12, Calissendorff discloses an intelligent television system comprising (smart TV controller (intelligent television system), paragraph [0114]): execute a statistics subservice (the presentation model includes services to present content to users based on user preferences (execute a statistics subservice), paragraph [0033]); execute an user interface application (dynamically adapt a user interface to the available context (execute an user interface application), paragraph [0120]): receive a selection for the user interface (the presentation model locates the command associated with the action (receive a selection for the user interface), paragraph [0077]), wherein the user interface provides content (the presentation model uses the available content to generate the interface for the user (wherein the user interface provides content), paragraph [0091]); determine a type of content to provide (content is determined by which available items fulfill the criteria of a presentation group (determine a type of content to provide), paragraph [0047]); determine a type of user interface based on the type of content to provide, wherein a first type of content corresponds to a first user interface (available content with the known context is used to generate the user interface (determine a type of user interface based on the type of content to provide, wherein the first type of content corresponds to a first user interface), paragraph [0072]), a second type of content corresponds to a second user interface (when a change in context is detected, the available content is used to generate a new user interface (a second type of content corresponds to a second user interface), paragraphs [0110], [0112]), and a third type of content corresponds to a third user interface (when the user moves into a different context B or C, the interface will update to the new context (and a third type of content corresponds to a third user interface), figures 5a-5d, paragraph [0058]); provide the first user interface for the first type of content (presenting the user interface of content (provide the first user interface for the first type of content), paragraph [0073]); provide the second user interface for the second type of content (presenting the user interface of the new content (provide the second user interface for the second type of content), paragraph [0113]); and provide the third user interface for the third type of content (the presentation model ensures that each item is presented (provide the third user interface for the third type of content), paragraph [0032]). However, Calissendorff fails to disclose a system comprising: a memory operable to store social media data; a processor in communication with the memory, the processor operable to execute a statistics subservice operable to: execute an user interface application operable to. Peterson discloses a system comprising: a memory operable to store social media data (memory can store supplemental content such as social network data (a memory operable to store social media data), paragraphs [0037], [0039]); a processor in communication with the memory, the processor operable to: execute an user interface application operable to (one or more processors with a memory element (a processor in communication with the memory), the processor executes the media delivery system (execute an user interface application operable to), figure 7, paragraph [0060]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Calissendorff to include a memory operable to store social media data; a processor in communication with the memory, the processor operable to execute a statistics subservice operable to: execute an user interface application operable to, as taught by Peterson, for the benefit of using stored social media data to perform metrics for organizing content display.

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As to claim 16, Calissendorff and Peterson disclose the intelligent television system as defined in claim 12. Calissendorff further discloses a system wherein the third type of content is for a collection of content, and wherein the third user interface is for a linear view (the presentation group (wherein the third type of content is for a collection of content) is in a linear view (wherein the third user interface is for a linear view), figure 3d).

Claims 3-5 and 18 lack an inventive step under PCT Article 33(3) as being obvious over Calissendorff in view of Jeong, and further in view of US 2010/0241962 A1 to Peterson et al. (hereinafter "Peterson").

As to claim 3, Calissendorff and Jeong disclose the method as defined in claim 2. However, Calissendorff fails to disclose a method wherein the first user interface is for at least one of a grid view, a Fibonacci view, and a cluster view. Peterson discloses a method wherein the first user interface is for at least one of a grid view, a Fibonacci view, and a cluster view (the means of displaying can be presented as a Fibonacci spiral (wherein the first user interface is a Fibonacci view), paragraph [0043]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the first user interface is for at least one of a grid view, a Fibonacci view, and a cluster view, as taught by Peterson, for the benefit of presenting a Fibonacci view giving the user more selectable options.

As to claim 4, the combination of Calissendorff, Jeong, and Peterson disclose the method as defined in claim 3. However, Calissendorff fails to disclose a method wherein the Fibonacci view provides selectable content thumbnails arranged in a Fibonacci spiral. Peterson discloses a method wherein the Fibonacci view provides selectable content thumbnails arranged in a Fibonacci spiral (content thumbnails can be presented in a Fibonacci spiral (the Fibonacci view provides selectable content thumbnails arranged in a Fibonacci spiral), paragraph [0011]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the Fibonacci view provides selectable content thumbnails arranged in a Fibonacci spiral, as taught by Peterson, for the benefit of presenting a Fibonacci view giving the user more selectable options.

As to claim 5, the combination of Calissendorff, Jeong, and Peterson disclose the method as defined in claim 4. However, Calissendorff fails to disclose a method wherein the thumbnails are arranged in the Fibonacci spiral based on a characteristic of the content associated with the thumbnail, and wherein the characteristic is one or more of an amount of content, a most viewed statistic, a newest statistic, or a most favorite statistic. Peterson discloses a method wherein the thumbnails are arranged in a Fibonacci spiral (thumbnails can be presented in a Fibonacci spiral (wherein thumbnails are arranged in a Fibonacci spiral), paragraph [0011]). Further, Jeong discloses a method wherein the arrangement is based on a characteristic of the content associated with the thumbnail (the application menu of thumbnails may be arranged based on characteristics (wherein the arrangement is based on a characteristic of the content associated with the thumbnail), paragraphs [0163], [0444]), and wherein the characteristic is a most favorite statistic (thumbnails may be arranged by applications most frequently used by the user (wherein the characteristic is a most favorite statistic), paragraph [0444]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the thumbnails are arranged in a Fibonacci spiral, as taught by Peterson, for the benefit of giving the user more selectable options. Further, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the characteristic is a most favorite statistic, as taught by Jeong, for the benefit of presenting thumbnails in a preferred order.

As to claim 18, Calissendorff and Jeong disclose the computer readable medium as defined in claim 17. However, Calissendorff fails to disclose a computer readable medium wherein first type of content is for a selection main screen with a limited amount of content, and wherein the first user interface is for at least one of a grid view, a Fibonacci view, and a cluster view. Jeong discloses a computer readable medium wherein first type of content is for a selection main screen with a limited amount of content (the home screen (selection main screen) may further include an application menu with at least one application that can be executed (wherein the first type of content is for a selection main screen with a limited amount of content), paragraph [0145]). Further, Peterson discloses a computer readable medium wherein the first user interface is for at least one of a grid view, a Fibonacci view, and a cluster view (the means of displaying can be presented as a Fibonacci spiral (wherein the first user interface is a Fibonacci view), paragraph [0043]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Calissendorff to include wherein first type of content is for a selection main screen with a limited amount of content, as taught by Jeong, for the benefit of presenting a main screen that is simple for the user to navigate. Further, It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Calissendorff to include wherein the first user interface is for at least one of a grid view, a Fibonacci view, and a cluster view, as taught by Peterson, for the benefit of using a Fibonacci view to present more selectable options to the user.

Claims 6-11 lack an inventive step under PCT Article 33(3) as being obvious over Calissendorff in view of US 2005/0091596 A1 to Anthony et al. (hereinafter "Anthony").

As to claim 6, Calissendorff discloses the method as defined in claim 1. However, Calissendorff fails to disclose a method wherein the second type of content is for content associated with time. Anthony discloses a method wherein the second type of content is for content associated with time (the area displayed to the user is enough in detail for the user to discern the timeline content (wherein the second type of content is for content associated with time), paragraph [0063]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the second type of content is for content associated with time, as taught by Anthony, for the benefit of using a time parameter for organizing content.

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As to claim 7, Calissendorff and Anthony disclose the method as defined in claim 6. However, Calissendorff fails to disclose a method wherein the second user interface is a timeline view. Anthony discloses a method wherein the second user interface is a timeline view (a dynamic timeline view allows a user to view a set of items arranged chronologically (is a timeline view) and presented in a GUI environment (wherein the second user interface), paragraph [0043]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the second user interface is a timeline view, as taught by Anthony, for the benefit of presenting the content in a timeline view to a user.

As to claim 8, Calissendorff and Anthony disclose the method as defined in claim 7. However, Calissendorff fails to disclose a method wherein the timeline view provides selectable content thumbnails arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view. Anthony discloses a method wherein the timeline view provides selectable content thumbnails arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view (the timeline view provides thumbnail icons that will open when the user double clicks (wherein the timeline view provides selectable content thumbnails) arranged in a chronological manner (arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view), paragraphs [0044], [0046], [0047]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the timeline view provides selectable content thumbnails arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view, as taught by Anthony, for the benefit of presenting a chronological view of content to a user.

As to claim 9, Calissendorff and Anthony disclose the method as defined in claim 8. However, Calissendorff fails to disclose a method wherein the timeline view includes a demarcation to indicate a change in date to which the content is associated. Anthony discloses a method wherein the timeline view includes a demarcation to indicate a change in date to which the content is associated (items may be grouped in chronological order (the timeline view includes a demarcation) in a logical timeline that may include various time intervals (to indicated a change in date to which the content is associated), paragraph [0042]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the timeline view includes a demarcation to indicate a change in date to which the content is associated, as taught by Anthony, for the benefit of showing a user interface that clearly indicates a date change of a timeline view.

As to claim 10, Calissendorff discloses the method as defined in claim 1. However, Calissendorff fails to disclose a method wherein the third type of content is for a collection of content. Anthony discloses a method wherein the third type of content is for a collection of content (items may be stored in logical groupings such as virtual folders or stacks (wherein the third type of content is for a collection of content), paragraph [0047]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the third type of content is for a collection of content, as taught by Anthony, for the benefit of grouping content for easier viewing for the user.

As to claim 11, Calissendorff and Anthony disclose the method as defined in claim 10. Calisendorff further discloses a method wherein the third user interface is for a linear view (the presentation group is in a linear view (wherein the third user interface is for a linear view), figure 3d). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the method of Calissendorff to include wherein the third user interface is for a linear view, as taught by Anthony, for the benefit of presenting a linear view in a user interface.

Claims 13-14 lack an inventive step under PCT Article 33(3) as being obvious over Calissendorff in view of Peterson, and further in view of Jeong.

As to claim 13, Calissendorff and Peterson disclose the intelligent television system as defined in claim 12. However, Calissendorff fails to disclose a system wherein first type of content is for a selection main screen with a limited amount of content, and wherein the first user interface is for at least one of a grid view, a Fibonacci view, and a cluster view. Jeong discloses a system wherein first type of content is for a selection main screen with a limited amount of content (the home screen (selection main screen) may further include an application menu with at least one application that can be executed (wherein the first type of content is for a selection main screen with a limited amount of content), paragraph [0145]). Further, Peterson discloses a system wherein the first user interface is for at least one of a grid view, a Fibonacci view, and a cluster view (the means of displaying can be presented as a Fibonacci spiral (wherein the first user interface is a Fibonacci view), paragraph [0043]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Calissendorff to include wherein first type of content is for a selection main screen with a limited amount of content, as taught by Jeong, for the benefit of presenting a main screen that is simple for the user to navigate. Further, It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Calissendorff to include wherein the first user interface is for at least one of a grid view, a Fibonacci view, and a cluster view, as taught by Peterson, for the benefit of using a Fibonacci view to present more selectable options to the user.

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As to claim 14, the combination of Calissendorff, Jeong, and Peterson disclose the intelligent television system as defined in claim 13. However, Calissendorff fails to disclose a system wherein the first user interface is a Fibonacci view, wherein the Fibonacci view provides selectable content thumbnails arranged in a Fibonacci spiral, wherein the thumbnails are arranged in the Fibonacci spiral based on a characteristic of the content associated with the thumbnail, and wherein the characteristic is one or more of an amount of content, a most viewed statistic, a newest statistic, or a most favorite statistic. Peterson discloses a system wherein the first user interface is a Fibonacci view (content can be presented in a Fibonacci spiral (wherein the first user interface is a Fibonacci view), paragraph [0011]), wherein the Fibonacci view provides selectable content thumbnails arranged in a Fibonacci spiral (content (thumbnails can be presented in a Fibonacci spiral (the Fibonacci view provides selectable content thumbnails arranged in a Fibonacci spiral), paragraph [0011]), wherein the thumbnails are arranged in the Fibonacci spiral (thumbnails can be presented in a Fibonacci spiral (wherein the thumbnails are arranged in a Fibonacci spiral), paragraph [0011]). Further, Jeong discloses a system wherein the arrangement is based on a characteristic of the content associated with the thumbnail (the application menu of thumbnails may be arranged based on characteristics (wherein the arrangement is based on a characteristic of the content associated with the thumbnail (paragraphs [0163], [0444]), and wherein the characteristic is a most favorite statistic (thumbnails may be arranged by applications most frequently used by the user (wherein the characteristic is a most favorite statistic), paragraph [0444]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Calissendorff to include wherein the first user interface is a Fibonacci view, wherein the Fibonacci view provides selectable content thumbnails arranged in a Fibonacci spiral, wherein the thumbnails are arranged in the Fibonacci spiral, as taught by Peterson, for the benefit of presenting thumbnails using a Fibonacci spiral to the user. Further, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Calissendorff to include system wherein the arrangement is based on a characteristic of the content associated with the thumbnail, and wherein the characteristic is a most favorite statistic as taught by Jeong, for the benefit of presenting thumbnails to a user based on favorites.

Claim 15 lacks an inventive step under PCT Article 33(3) as being obvious over Calissendorff in view of Peterson, and further in view of Anthony.

As to claim 15, Calissendorff and Peterson disclose the intelligent television system as defined in claim 12. However, Calissendorff fails to disclose a system wherein the second type of content is for content associated with time, wherein the second user interface is a timeline view, wherein the timeline view provides selectable content thumbnails arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view, and wherein the timeline view includes a demarcation to indicate a change in date to which the content is associated. Anthony discloses a system wherein the second type of content is for content associated with time (the area displayed to the user is enough in detail for the user to discern the timeline content (wherein the second type of content is for content associated with time), paragraph [0063]), wherein the second user interface is a timeline view (a dynamic timeline view allows a user to view a set of items arranged chronologically (is a timeline view) and presented in a GUI environment (wherein the second user interface), paragraph [0043]), wherein the timeline view provides selectable content thumbnails arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view (the timeline view provides thumbnail icons that will open when the user double clicks (wherein the timeline view provides selectable content thumbnails) arranged in a chronological manner (arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view), paragraphs [0044], [0046], [0047]), and wherein the timeline view includes a demarcation to indicate a change in date to which the content is associated (items may be grouped in chronological order (the timeline view includes a demarcation) in a logical timeline that may include various time intervals (to indicated a change in date to which the content is associated), paragraph [0042]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the system of Calisssendorff to include wherein the second type of content is for content associated with time, wherein the second user interface is a timeline view, wherein the timeline view provides selectable content thumbnails arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view, and wherein the timeline view includes a demarcation to indicate a change in date to which the content is associated, as taught by Anthony, for the benefit of organizing the display of content in a timeline view.

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Claim 19 lacks an inventive step under PCT Article 33(3) as being obvious over Calissendorff in view of Jeong, and further in view of Anthony.

As to claim 19, Calissendorff and Jeong disclose the computer readable medium as defined in claim 17. However, Calissendorff fails to disclose the computer readable medium wherein the second type of content is for content associated with time, wherein the second user interface is a timeline view, wherein the timeline view provides selectable content thumbnails arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view, and wherein the timeline view includes a demarcation to indicate a change in date to which the content is associated. Anthony discloses a computer readable medium (computer readable medium, claim 21) wherein the second type of content is for content associated with time (the area displayed to the user is enough in detail for the user to discern the timeline content (wherein the second type of content is for content associated with time), paragraph [0063]), wherein the second user interface is a timeline view (a dynamic timeline view allows a user to view a set of items arranged chronologically (is a timeline view) and presented in a GUI environment (wherein the second user interface), paragraph [0043]), wherein the timeline view provides selectable content thumbnails arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view the timeline view provides thumbnail icons that will open when the user double clicks (wherein the timeline view provides selectable content thumbnails) arranged in a chronological manner (arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view), paragraphs [0044], [0046], [0047]), and wherein the timeline view includes a demarcation to indicate a change in date to which the content is associated (items may be grouped in chronological order (the timeline view includes a demarcation) in a logical timeline that may include various time intervals (to indicated a change in date to which the content is associated), paragraph [0042]). It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the computer readable medium of Calissendorff to include wherein the second type of content is for content associated with time, wherein the second user interface is a timeline view, wherein the timeline view provides selectable content thumbnails arranged in timeline from oldest content at a first side of the timeline view to newest content at a second side of the timeline view, and wherein the timeline view includes a demarcation to indicate a change in date to which the content is associated, as taught by Anthony, for the benefit of performing the timeline view operations using computer readable medium.

Claims 1-20 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

Electronic Acknowledgement Receipt

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Application Number:	13969857
International Application Number:	
Confirmation Number:	3306
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Sanjiv Sirpal
Customer Number:	111285
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Application Type:	Utility under 35 USC 111(a)

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Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		6583-427_IDS_02.pdf	360502 d0d4f11977c3c264c72819da8392a41d6b405490	yes	8

	Multipart Description/PDF files in .zip description				
	Document Description		Start	End	
	Transmittal Letter		1	3	
	Information Disclosure Statement (IDS) Form (SB08)		4	8	
Warnings:					
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2	Foreign Reference	WO2012103121.pdf	13311541 6aae5e6a94ce861a1bf6d32c7f2a438ee9887a84	no	176
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3	Non Patent Literature	6583-426-PCT_ISR_WO_04-16-2014.pdf	1086233 a4e513b78e6fe5498dbd4cde6712a1df6047fbfa	no	9
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4	Non Patent Literature	6583-434-PCT_ISR_WO_04-17-2014.pdf	1443005 eb4910f5bd08db361d7cb252843a4135585ad136	no	12
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9	Non Patent Literature	6583-442_OA_07-09-2014.pdf	521185 dfd876c0126ad1bd89bd4b648d044412796f117b	no	17
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12	Non Patent Literature	6583-445_OA_06-25-2014.pdf	979911 d85cf005844bea4a77c9141925bfc6f564c368bb	no	23
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14	Non Patent Literature	6583-449_OA_07-07-2014.pdf	512413 656cf509f75e3062f279fe472b03a190891df25c	no	15
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16	Non Patent Literature	6583-453_OA_06-13-2014.pdf	314734 1f206c9fb6d4815e594bab0111d8bda6fa95e2df	no	10
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19	Non Patent Literature	6583-458_OA_05-23-2014.pdf	586825 74e18283d79847eafc655e19258cdac279f0d9e9	no	17
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21	Non Patent Literature	6583-464_OA_07-07-2014.pdf	236242 ecaa508243eb84eb2610d842ec70614de4342054	no	7
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22	Non Patent Literature	6583-481_OA_06-06-2014.pdf	240412 dc452e429b01c83dfb982eca23e28ee0decee85ce	no	7
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23	Non Patent Literature	6583-495_OA_07-18-2014.pdf	451229 94d6ab2206db4baba3766da85d17dd376b126cad	no	14
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25	Non Patent Literature	6583-499_OA_04-30-2014.pdf	357652 24c196b3fbdead07de140cc45ea1fee1d327d2a6	no	11
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26	Non Patent Literature	6583-500_OA_05-27-2014.pdf	414649 69622a4b0aa546852115e60280ef598eee13fa20	no	12
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28	Non Patent Literature	6583-511_OA_06-25-2014.pdf	386960 1dbcc9147ff873c7849b329c4b680d061b91df42	no	13
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30	Non Patent Literature	6583-526_OA_07-15-2014.pdf	307584 7a57a9fa2db383092656ae539a054fd7099bf01f	no	9
Warnings:					
Information:					
		Total Files Size (in bytes):	28520289		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 2425
Sanjiv Sirpal	)	Confirmation No.: 3306
Serial No.: 13/969,857	)	Examiner: Kieu Oanh T Bui
Filed: August 19, 2013	)	SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
Atty. File No.: 6583-427	)	
Entitled: "Systems and Methods for Providing User Interfaces in an Intelligent Television"	)	*Electronically Submitted*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.

☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.

☒ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).

☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

☐ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.

☐ Examiner's attention is drawn to the following related applications:

Serial No. _____ filed _____ (Attorney Ref. No. _____)

Serial No. _____ filed _____ (Attorney Ref. No. _____)

☐ Other:_____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence

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VIZIO v. MMT, IPR2024-00722

of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☒	**37 CFR 1.97(b)**: No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☒ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☐	**37 CFR 1.97(c)**: The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☐ Please charge Deposit Account 19-1970 in the amount of $180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	**37 CFR 1.97(d)**: This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of $180.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

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VIZIO v. MMT, IPR2024-00722

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

☐ The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement submitted herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).

☐ A copy of the communication from the foreign patent office is enclosed.

OR

☐ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /Douglas W. Swartz/
Douglas W. Swartz
Registration No. 37,739
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Denver, Colorado 80202-5141
(303) 863-9700

Date: July 28, 2014

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VIZIO v. MMT, IPR2024-00722

Electronic Acknowledgement Receipt

EFS ID:	20698171
Application Number:	13969857
International Application Number:	
Confirmation Number:	3306
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Sanjiv Sirpal
Customer Number:	111285
Filer:	Douglas W. Swartz
Filer Authorized By:	
Attorney Docket Number:	6583-427
Receipt Date:	14-NOV-2014
Filing Date:	19-AUG-2013
Time Stamp:	12:20:19
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	6583-426_OA_08-15-2014.pdf	760166 92e718d5ae9f43744c9b135cd529cf243b80207a	no	19

Warnings:	
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2	Non Patent Literature	6583-428_OA_09-16-2014.pdf	650527 2a8c75cc05d27efaa9867b8e95eb8d799625227a	no	20
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3	Non Patent Literature	6583-431_OA_09-11-2014.pdf	332841 5e41e31557dd456773f08b995ed07271cfdd77fc	no	10
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Information:					
4	Non Patent Literature	6583-432_OA_10-23-2014.pdf	650281 3631a4775f4d654bbdf07b9818a15d3b12d7d1f9	no	20
Warnings:					
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5	Non Patent Literature	6583-433_OA_10-23-2014.pdf	505168 9580d4d4b6644bb5e83af4d774ee349c01104e6f	no	16
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6	Non Patent Literature	6583-434_OA_10-21-2014.pdf	786732 6d142fbc32b572550df58ad441293a599a611c42	no	22
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7	Non Patent Literature	6583-435_OA_10-02-2014.pdf	726776 075ce65886272c853833ce71c148a18ed29a2e56	no	21
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8	Non Patent Literature	6583-436_OA_09-04-2014.pdf	409918 0587ac5de8a03e52acb8dabfd88b9f23088e7e1e	no	14
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9	Non Patent Literature	6583-437_OA_09-02-2014.pdf	418309 4fd2175e3fdb93d51d00ab528332d8950119dabe	no	14
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10	Non Patent Literature	6583-439_OA_10-09-2014.pdf	456496 49809533e987cb9dd39dc0696ff83ec9e566ba0d	no	15
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12	Non Patent Literature	6583-441_OA_10-07-2014.pdf	311743 97fa18e8dd147a13bb0845fd65842a4eecf5f60a	no	10
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13	Non Patent Literature	6583-452_OA_11-10-2014.pdf	356998 1c2fa4c9308de40d3e0fa83b414b3f66f2f0696a	no	11
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14	Non Patent Literature	6583-455_OA_09-11-2014.pdf	283036 d55211da7c34bea6c21b749ba50aaad480fb50a5	no	10
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15	Non Patent Literature	6583-457_OA_10-08-2014.pdf	750825 dc6a8ece8aa2e2891d26d56c2e3f6f40a80b7819	no	21
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16	Non Patent Literature	6583-469_OA_08-19-2014.pdf	525045 d7ba8dcb7b0bc6a82eb32544cb87d6e025f1669e	no	17
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17	Non Patent Literature	6583-480_OA_10-02-2014.pdf	286848 453b643b4af78dedab130e799e988d52a961a4bc	no	9
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18	Non Patent Literature	6583-488_OA_10-09-2014.pdf	344132 fbaea2d4c6ef104446ee0d4eea395ff696a8934d	no	12
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20	Non Patent Literature	6583-496_OA_08-12-2014.pdf	599682 6032b3c8938d957d2db08dce715620b86fd462c1	no	19

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Total Files Size (in bytes):	10486770

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New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

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Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	1	of	4	Attorney Docket Number	6583-427

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	5867227	02/02/1999	Yamaguchi	
	2	6047319	04/04/2000	Olson	
	3	6111614	08/29/2000	Mugura et al.	
	4	6766526	07/20/2004	Ellis	
	5	7623933	11/24/2009	Sarosi et al.	
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	7	7805634	09/28/2010	Balazich et al.	
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	9	8281339	10/02/2012	Walker et al.	
	10	8510780	08/13/2013	Stallings et al.	
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	12	8640166	01/28/2014	Craner	
	13	2002/0049970	04/25/2002	Park	
	14	2004/0093616	05/13/2004	Johnson	
	15	2004/0158193	08/12/2004	Bui	
	16	2005/0015804	01/20/2005	LaJoie et al.	
	17	2005/0022237	01/27/2005	Nomura	
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	19	2005/0188402	08/25/2005	de Andrade et all.	
	20	2005/0289603	12/29/2005	Cezeaux et al.	
	21	2006/0090183	04/27/2006	Zito et al.	
	22	2006/0143674	06/29/2006	Jones et al.	
	23	2007/0192715	08/16/2007	Kataria et al.	
	24	2007/0199022	08/23/2007	Moshiri et al.	
	25	2007/0250762	10/25/2007	Mansfield	
	26	2007/0250864	10/25/2007	Diaz Perez	
	27	2008/0092198	04/17/2008	Hutten	
	28	2008/0163307	07/03/2008	Coburn et al.	
	29	2008/0235595	09/25/2008	Krantz et al.	
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	31	2009/0150379	06/11/2009	Park et al.	
	32	2009/0177981	07/09/2009	Christie et al.	

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	2	of	4	Attorney Docket Number	6583-427

	33	2009/0179989	07/16/2009	Bessone et al.	
	34	2009/0241048	09/24/2009	Augustine et al.	
	35	2010/0071019	03/18/2010	Blanchard et al.	
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	47	2012/0284752	11/08/2012	Christie	
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	49	2013/0275519	10/17/2013	Nichols	
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	51	2013/0332856	12/12/2013	Sanders et al.	
	52	2014/0040819	02/06/2014	Duffy	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	53	Official Action for U.S. Patent Application No. 13/969,846, mailed Aug. 15, 2014 (Attorney's Ref. No. 6583-426) 19 pages
	54	Official Action for U.S. Patent Application No. 13/969,869, mailed Sep. 16, 2014 (Attorney's Ref. No. 6583-428) 20 pages

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	3	of	4	Attorney Docket Number	6583-427

	55	Official Action for U.S. Patent Application No. 13/969,880, mailed Sep. 11, 2014 (Attorney's Ref. No. 6583-431) 10 pages
	56	Official Action for U.S. Patent Application No. 13/969,884, mailed Oct. 23, 2014 (Attorney's Ref. No. 6583-432) 20 pages
	57	Official Action for U.S. Patent Application No. 13/969,887, mailed Oct. 23, 2014 (Attorney's Ref. No. 6583-433) 16 pages
	58	Official Action for U.S. Patent Application No. 13/969,482, mailed Oct. 21, 2014 (Attorney's Ref. No. 6583-434) 22 pages
	59	Official Action for U.S. Patent Application No. 13/969,485, mailed Oct. 02, 2014 (Attorney's Ref. No. 6583-435) 21 pages
	60	Official Action for U.S. Patent Application No. 13/970,388, mailed Sep. 04, 2014 (Attorney's Ref. No. 6583-436) 14 pages
	61	Official Action for U.S. Patent Application No. 13/970,398, mailed Sep. 02, 2014 (Attorney's Ref. No. 6583-437) 14 pages
	62	Official Action for U.S. Patent Application No. 13/970,420, mailed Oct. 09, 2014 (Attorney's Ref. No. 6583-439) 15 pages
	63	Official Action for U.S. Patent Application No. 13/970,427, mailed Sep. 30, 2014 (Attorney's Ref. No. 6583-440) 24 pages
	64	Official Action for U.S. Patent Application No. 13/970,442, mailed Oct. 07, 2014 (Attorney's Ref. No. 6583-441) 10 pages
	65	Official Action for U.S. Patent Application No. 13/969,588, mailed Nov. 10, 2014 (Attorney's Ref. No. 6583-452) 11 pages
	66	Official Action for U.S. Patent Application No. 13/969,487, mailed Sep. 11, 2014 (Attorney's Ref. No. 6583-455) 10 pages
	67	Official Action for U.S. Patent Application No. 13/969,491, mailed Oct. 08, 2014 (Attorney's Ref. No. 6583-457) 21 pages
	68	Official Action for U.S. Patent Application No. 13/864,214, mailed Aug. 19, 2014 (Attorney's Ref. No. 6583-469) 17 pages
	69	Official Action for U.S. Patent Application No. 13/969,506, mailed Oct. 02, 2014 (Attorney's Ref. No. 6583-480) 9 pages
	70	Official Action for U.S. Patent Application No. 13/968,665, mailed Oct. 09, 2014 (Attorney's Ref. No. 6583-488) 12 pages
	71	Official Action for U.S. Patent Application No. 13/968,897, mailed Aug. 15, 2014 (Attorney's Ref. No. 6583-489) 15 pages
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	73	Official Action for U.S. Patent Application No. 13/968,969, mailed Aug. 19, 2014 (Attorney's Ref. No. 6583-498) 14 pages

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [2] Applicant's unique citation designation number (optional). [3] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [4] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [5] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [6] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [7] Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
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	74	Official Action for U.S. Patent Application No. 13/968,610, mailed Aug. 19, 2014 (Attorney's Ref. No. 6583-499) 13 pages
	75	Official Action for U.S. Patent Application No. 13/968,630, mailed Jul. 31, 2014 (Attorney's Ref. No. 6583-504) 9 pages
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	78	Official Action for U.S. Patent Application No. 13/969,510, mailed Nov. 03, 2014 (Attorney's Ref. No. 6583-511) 16 pages
	79	Official Action for U.S. Patent Application No. 13/970,243, mailed Aug. 22, 2014 (Attorney's Ref. No. 6583-519) 20 pages

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Electronic Acknowledgement Receipt

EFS ID:	20698246
Application Number:	13969857
International Application Number:	
Confirmation Number:	3306
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING USER INTERFACES IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Sanjiv Sirpal
Customer Number:	111285
Filer:	Douglas W. Swartz
Filer Authorized By:	
Attorney Docket Number:	6583-427
Receipt Date:	14-NOV-2014
Filing Date:	19-AUG-2013
Time Stamp:	12:23:36
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Non Patent Literature	6583-498_OA_08-19-2014.pdf	467276 7d433f365cb49f91ef1de0a81b2867578a677d76	no	14

Warnings:	
Information:	

2	Non Patent Literature	6583-499_OA_08-19-2014.pdf	428709 e412757c1e7fc71c447e58b5df9fa810f5cbe91d	no	13
Warnings:					
Information:					
3	Non Patent Literature	6583-504_OA_07-31-2014.pdf	289770 5672e9bb8025b88a012f27c27e54100eb8fd3f87	no	9
Warnings:					
Information:					
4	Non Patent Literature	6583-508_OA_08-29-2014.pdf	979764 dc22c5821c58624aba5bf90f6bcf36683e39f3b9	no	30
Warnings:					
Information:					
5	Non Patent Literature	6583-510_OA_11-07-2014.pdf	328862 565db7979793d5808ab65f19ad1ec7bb98fe1db2	no	10
Warnings:					
Information:					
6	Non Patent Literature	6583-511_OA_11-03-2014.pdf	465744 766bec5e288e793404dd54a48256e5335e0e84e2	no	16
Warnings:					
Information:					
7	Non Patent Literature	6583-519_OA_08-22-2014.pdf	668117 02faf93fe01ccc30e757f2a36b60d6de1e29823d	no	20
Warnings:					
Information:					
8		6583-427_IDS_03.pdf	308702 d922a9d5928600e701934dafb5ff91538ed7d6b2	yes	7

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Transmittal Letter	1	3
	Information Disclosure Statement (IDS) Form (SB08)	4	7

Warnings:	
Information:	
Total Files Size (in bytes):	3936944

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111

If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371

If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office

If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	)	Group Art Unit: 2425
Sanjiv Sirpal	)	Confirmation No.: 3306
Serial No.: 13/969,857	)	Examiner: Kieu Oanh T Bui
Filed: August 19, 2013	)	SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
Atty. File No.: 6583-427	)	
Entitled: "Systems and Methods for Providing User Interfaces in an Intelligent Television"	)	*Electronically Submitted*

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Commissioner:

The references cited on attached Form PTO/SB08 are being called to the attention of the Examiner.

☒ Copies of the cited non-patent and/or foreign references are enclosed herewith.

☐ Copies of the cited U.S. patents and/or patent applications are enclosed herewith.

☒ Copies of the cited U.S. patents/patent application publications are not enclosed in accordance with 37 C.F.R. § 1.98(a).

☐ Copies of the cited references are not enclosed, in accordance with 37 C.F.R. § 1.98(d), because the references were cited by or submitted to the U.S. Patent and Trademark Office in prior application Serial No. _____ filed _____, which is relied upon for an earlier filing date under 35 U.S.C. § 120.

☐ To the best of applicants' belief, the pertinence of the foreign-language references is believed to be summarized in the attached English abstracts and/or in the figures, although applicants do not necessarily vouch for the accuracy of the translation.

☐ Examiner's attention is drawn to the following related applications:

Serial No. _____ filed _____ (Attorney Ref. No. _____)

Serial No. _____ filed _____ (Attorney Ref. No. _____)

☐ Other:_____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence

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VIZIO v. MMT, IPR2024-00722

of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☒	**37 CFR 1.97(b)**: No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☒ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☐	**37 CFR 1.97(c)**: The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☐ Please charge Deposit Account 19-1970 in the amount of $180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	**37 CFR 1.97(d)**: This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of $180.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

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VIZIO v. MMT, IPR2024-00722

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

☐ The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement submitted herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).

☐ A copy of the communication from the foreign patent office is enclosed.

OR

☐ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /Douglas W. Swartz/
Douglas W. Swartz
Registration No. 37,739
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
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Date: November 13, 2014

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VIZIO v. MMT, IPR2024-00722

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	1	of	9	Attorney Docket Number	6583-427

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	1	5701183	12/23/1997	Bellemare et al.	
	2	5734444	03/31/1998	Yoshinobo	
	3	5801747	09/01/1998	Bedard	
	4	5933141	08/03/1999	Smith	
	5	6285804	09/04/2001	Crinon et al.	
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	9	7232073	06/19/2007	de Jong	
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	31	2005/0204387	09/15/2005	Knudson et al.	
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Examiner Signature		Date Considered	

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Substitute for form 1449/PTO				Complete if Known	
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				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	2	of	9	Attorney Docket Number	6583-427

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	53	2010/0302444	12/02/2010	Ahn et al.	
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	56	2010/0321405	12/23/2010	MacInnes et al.	
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	63	2012/0054803	03/01/2012	Lee et al.	
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	65	2012/0079427	03/29/2012	Carmichael et al.	
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	67	2012/0143972	06/07/2012	Malik et al.	
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Examiner Signature		Date Considered	

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				Filing Date	August 19, 2013
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(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	3	of	9	Attorney Docket Number	6583-427

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	70	2012/0198490	08/02/2012	Mertens	
	71	2012/0210367	08/16/2012	Lee et al.	
	72	2012/0272271	10/25/2012	Nishizawa et al.	
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UNPUBLISHED U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Document Number Number-kind Code[2] (if known)	Filing Date MM-DD-YYYY	Name of Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	97	14/407593	12/12/2014	Sirpal et al.	
	98	14/407598	12/12/2014	Sirpal et al.	
	99	14/407601	12/12/2014	Sirpal et al.	

Examiner Signature		Date Considered	

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(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	4	of	9	Attorney Docket Number	6583-427

	100	14/407609	12/12/2014	Sirpal et al.	
	101	14/418969	02/02/2015	Sirpal et al.	
	102	14/418972	02/02/2015	Sirpal et al.	
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Country Code[3]; Number[4]; Kind Code[5] *(if known)*	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]

NON-PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
	104	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/55494, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-426-PCT) 8 pages
	105	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/36826, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-430-PCT) 8 pages
	106	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/055342, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-434-PCT) 10 pages
	107	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/55589, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-436-PCT) 8 pages
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	110	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/055286, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-446-PCT) 8 pages
	111	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055284, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-448-PCT) 9 pages
	112	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055293, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-449-PCT) 12 pages
	113	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/055294, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-450-PCT) 10 pages
	114	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/55493, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-452-PCT) 8 pages

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1] Applicant's unique citation designation number (optional). [2] See Kinds Codes of USPTO Patent Documents at www.uspto.gov or MPEP 901.04. [3] Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4] For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5] Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. [6] Applicant is to place a check mark here if English language Translation is attached.

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
(Use as many sheets as necessary)				First Named Inventor	Sanjiv Sirpal
				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	5	of	9	Attorney Docket Number	6583-427

	115	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/036828, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-453-PCT) 12 pages
	116	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/055340, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-454-PCT) 8 pages
	117	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055551, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-463-PCT) 6 pages
	118	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/55592, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-464-PCT) 10 pages
	119	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/036819, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-469-PCT) 8 pages
	120	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/036782, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-470-PCT) 8 pages
	121	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/36678, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-471-PCT) 8 pages
	122	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/036804, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-472-PCT) 12 pages
	123	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/55405, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-478-PCT) 8 pages
	124	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/055278, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-479-PCT) 8 pages
	125	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/55509, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-481-PCT) 8 pages
	126	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/CN2013/081639, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-487-PCT) 6 pages
	127	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US2013/055303, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-488-PCT) 7 pages
	128	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055383, mailed Apr. 02, 2015 (Attorney's Ref. No. 6583-490-PCT) 8 pages
	129	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055344, mailed Apr. 02, 2015 (Attorney's Ref. No. 6583-491-PCT) 7 pages
	130	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055389, mailed Apr. 02, 2015 (Attorney's Ref. No. 6583-494-PCT) 9 pages
	131	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055283, mailed Apr. 02, 2015 (Attorney's Ref. No. 6583-495-PCT) 6 pages
	132	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055564, mailed Apr. 02, 2015 (Attorney's Ref. No. 6583-496-PCT) 6 pages
	133	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055379, mailed Apr. 02, 2015 (Attorney's Ref. No. 6583-497-PCT) 8 pages

Examiner Signature		Date Considered	

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Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	13/969,857
				Filing Date	August 19, 2013
				First Named Inventor	Sanjiv Sirpal
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	6	of	9	Attorney Docket Number	6583-427

	134	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055349, mailed Apr. 02, 2015 (Attorney's Ref. No. 6583-498-PCT) 7 pages
	135	International Preliminary Report for International (PCT) Patent Application No. PCT/US2013/055298, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-509-PCT) 7 pages
	136	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/55567, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-519-PCT) 9 pages
	137	International Preliminary Report on Patentability for International (PCT) Patent Application No. PCT/US13/55570, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-520-PCT) 7 pages
	138	Official Action for U.S. Patent Application No. 13/969,846, mailed Mar. 02, 2015 (Attorney's Ref. No. 6583-426) 21 pages
	139	Official Action for U.S. Patent Application No. 13/969,869, mailed Feb. 24, 2015 (Attorney's Ref. No. 6583-428) 22 pages
	140	Official Action for U.S. Patent Application No. 13/969,880, mailed Mar. 27, 2015 (Attorney's Ref. No. 6583-431) 14 pages
	141	Notice of Allowance for U.S. Patent Application No. 13/969,884, mailed Mar. 24, 2015 (Attorney's Ref. No. 6583-432) 16 pages
	142	Official Action for U.S. Patent Application No. 13/969,887, mailed Mar. 11, 2015 (Attorney's Ref. No. 6583-433) 24 pages
	143	Official Action for U.S. Patent Application No. 13/969,482, mailed Apr. 03, 2015 (Attorney's Ref. No. 6583-434) 19 pages
	144	Official Action for U.S. Patent Application No. 13/969,485, mailed Mar. 11, 2015 (Attorney's Ref. No. 6583-435) 19 pages
	145	Official Action for U.S. Patent Application No. 13/970,388, mailed Jan. 22, 2015 (Attorney's Ref. No. 6583-436) 12 pages
	146	Notice of Allowance for U.S. Patent Application No. 13/970,398, mailed Feb. 02, 2015 (Attorney's Ref. No. 6583-437) 14 pages
	147	Official Action for U.S. Patent Application No. 13/970,409, mailed Feb. 11, 2015 (Attorney's Ref. No. 6583-438) 25 pages
	148	Official Action for U.S. Patent Application No. 13/970,420, mailed Feb. 10, 2015 (Attorney's Ref. No. 6583-439) 13 pages
	149	Official Action for U.S. Patent Application No. 13/970,442, mailed Feb. 26, 2015 (Attorney's Ref. No. 6583-441) 10 pages
	150	Official Action for U.S. Patent Application No. 13/970,450, mailed Nov. 19, 2014 (Attorney's Ref. No. 6583-442) 12 pages
	151	Notice of Allowance for U.S. Patent Application No. 13/970,453, mailed Dec. 09, 2014 (Attorney's Ref. No. 6583-443) 11 pages
	152	Official Action for U.S. Patent Application No. 13/968,858, mailed Jan. 23, 2015 (Attorney's Ref. No. 6583-444) 9 pages

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(Use as many sheets as necessary)				First Named Inventor	Sanjiv Sirpal
				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	7	of	9	Attorney Docket Number	6583-427

	153	Notice of Allowance for U.S. Patent Application No. 13/968,884, mailed Jan. 05, 2015 (Attorney's Ref. No. 6583-445) 20 pages
	154	Corrected Notice of Allowance for U.S. Patent Application No. 13/968,884, mailed Apr. 01, 2015 (Attorney's Ref. No. 6583-445) 15 pages
	155	Official Action for U.S. Patent Application No. 13/968,876, mailed Dec. 26, 2014 (Attorney's Ref. No. 6583-446) 13 pages
	156	Official Action for U.S. Patent Application No. 13/968,867, mailed Jan. 27, 2015 (Attorney's Ref. No. 6583-447) 17 pages
	157	Official Action for U.S. Patent Application No. 13/968,913, mailed Apr. 01, 2015 (Attorney's Ref. No. 6583-448) 16 pages
	158	Official Action for U.S. Patent Application No. 13/968,983, mailed Nov. 26, 2014 (Attorney's Ref. No. 6583-449) 17 pages
	159	Official Action for U.S. Patent Application No. 13/968,983, mailed Mar. 12, 2015(Attorney's Ref. No. 6583-449) 21 pages
	160	Official Action for U.S. Patent Application No. 13/968,948, mailed Nov. 24, 2014 (Attorney's Ref. No. 6583-450) 13 pages
	161	Official Action for U.S. Patent Application No. 13/968,948, mailed Mar. 11, 2015 (Attorney's Ref. No. 6583-450) 13 pages
	162	Official Action for U.S. Patent Application No. 13/968,929, mailed Apr. 29, 2015 (Attorney's Ref. No. 6583-451) 12 pages
	163	Official Action for U.S. Patent Application No. 13/969,588, mailed Mar. 11, 2015 (Attorney's Ref. No. 6583-452) 12 pages
	164	Official Action for U.S. Patent Application No. 13/864,120, mailed Dec. 24, 2014 (Attorney's Ref. No. 6583-453) 13 pages
	165	Notice of Allowance for U.S. Patent Application No. 13/864,120, mailed Apr. 14, 2015 (Attorney's Ref. No. 6583-453) 9 pages
	166	Official Action for U.S. Patent Application No. 13/969,505, mailed Feb. 24, 2015 (Attorney's Ref. No. 6583-454) 9 pages
	167	Official Action for U.S. Patent Application No. 13/969,490, mailed Nov. 19, 2014 (Attorney's Ref. No. 6583-456) 22 pages
	168	Official Action for U.S. Patent Application No. 13/969,490, mailed Mar. 13, 2015 (Attorney's Ref. No. 6583-456) 26 pages
	169	Official Action for U.S. Patent Application No. 13/969,491, mailed Mar. 20, 2015 (Attorney's Ref. No. 6583-457) 25 pages
	170	Official Action for U.S. Patent Application No. 13/969,492, mailed Dec. 05, 2014 (Attorney's Ref. No. 6583-458) 14 pages
	171	Official Action for U.S. Patent Application No. 13/969,493, mailed Mar. 2, 2015 (Attorney's Ref. No. 6583-459) 15 pages

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	172	Official Action for U.S. Patent Application No. 13/970,000, mailed Nov. 14, 2014 (Attorney's Ref. No. 6583-463) 14 pages
	173	Official Action for U.S. Patent Application No. 13/970,000, mailed Mar. 05, 2015 (Attorney's Ref. No. 6583-463) 16 pages
	174	Official Action for U.S. Patent Application No. 13/970,355, mailed Dec. 19, 2014 (Attorney's Ref. No. 6583-464) 9 pages
	175	Official Action for U.S. Patent Application No. 13/864,214, mailed Jan. 29, 2015 (Attorney's Ref. No. 6583-469) 17 pages
	176	Official Action for U.S. Patent Application No. 13/969,179, mailed Nov. 28, 2014 (Attorney's Ref. No. 6583-478) 15 pages
	177	Official Action for U.S. Patent Application No. 13/969,179, mailed Mar. 12, 2015 (Attorney's Ref. No. 6583-478) 17 pages
	178	Official Action for U.S. Patent Application No. 13/968,767, mailed Jan. 22, 2015 (Attorney's Ref. No. 6583-479) 15 pages
	179	Official Action for U.S. Patent Application No. 13/969,506, mailed Jan. 23, 2015 (Attorney's Ref. No. 6583-480) 9 pages
	180	Official Action for U.S. Patent Application No. 13/970,374, mailed Dec. 09, 2014 (Attorney's Ref. No. 6583-481) 9 pages
	181	Official Action for U.S. Patent Application No. 13/968,897, mailed Jan. 28, 2015 (Attorney's Ref. No. 6583-489) 18 pages
	182	Official Action for U.S. Patent Application No. 13/968,652, mailed Dec. 05, 2014 (Attorney's Ref. No. 6583-491) 25 pages
	183	Official Action for U.S. Patent Application No. 13/968,652, mailed Apr. 17, 2015 (Attorney's Ref. No. 6583-491) 17 pages
	184	Official Action for U.S. Patent Application No. 13/968,709, mailed Nov. 14, 2014 (Attorney's Ref. No. 6583-493) 17 pages
	185	Official Action for U.S. Patent Application No. 13/968,709, mailed Feb. 23, 2015 (Attorney's Ref. No. 6583-493) 13 pages
	186	Official Action for U.S. Patent Application No. 13/968,903, mailed Jan. 05, 2015 (Attorney's Ref. No. 6583-495) 13 pages
	187	Official Action for U.S. Patent Application No. 13/970,234, mailed Dec. 26, 2014 (Attorney's Ref. No. 6583-496) 13 pages
	188	Notice of Allowance for U.S. Patent Application No. 13/968,969, mailed Jan. 06, 2015 (Attorney's Ref. No. 6583-498) 6 pages
	189	Official Action for U.S. Patent Application No. 13/968,610, mailed Dec. 31, 2014 (Attorney's Ref. No. 6583-499) 7 pages
	190	Notice of Allowance for U.S. Patent Application No. 13/968,610, mailed Feb. 24, 2015 (Attorney's Ref. No. 6583-499) 5 pages

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(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	Kieu Oanh T Bui
Sheet	9	of	9	Attorney Docket Number	6583-427

	191	Official Action for U.S. Patent Application No. 13/968,732, mailed Dec. 26, 2014 (Attorney's Ref. No. 6583-500) 13 pages
	192	Official Action for U.S. Patent Application No. 13/969,777, mailed Jan. 08, 2015 (Attorney's Ref. No. 6583-501) 11 pages
	193	Official Action for U.S. Patent Application No. 13/969,777, mailed Apr. 15, 2015 (Attorney's Ref. No. 6583-501) 11 pages
	194	Official Action for U.S. Patent Application No. 13/968,630, mailed Nov. 19, 2014 (Attorney's Ref. No. 6583-504) 11 pages
	195	Official Action for U.S. Patent Application No. 13/968,630, mailed Mar. 27, 2015 (Attorney's Ref. No. 6583-504) 15 pages
	196	Official Action for U.S. Patent Application No. 13/969,507, mailed Jan. 27, 2015 (Attorney's Ref. No. 6583-508) 30 pages
	197	Official Action for U.S. Patent Application No. 13/968,937, mailed Dec. 18, 2014 (Attorney's Ref. No. 6583-509) 9 pages
	198	Official Action for U.S. Patent Application No. 13/968,937, mailed Apr. 07, 2015 (Attorney's Ref. No. 6583-509) 10 pages
	199	Official Action for U.S. Patent Application No. 13/969,508, mailed Mar. 05, 2015 (Attorney's Ref. No. 6583-510) 9 pages
	200	Official Action for U.S. Patent Application No. 13/969,510, mailed Feb. 24, 2015 (Attorney's Ref. No. 6583-511) 17 pages
	201	Official Action for U.S. Patent Application No. 13/970,243, mailed Jan. 22, 2015 (Attorney's Ref. No. 6583-519) 14 pages
	202	Official Action for U.S. Patent Application No. 13/970,247, mailed Dec. 22, 2014 (Attorney's Ref. No. 6583-520) 20 pages
	203	Official Action for U.S. Patent Application No. 13/969,504, mailed Feb. 23, 2015 (Attorney's Ref. No. 6583-526) 10 pages

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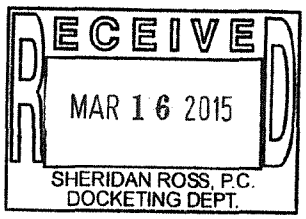
PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING TRANSMITTAL OF COPY OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (CHAPTER I OF THE PATENT COOPERATION TREATY)
(PCT Rule 44bis.1(c))

To:



WILSON, Tadd, F.
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
ETATS-UNIS D'AMERIQUE

Date of mailing *(day/month/year)*	
26 February 2015 (26.02.2015)	
Applicant's or agent's file reference: 6583-426-PCT	IMPORTANT NOTICE

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055494	18 August 2013 (18.08.2013)	17 August 2012 (17.08.2012)

Applicant: FLEXTRONICS AP, LLC

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

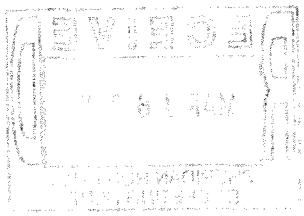
The International Bureau of WIPO
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1211 Geneva 20, Switzerland

Facsimile No. +41 22 338 82 70

Authorized officer
Kihwan Moon

e-mail: pt01.pct@wipo.int

VIZIO Ex. 1002, Page 3196 of 3573
VIZIO v. MMT, IPR2024-00722



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference 6583-426-PCT	**FOR FURTHER ACTION**	See item 4 below
International application No. PCT/US2013/055494	International filing date *(day/month/year)* 18 August 2013 (18.08.2013)	Priority date *(day/month/year)* 17 August 2012 (17.08.2012)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant FLEXTRONICS AP, LLC		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 5 sheets, including this cover sheet.

   In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☒	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44*bis*.3(c) and 93*bis*.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44*bis* .2).

	Date of issuance of this report 17 February 2015 (17.02.2015)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Kihwan Moon e-mail: pt01.pct@wipo.int

Form PCT/IB/373 (January 2004)

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Tadd F. Wilson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, Colorado 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	16 APR 2014

Applicant's or agent's file reference	FOR FURTHER ACTION
6583-426-PCT	See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55494	18 August 2013 (18.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/0482 (2014.01)
USPC - 715/851

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to th IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	24 March 2014 (24.03.2014)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55494

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55494

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the appicable time limit:

   ☐ paid additional fees

   ☐ paid additional fees under protest and, where applicable, the protest fee

   ☐ paid additional fees under protest but the applicable protest fee was not paid

   ☒ not paid additional fees

2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.

3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is

   ☐ complied with

   ☒ not complied with for the following reasons:

Group I: Claims 1-2; Group II: Claims 3-4; Group II: Claims 5-6; Group IV: Claims 7-8; Group V: Claims 9-10; Group VI: Claims 11-12; Group VII: Claims 13-14

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1-2 are directed toward a method for providing a user interface in an intelligent television.
Group II: Claims 3-4 are directed toward a method for providing a user interface in an intelligent television.
Group III: Claims 5-6 are directed toward a method for providing a user interface in an intelligent television.
Group IV: Claims 7-8 are directed toward a method for providing a user interface in an intelligent television.
Group V: Claims 9-10 are directed toward a method for providing a user interface in an intelligent television.
Group VI: Claims 11-12 are directed toward a method for providing one of two types of user interfaces in an intelligent television.
Group VII: Claims 13-14 are directed toward a method for providing a user interface in an intelligent television.

The inventions listed as Groups I-VII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: The special technical features of Group I include a first series of user interfaces; receiving a back selection to reverse a navigation, which are not present in Groups II-VII. The special technical features of Group II include a first navigation bar; a second navigation bar; rendering a horizontal navigation bar; and rendering a different user interface for the second navigation bar, which are not present in Groups I and III-VII. The special technical features of Group III include a notification for a user; dismissing the notification; and providing a missing notification icon in the user interface, which are not present in Groups I-II and IV-VII. The special technical features of Group IV include the user interface including at least two regions; and providing an action based on a location within one of the least two regions, which are not present in Groups I-III and V-VII. The special technical features of Group V include determining a selection characteristic; determining a content characteristic; and based on the selection characteristic and the content characteristic, affecting change in the user interface, which are not present in Groups I-IV and VI-VII. The special technical features of Group VI include determining a type of user interface selection; a first type of selection; and a second type of selection, which are not present in Groups I-V and VII. The special technical features of Group VII include receiving a selection for an unrelated search that does not apply to the first content; and providing a search panel above a portion of the content to search for a second content, which are not present in Groups I-VI.

The common technical feature shared by Groups I-VII is a method and system for providing a user interface in an intelligent television, the method and system comprising: receiving, by a processor of the intelligent television, a selection associated with content in the intelligent television; presenting a second user interface different than a first user interface. However, this common feature is previously disclosed by US 2012/0210239 A1 (Kim). Kim discloses a method and system for providing a user interface in an intelligent television (a first GUI (user interface) displayed on a screen of a Smart TV; paragraphs [0121] and [0247]), the method and system comprising: receiving, by a processor (paragraph [0177]) of the intelligent television, a selection associated with content in the intelligent television (first user action (selection); paragraph [0249]); presenting a second user interface different than a first user interface (second GUI; paragraph [0249]).

Since the common technical feature is previously disclosed by the Kim reference, this common feature is not special and so Groups I-VII lack unity.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

   ☐ all parts

   ☒ the parts relating to claims Nos. 1 and 2

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55494

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	None	YES
	Claims	1-2	NO
Inventive step (IS)	Claims	None	YES
	Claims	1-2	NO
Industrial applicability (IA)	Claims	1-2	YES
	Claims	None	NO

2. Citations and explanations:

Claims 1-2 lack novelty under PCT Article 33(2) as being anticipated by US 2012/0174039 A1 to Rhoads et al. (hereinafter "Rhoads").

As to claim 1, Rhoads discloses a method for providing a user interface in an intelligent television, the method comprising: receiving, by a processor of the intelligent television, a selection associated with content in the intelligent television (receiving by the control circuitry of a smart TV comprising a microprocessor (receiving, by a processor of the intelligent television) a user selection of a media identifier from multiple media identifiers by the smart TV (a selection associated with content in the intelligent television), paragraphs [0006], [0026], [0049]); in response to the selection, presenting the user interface associated with the content, wherein the user interface is associated with a first series of user interfaces (In response to the user's indication (in response to the selection), the media guidance application may provide a display screen with media guidance data (presenting the user interface associated with the content); an options region may allow the user to access different types of content, media guidance application displays, and/or media guidance application features (wherein the user interface is associated with a first series of user interfaces), paragraph [0028]); receiving a back selection to reverse a navigation through the first series of user interfaces (the navigation indicator may allow a user to navigate back (receiving a back selection to reverse a navigation) through a hierarchical structure of media identifiers to the location of the media asset (through the first series of user interfaces), paragraph [0023]); and presenting a second user interface, wherein the second user interface is in a second series of user interfaces (a second navigation indicator is displayed (and presenting a second user interface) that represents a path navigating through the hierarchy of the interactive media guidance application to the second media asset (wherein the second user interface is in a second series of user interfaces), claims 5, 6), and wherein the first series of user interfaces is different from the second series of user interfaces (wherein the first navigation indicator comprises a first navigation cue that identifies which media identifier to select from a first portion of the plurality of media identifiers (wherein the first series of user interfaces) second navigation cue that identifies which media identifier to select from a second portion of the plurality of media identifier (is different from a second series of user interfaces), claim 22).

As to claim 2, Rhoads discloses an intelligent television system comprising: a memory operable to store social media data (memory storage may be used to store various types of content including social media content (a memory operable to store social media data), paragraphs [0025], [0051]); a processor in communication with the memory (a processor with an application stored in memory (a processor in communication with the memory), paragraph [0049]), the processor operable to: execute a user interface application (the processor executes instruction for the media guidance application (executes a user interface application), paragraph [0049]), the user interface application operable receive, by a processor of the intelligent television, a selection associated with content in the intelligent television (the media guidance application (the user interface application) receives by the control circuitry of a smart TV comprising a microprocessor (operable to receive, by a processor of the intelligent television) a user selection of a media identifier from multiple media identifiers by the smart TV (a selection associated with content in the intelligent television), paragraphs [0006], [0026], [0049]); in response to the selection, present the user interface associated with the content, wherein the user interface is associated with a first series of user interfaces (In response to the user's indication (in response to the selection), the media guidance application may provide a display screen with media guidance data (present the user interface associated with the content); an options region may allow the user to access different types of content, media guidance application displays, and/or media guidance application features (wherein the user interface is associated with a first series of user interfaces), paragraph [0028]); receive a back selection to reverse a navigation through the first series of user interfaces (the navigation indicator may allow a user to navigate back (receive a back selection to reverse a navigation) through a hierarchical structure of media identifiers to the location of the media asset (through the first series of user interfaces), paragraph [0023]); and present a second user interface, wherein the second user interface is in a second series of user interfaces (a second navigation indicator is displayed (and present a second user interface) that represents a path navigating through the hierarchy of the interactive media guidance application to the second media asset (wherein the second user interface is in a second series of user interfaces), claims 5, 6), and wherein the first series of user interfaces is different from the second series of user interfaces (wherein the first navigation indicator comprises a first navigation cue that identifies which media identifier to select from a first portion of the plurality of media identifiers (wherein the first series of user interfaces) second navigation cue that identifies which media identifier to select from a second portion of the plurality of media identifier (is different from a second series of user interfaces), claim 22).

Claims 1-2 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

VIZIO Ex. 1002, Page 3202 of 3573
VIZIO v. MMT, IPR2024-00722

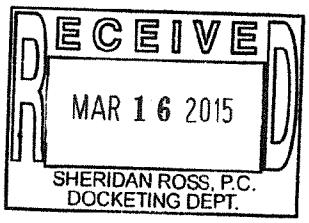
PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

PCT

NOTIFICATION CONCERNING TRANSMITTAL OF COPY OF INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (CHAPTER I OF THE PATENT COOPERATION TREATY)
(PCT Rule 44bis.1(c))

To:



WILSON, Tadd, F.
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
ETATS-UNIS D'AMERIQUE

Date of mailing *(day/month/year)*	
26 February 2015 (26.02.2015)	
Applicant's or agent's file reference 6583-430-PCT	**IMPORTANT NOTICE**

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/036826	16 April 2013 (16.04.2013)	17 August 2012 (17.08.2012)

Applicant
FLEXTRONICS AP, LLC

The International Bureau transmits herewith a copy of the international preliminary report on patentability (Chapter I of the Patent Cooperation Treaty)

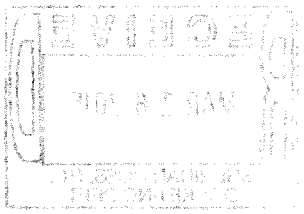
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VIZIO Ex. 1002, Page 3204 of 3573
VIZIO v. MMT, IPR2024-00722



PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44*bis*)

Applicant's or agent's file reference 6583-430-PCT	**FOR FURTHER ACTION**	See item 4 below
International application No. PCT/US2013/036826	International filing date *(day/month/year)* 16 April 2013 (16.04.2013)	Priority date *(day/month/year)* 17 August 2012 (17.08.2012)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant FLEXTRONICS AP, LLC		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 *bis*.1(a).

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

   In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

☒	Box No. I	Basis of the report
☐	Box No. II	Priority
☐	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐	Box No. IV	Lack of unity of invention
☒	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐	Box No. VI	Certain documents cited
☐	Box No. VII	Certain defects in the international application
☐	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44*bis*.3(c) and 93*bis*.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44*bis* .2).

	Date of issuance of this report 17 February 2015 (17.02.2015)
The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Authorized officer Nora Lindner e-mail: pt05.pct@wipo.int

Form PCT/IB/373 (January 2004)

From the
INTERNATIONAL SEARCHING AUTHORITY

To: Tadd F. Wilson
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202
United States of America

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	17 JUN 2013
Applicant's or agent's file reference 6583-430-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/36826	16 April 2013 (16.04.2013)	14 June 2012 (14.06.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - H04N 5/44543; G06F 8/34 (2013.01)
USPC - 715/763; 725/39

Applicant Flextronics AP, LLC

1. This opinion contains indications relating to the following items:

- [X] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [X] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1 *bis*(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Fom PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	6 June 2013 (06.06.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

Form PCT/ISA/237 (cover sheet) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36826

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:

   ☒ the international application in the language in which it was filed.

   ☐ a translation of the international application into _____ which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).

2. ☐ This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:

   a. (means)

   ☐ on paper

   ☐ in electronic form

   b. (time)

   ☐ in the international application as filed

   ☐ together with the international application in electronic form

   ☐ subsequently to this Authority for the purposes of search

4. ☐ In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/36826

Box No. V **Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	5-8, 13-15 and 18-20	YES
	Claims	1-4, 9-12 and 16-17	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1-4, 9-12 and 16-17 lack novelty under PCT Article 33(2) as being anticipated by US 8,201,104 B2 Yamamoto et al. (hereinafter "Yamamoto").

As to claim 1, Yamamoto discloses a method for associating badges with an item of content or a content source, the method comprising (a plurality of function icons (associating badges) representing respective types of content playing functions, column 2, lines 32-35): receiving a selection associated with the item of content or the content source (A game icon 62 is an icon that represents the game running function and is selected to run a game program (selection associated with a item/game program), column 9, lines 8-10); based on the selection, associating a badge with the item of content or the content source (a plurality of function icons (associating badges) representing respective types of content playing functions, column 2, lines 32-35), wherein a badge is a user interface device having visual indicia that indicates the item of content or the content source includes a feature, a state, or a designation (A moving image icon, which is a function (feature) icon displayed in an area of intersection in which the array of function icons and the array of content icons (item of content) intersect, is highlighted by a color different from that of the other function icons (when the state changes) and by an enlarged view, abstract).

As to claim 2, Yamamoto discloses the method as defined in claim 1, further comprising receiving a second selection for a user interface containing information about the item of content or the content source (a display controller which generates the image data for the on-screen menu with a two-dimensional array which includes a first array comprising the plurality of function icons arranged in a specific direction on a screen and which also includes a second array comprising the plurality of content icons (item of content) in a direction intersecting the specific direction on the screen, column 2, lines 2-9).

As to claim 3, Yamamoto discloses the method as defined in claim 2, further comprising, based on the second selection, presenting the information about the item of content or the content source (The display controller displays the second array to intersect the first array at a position of one of the function icons selected by the user, and, if the contents are hierarchically stored in the storage, displays an expanded view (presenting the information) of the content icons (item of content) in the second array such that the hierarchy is represented visually or auditorily, column 2, lines 9-14).

As to claim 4, Yamamoto discloses the method as defined in claim 3, further comprising, based on the second selection, presenting the badge, associated with the item of content or the content source, with the information the item of content or the content source (the contents are hierarchically stored in the storage, displays an expanded view of the content icons (badge) in the second array such that the hierarchy is represented visually or auditorily and the term "content" refers to information including moving images, still images, audio, texts and programs that are played, displayed or run by respective types of information conveying means, column 2, lines 9-19).

As to claim 9, Yamamoto discloses the method as defined in claim 4, further disclose wherein the state is a paused playback (The instruction determination module 94 acquires instructions such as "content playing", "pause playing" (pause playback) and "invoke on-screen menu" entered by the user manipulating the controller 42, column 4, line 66 and column 5, line 3).

As to claim 10, Yamamoto discloses the method as defined in claim 3, further discloses wherein the badge is an in-progress badge (The instruction determination module 94 acquires instructions such as "content playing" (in progress icon), "pause playing" (pause playback) and "invoke on-screen menu" entered by the user manipulating the controller 42, column 4, line 66 and column 5, line 3).

As to claim 11, Yamamoto discloses a tangible computer readable medium having instructions stored thereon, wherein when executed by a processor cause the processor to execute a method (computer readable medium having stored therein a computer program executable by a computer for displaying an on-screen menu in a content player, column 25, lines 21-25), the instructions comprising: instructions to receive a selection associated with the item of content or the content source (A game icon 62 is an icon that represents the game running function and is selected to run a game program (selection associated with a item/game program), column 9, lines 8-10), based on the selection, instructions to associate a badge with the item of content or the content source (a plurality of function icons (associating badges) representing respective types of content playing functions, column 2, lines 32-35), wherein a badge is a user interface device having visual indicia that indicates the item of content or the content source includes a feature, a state, or a designation (A moving image icon, which is a function (feature) icon displayed in an area of intersection in which the array of function icons and the array of content icons intersect, is highlighted by a color different from that of the other function icons (when the state changes) and by an enlarged view, abstract).

-***-Continued Within the Next Supplemental Box-***-