190. The system of item 185, wherein the viewing history of the first of the home networks is accessible by each of the home networks.

191. The system of item 185, wherein the system is operative to:

provide a home profile, wherein the home profile comprises the viewer history for at least the first of the home networks.

192. The system of item 185, wherein the system is operative to:

monitor interactions performed on the first of the home networks; and
update the viewer history for at least the first of the home networks based on the monitored interactions.

193. The system of item 185, wherein the viewer history is associated with the first of the home networks and a second of the home networks, wherein the system is operative to:

monitor interactions performed on a second of the home networks; and
update the viewer history for the first and second of the home networks.

194. The system of item 185, wherein the system is operative to:

store the viewer history on a database.

195. The system of item 194, wherein the database is located locally on a user device that is communicatively coupled to one of the home networks.

196. The system of item 194, wherein the database is a home network database that is communicatively coupled to one of the home networks.

197. The system of item 194, wherein the database is a remote database that is communicatively coupled to each of the home networks.

198. The system of item 197, wherein the remote database is located on a server or a distribution facility.

199. The system of item 185, wherein the viewing history comprises data that indicates which programming has been viewed on the first of the home networks, data that monitors interactions with the user equipment device on the first of the home networks, data that indicates which advertisements have been displayed by the first of the home networks, or data that indicates which additional information has been displayed by the first of the home networks.

200. The system of item. 185, wherein the generated interactive content comprises a list of programming that includes programming that has not been displayed by the first of the home networks, advertisements that have not been displayed by the first of the home networks, additional information that has not been displayed by the first of the home networks, additional information that indicates whether a particular program has been viewed, additional information that indicates the last time a particular program was viewed, or a list of programming that has been ranked according to predetermined criteria.

201. The system of item 185, wherein the generated interactive content comprises a listing of programming, wherein the system is operative to:

store in a database an identifier associated with each program that has been viewed on the first of the home networks; and
cross-reference identifiers associated with all available programming with the identifiers stored in the database to determine which programming can be included in the listing of programming.

202. The system of item 185, wherein the generated interactive content comprises a listing of programming, wherein the system is operative to:

provide a group of identifiers corresponding to all programming available that can be viewed at any of the home networks, wherein the listing of programming is derived from the group of identifiers; and
remove from the group identifiers corresponding to programming that has been viewed on the first of the home networks.

203. The system of item 202, wherein the system is operative to:

add new identifiers to the group as new programming becomes available; and
delete identifiers from the group when programming corresponding to the deleted identifiers is no longer available.

204. The system of item 185, wherein the interactive media guidance application is an interactive television program guide or an online television program guide.

205. A method for creating a viewing history using an interactive media guidance application, compris-

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ing:

creating a viewing history for a user based on previously viewed content;
automatically updating the viewing history based on content that is viewed by the user on a user equipment device; and
allowing the user to manually update the viewing history using the interactive media guidance application.

206. The method of item 205, wherein the user equipment device is a first user equipment device, the method further comprising automatically updating the viewing history based on content that is viewed by the user on a second user equipment device.

207. The method of item 206, wherein the second user equipment device is part of a home network, the home network comprises a plurality of user equipment devices, including the first user equipment device.

208. The method of item 206, wherein the second user equipment device is not part of a home network, the home network comprises a plurality of user equipment devices, including the first user equipment device.

209. The method of item 205, wherein allowing the user to manually update the viewing history through the interactive media guidance application comprises:

receiving a first user input for specifying previously viewed content; and
receiving a second user input for selecting a user profile, wherein the user profile comprises the viewing history for the user based on the previously viewed content.

210. The method of item 209, further comprising:

updating the viewing history of the selected user profile with the specified content.

211. The method of item, 209, wherein receiving a first user input for specifying previously viewed content comprises:

allowing a user to perform a search for the previously viewed content; and
receiving a user input of the previously viewed content based on the search.

212. The method of item 209, wherein receiving a first user input for specifying previously viewed content further comprises receiving a user input for specifying details of the viewing of the previously viewed content.

213. The method of item 209, wherein receiving a second user input for selecting a profile comprises:

allowing a user to perform a search for the profile; and
receiving a user input of the profile based on the search.

214. The method of item 209, further comprising receiving a user input for creating a profile.

215. The method of item 210, wherein updating the viewing history of the selected profile with the specified content comprises adding the specified content to the viewing history of the selected profile, or replacing the viewing history of the selected profile with the specified content.

216. The method of item 209, further comprising receiving a user input to begin displaying interactive content using the interactive media guidance application for only a portion of the functionality provided by the interactive media guidance application based on the specified content.

217. The method of item. 209, wherein the specified content and the selected profile are provided on a website, and further wherein the interactive media guidance application receives the specified content and the selected profile from the website to perform the updating.

218. The method of item 209, wherein the specified content and the selected profile are provided to the interactive media guidance application.

219. The method of item 205, wherein the interactive media guidance application is an interactive television program guide, or an online television program guide.

220. The method of item 205, wherein the previously viewed content comprises programming, advertisements, content identified based on interactions by a user with the interactive media guidance application, or additional information.

221. The method of item 205, wherein the viewing history makes up a portion of a user profile for the user.

222. The method of item 221, wherein the user profile is stored in a single database that is accessible by at least one of a plurality of user equipment devices that are part of a home network, wherein the plurality

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of user equipment devices in the home network includes the user equipment device, and further wherein the plurality of user equipment devices in the home network are communicatively coupled to one another.

223. The method of item 222, wherein the single database is located in a local server within the home network.

224. The method of item 223, wherein the local server is a standalone local server.

225. The method of item 222, wherein the single database is located in a remote server outside of the home network.

226. The method of item 222, wherein the single database is located in one of the plurality of user equipment devices in the home network, or in another user equipment device outside of the home network.

227. The method of item 222, wherein authorization is required to access the single database, the user profile, or the viewing history portion of the user profile.

228. The method of item 222, wherein a first user equipment device in the home network accesses the viewing history stored in the single database by establishing a communicative link with at least a second user equipment device that has direct access to the single database.

229. The method of item 221, wherein the user profile is stored in a single database that is accessible by the user equipment device.

230. The method of item 221, wherein the user profile is duplicated and stored in a plurality of databases, at least one of which is accessible by at least one of a plurality of user equipment devices that are part of a home network, and wherein the plurality of user equipment devices in the home network includes the user equipment device.

231. The method of item 230, wherein the plurality of databases are located at any of the locations from the group consisting of a local server within the home network, a remote server outside of the home network, and at least one of the plurality of user equipment devices in the home network.

232. The method of item 231, wherein the user profile, including the viewing history, is stored in a plurality of databases, at least one of which is accessible by at least one of a plurality of user equipment devices that are part of a home network, and wherein the plurality of user equipment devices in the home network includes the user equipment device.

233. The method of item 232, wherein the plurality of databases are located at any of the locations from the group consisting of a local server within the home network, a remote server outside of the home network, and at least one of the plurality of user equipment devices in the home network.

234. A system for creating a viewing history using an interactive media guidance application, the system comprising a user equipment device operative to:

create a viewing history for a user based on previously viewed content;
automatically update the viewing history based on content that is viewed by the user on the user equipment device; and
allow the user to manually update the viewing history.

235. The system of item 234, wherein the viewing history is automatically updated based on content that is viewed by the user on a second user equipment device.

236. The system of item 235, wherein the second user equipment device is part of a home network, wherein the home network comprises a plurality of user equipment devices that includes the user equipment device.

237. The system of item 235, wherein the second user equipment device is outside of a home network, wherein the home network comprises a plurality of user equipment devices that includes the user equipment device.

238. The system of item 234, wherein the user equipment device is operative to:

receive a first user input for specifying previously viewed content; and
receive a second user input for selecting a user profile, wherein the user profile comprises the viewing history for the user based on the previously viewed content.

239. The system of item 238, wherein the user equipment is operative to:

update the viewing history of the selected user profile with the specified content.

240. The system of item 234, wherein the user equipment device is operative to:

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allow a user to perform a search for the previously viewed content; and

receive a user input of the previously viewed content based on the search.

241. The system of item 234, wherein the user equipment device is operative to receive a user input for specifying details of the viewing of the previously viewed content.

242. The system of item 234, wherein the user equipment device is operative to:

allow a user to perform a search for a profile; and

receive a user input to select a profile based on the search.

243. The system of item 234, wherein the user equipment device is operative to receive a user input for creating a profile.

244. The system of item 239, wherein the user equipment device is operative to add the specified content to the viewing history of the selected profile, or to replace the viewing history of the selected profile with the specified content.

245. The system of item 239, wherein the user equipment device is operative to receive a user input to begin displaying interactive content for only a portion of the functionality based on the specified content.

246. The system of item 238, wherein the specified content and the selected profile are provided on a website, and further wherein the user equipment device is operative to receive the specified content and the selected profile from the website to perform the update.

247. The system of item 238, wherein the specified content and the selected profile are provided to the interactive media guidance application.

248. The system of item 234, wherein the interactive media guidance application is an interactive television program guide, or an online television program guide.

249. The system of item 234, wherein the previously viewed content comprises programming, advertisements, content identified based on interactions by a user with the user equipment, or additional information.

250. The system of item 234, wherein the viewing history makes up a portion of a user profile for the user.

251. The system of item 250, wherein the user profile is stored in a single database that is accessible by at least one of a plurality of user equipment devices that are part of a home network, wherein the plurality of user equipment devices in the home network includes the user equipment device, and further wherein the plurality of user equipment devices in the home network are communicatively coupled to one another.

252. The system of item 251, wherein the single database is located in a local server within the home network.

253. The system of item 252, wherein the local server is a standalone local server.

254. The system of item 251, wherein the single database is located in a remote server outside of the home network.

255. The system of item 251, wherein the single database is located in one of the plurality of user equipment devices in the home network, or in another user equipment device outside of the home network.

256. The system of item 251, wherein authorization is required to access the single database, the user profile, or the viewing history portion of the user profile.

257. The system of item 251, wherein a first user equipment device in the home network accesses the viewing history stored in the single database by establishing a communicative link with at least a second user equipment device that has direct access to the single database.

258. The system of item 250, wherein the user profile is stored in a single database that is accessible by the user equipment device.

259. The system of item. 250, wherein the user profile is duplicated and stored in a plurality of databases, at least one of which is accessible by at least one of a plurality of user equipment devices that are part of a home network, and wherein the plurality of user equipment devices in the home network includes the user equipment device.

260. The system of item 259, wherein the plurality of databases are located at any of the locations from the group consisting of a local server within the home network, a remote server outside of the home network, and at least one of the plurality of user equipment devices in the home network.

261. The system of item 260, wherein the user pro-

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file, including the viewing history, is stored in a plurality of databases, at least one of which is accessible by at least one of a plurality of user equipment devices that are part of a home network, and wherein the plurality of user equipment devices in the home network includes the user equipment device.

262. The system of item 261, wherein the plurality of databases are located at any of the locations from the group consisting of a local server within the home network, a remote server outside of the home network, and at least one of the plurality of user equipment devices in the home network.

263. A method for displaying a list of previously viewed content in an interactive media guidance application implemented on a user equipment device, comprising:

ranking previously viewed content according to at least one predetermined criterion; and
displaying interactive content using the interactive media guidance application based on the ranking.

264. The method of item. 263, wherein the predetermined criterion is specified by a user.

265. The method of item. 263, wherein a user specifies an order in which the previously viewed content is ranked.

266. The method of item 263, wherein the predetermined criterion comprises the last time the previously viewed content was viewed, the number of times the previously viewed content was viewed, how often the previously viewed content was viewed, or how much of the previously viewed content was viewed.

267. The method of item 263, further comprising ranking previously viewed content according to a plurality of predetermined criteria, wherein the predetermined criteria are combined according to a weighting.

268. The method of item 267, wherein the weighting is specified by a user.

269. The method of item 263, wherein the previously viewed content comprises programming, advertisements, content identified based on interactions by a user with the interactive media guidance application, or additional information.

270. A system for creating a viewing history using an interactive media guidance application, the system comprising a user equipment device operative to:

rank previously viewed content according to at least one predetermined criterion; and
display interactive content based on the ranking.

271. The system of item. 270, wherein the predetermined criterion is specified by a user.

272. The system of item 270, wherein a user specifies an order in which the previously viewed content is ranked.

273. The system of item 270, wherein the predetermined criterion comprises the last time the previously viewed content was viewed, the number of times the previously viewed content was viewed, how often the previously viewed content was viewed, or how much of the previously viewed content was viewed.

274. The system of item 270, wherein the user equipment device is operative to rank previously viewed content according to a plurality of predetermined criteria, wherein the predetermined criteria are combined according to a weighting.

275. The system of item 274, wherein the weighting is specified by a user.

276. The system of item 270, wherein the previously viewed content comprises programming, advertisements, content identified based on interactions with the user equipment device, or additional information.

277. A method for displaying a list of programming in an interactive media guidance application, the method comprising:

providing a plurality of user equipment devices capable of supporting an interactive media guidance application and that are communicatively coupled to each other via a home network;
assigning a timestamp to each program that has been viewed on at least one of the user devices;
ranking programming according to predetermined criteria to determine the order in which the programming is displayed in a ranked list of programming, the predetermined criteria comprising the timestamp; and
displaying the ranked list of programming using at least one of the user devices.

278. The method of item 277, wherein the ranking comprises placing previously viewed programs in the list according to their timestamps.

279. The method of item 277, wherein the ranking comprises placing programs having timestamps that are more recent lower in the list of programming than programs having timestamps that are less recent

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and programs that do not have an assigned timestamp.

280. The method of item 277, wherein the ranking comprises placing the most recently viewed program at the bottom of the list of programming.

281. The method of item 277, wherein the list of programming includes programming that has been viewed and programming that has not been viewed.

282. The method of item 277, wherein the list of programming includes only programming that has not been viewed.

283. The method of item 277, wherein the displayed list of programming is a list available for display on any one of the user devices based on a viewing history for an identified user.

284. The method of item 277, wherein the displayed list of programming is based on a viewing history for a selected one of the plurality of user devices.

285. The method of item 277, wherein the displayed list of programming is based on a viewing history for at least one home network.

286. The method of item 277, further comprising:

displaying additional information for a particular program displayed in the list of programming.

287. The method of item 286, wherein the additional information comprises an indicator that indicates that the particular program has been previously viewed.

288. The method of item 287, wherein the indicator comprises an icon or a change in an appearance of the particular program.

289. The method of item 286, wherein the additional information comprises the timestamp associated with the particular program.

290. The method of item 277, wherein programs that are ranked lower may be colored different than higher ranked programs.

291. A system for using an interactive media guidance application, comprising:

a plurality of user equipment devices connected by a network, wherein the system is operative to:

assign a timestamp to each program that has been viewed on the user equipment device;

rank programming according to predetermined criteria to determine the order in which the programming is displayed in a ranked list of programming, the predetermined criteria comprising the timestamp; and

display the ranked list of programming.

292. The system of item 291, wherein the system is operative to place previously viewed programs in the list according to their timestamps.

293. The system of item 291, wherein the system is operative to place programs having timestamps that are more recent lower in the list of programming than programs having timestamps that are less recent and programs that do not have an assigned timestamp.

294. The system of item 291, wherein the system is operative to place the most recently viewed program at the bottom of the list of programming.

295. The system of item 291, wherein the list of programming includes programming that has been viewed and programming that has not been viewed.

296. The system of item 291, wherein the list of programming includes only programming that has not been viewed.

297. The system of item 291, wherein the displayed list of programming is a list available for display on any one of the user devices based on a viewing history for an identified user.

298. The system of item 291, wherein the displayed list of programming is based on a viewing history for a selected one of the plurality of user devices.

299. The system of item 291, wherein the displayed list of programming is based on a viewing history for at least one home network.

300. The system of item 291, wherein the system is operative to:

display additional information for a particular program displayed in the list of programming.

301. The system of item 300, wherein the additional information comprises an indicator that indicates that the particular program has been previously viewed.

302. The system of item 301, wherein the indicator comprises an icon or a change in an appearance of the particular program.

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303. The system of item 300, wherein the additional information comprises the timestamp associated with the particular program.

304. The system of item 291, wherein programs that are ranked lower may be colored different than higher ranked programs.

Claims

1. A method for using an interactive media guidance application, comprising:

   providing a plurality of user equipment devices, each having an interactive media guidance application implemented thereon, communicatively coupled to each other via a network;
   providing a viewing history of a user, the viewing history including monitored interactions by the user on all of the user equipment devices; and
   generating interactive content based on the viewing history of the user for display using the plurality of user equipment devices communicatively coupled to the network.

2. The method of claim 1, wherein the network is a home network.

3. The method of claim 1, wherein each interactive media guidance application is configured to provide media guidance services independent of other interactive media guidance applications and provide media guidance services in communication with one or more of the other media guidance applications.

4. The method of claim 1, further comprising determining the identity of the user using one of the user equipment devices, wherein the determining comprises at least one of using an identification system to determine the identity of the identified user, receiving a user input command that indicates the identity of the identified user, selecting a default identity for the user, and selecting for the user a user profile comprising the viewing history of the user.

5. The method of claim 1, wherein the generated interactive content comprises at least one of menus, program listings, recommendations, search results, advertisements, and additional information.

6. The method of claim 1, further comprising:

   displaying the generated interactive content on a display screen of a first one of the user equipment devices for the user; and
   displaying the generated interactive content on a display screen of a second one of the user equipment devices for the user.

7. The method of claim 1, further comprising:

   monitoring interactions performed by the user on all of the user equipment devices; and
   updating the viewing history for the user based on the monitored interactions.

8. The method of claim 1, wherein at least one of the generated interactive content and the viewing history is accessible by each of the user equipment devices.

9. The method of claim 1, further comprising:

   storing the viewing history on a database, wherein the database is at least one of a local database on one of the user equipment devices, a network database that is communicatively coupled to the network, and a remote database that is communicatively coupled to the network and located on a server or a distribution facility.

10. The method of claim 1, wherein:

    the viewing history comprises data that indicates which programming has been viewed by the user, data that monitors the user's interactions with the interactive media guidance application, data that indicates which advertisements have been viewed or selected by the user, or data that indicates which additional information has been viewed or selected by the user; and
    the generated interactive content comprises a list of programming that has not been viewed by the user, advertisements that have not been viewed by the user, additional information that has not been viewed by the user, additional information that informs the user whether a particular program has been viewed, additional information that informs the identified user the last time a particular program was viewed, or a list of programming that has been ranked according to predetermined criteria.

11. The method of claim 1, wherein the generated interactive content comprises a listing of programming, the method further comprising:

    storing in a database an identifier associated with each program that has been viewed by the user; and
    cross-referencing identifiers associated with all available programming with the identifiers stored in the database to determine which programming can be included in the listing of programming.

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12. The method of claim 1, wherein the user is a first user and the generated interactive content is first user interactive content generated for the first user, the method further comprising:

determining that a second user is using one of the user equipment devices; and
generating second user interactive content for the second user based on a viewing history for the second user for display on a display screen of any user equipment device communicatively coupled to the network.

13. The method of claim 1, wherein the interactive media guidance application is an interactive television program guide or an online media guide.

14. A system that performs any of the methods of claims 1-13.

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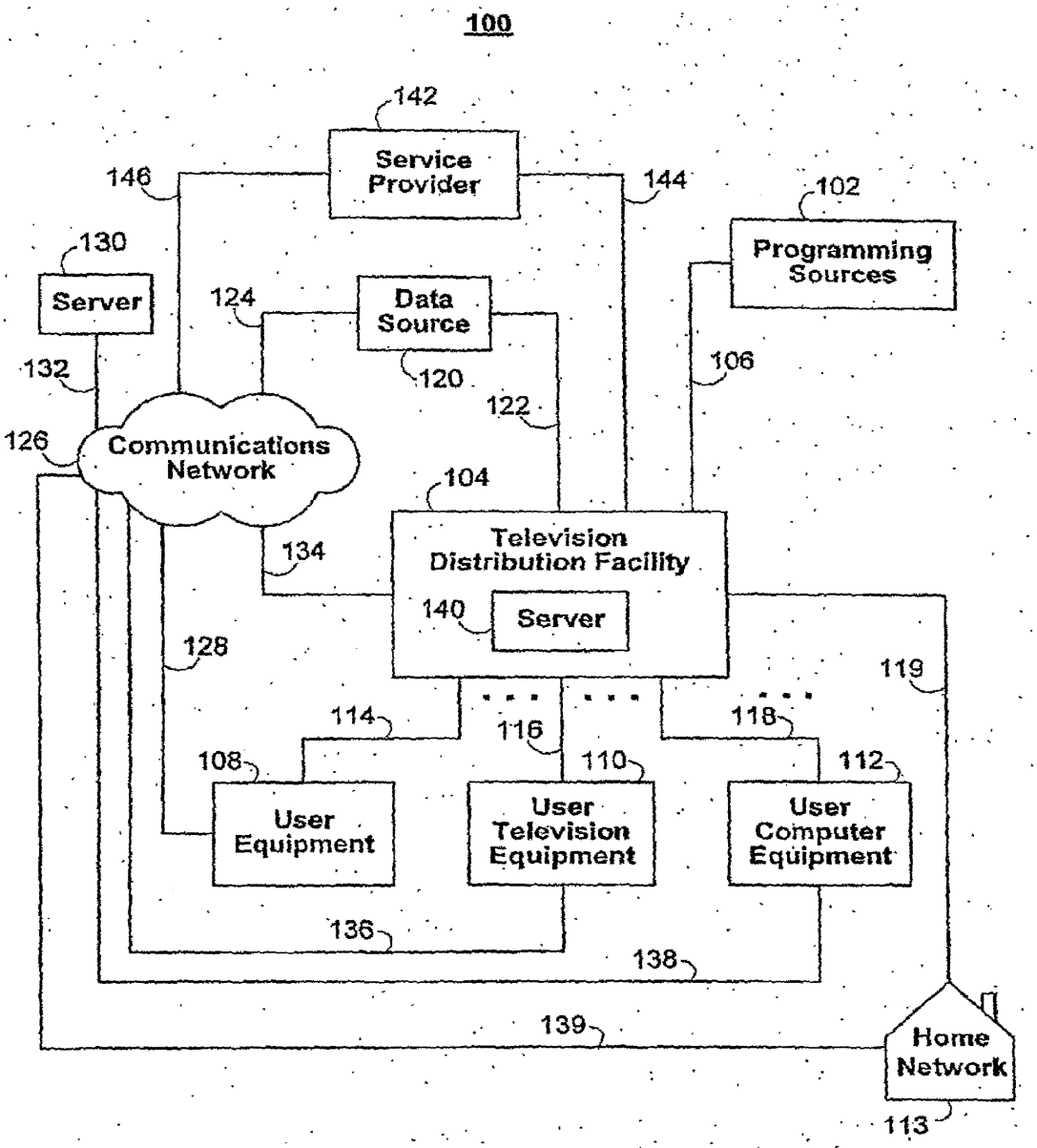

100
142
Service Provider
146
144
102
Programming Sources
130
Server
124
Data Source
120
122
106
132
126
Communications Network
104
Television Distribution Facility
134
140
Server
128
119
114
116
118
108
110
112
User Equipment
User Television Equipment
User Computer Equipment
136
138
139
Home Network
113

FIG. 1

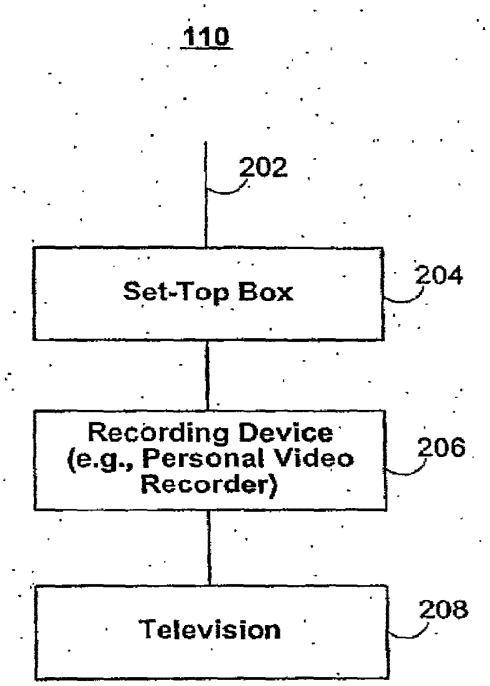

110
202
Set-Top Box
204
Recording Device (e.g., Personal Video Recorder)
206
Television
208

FIG. 2

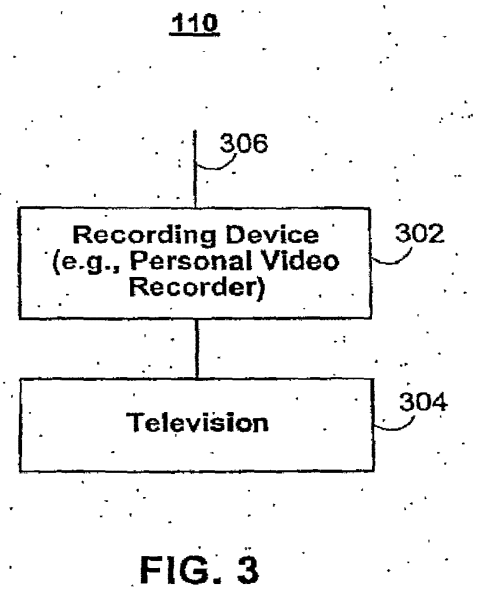

110
306
Recording Device (e.g., Personal Video Recorder)
302
Television
304

FIG. 3

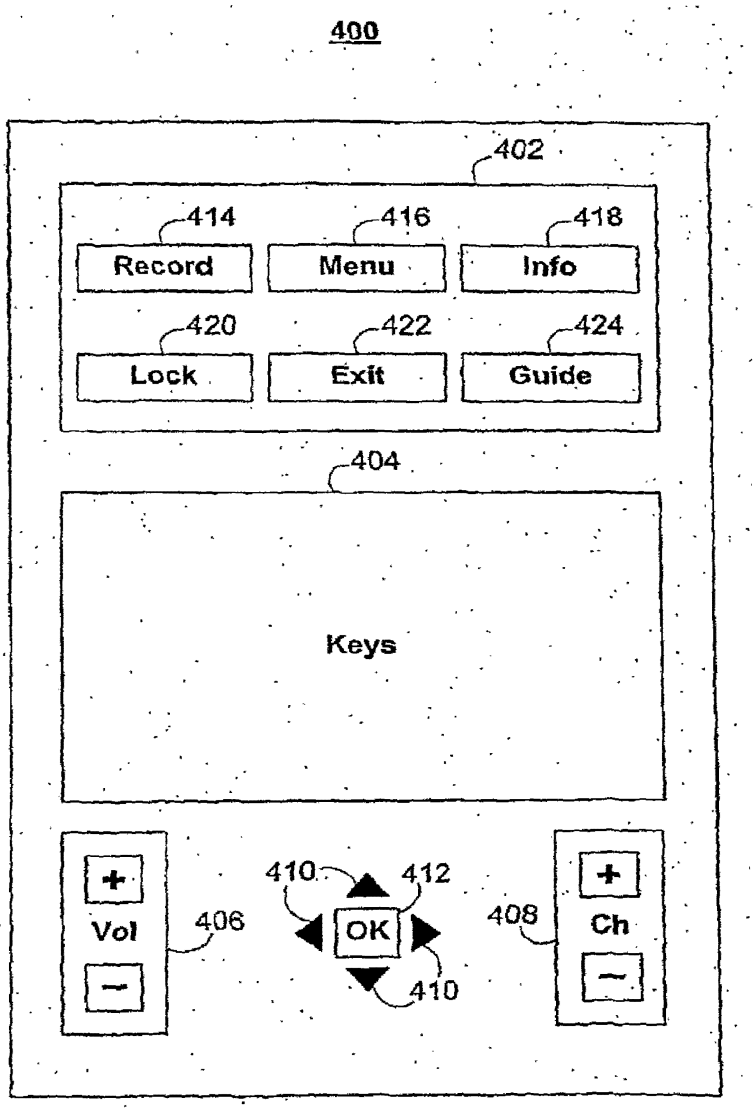

400
402
414
Record
416
Menu
418
Info
420
Lock
422
Exit
424
Guide
404
Keys
+
Vol
−
406
410
412
OK
410
408
+
Ch
−

FIG. 4

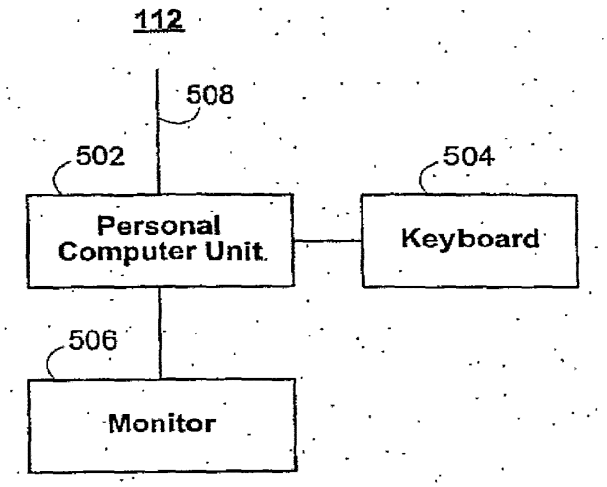

112
508
502
504
Personal Computer Unit
Keyboard
506
Monitor

FIG. 5

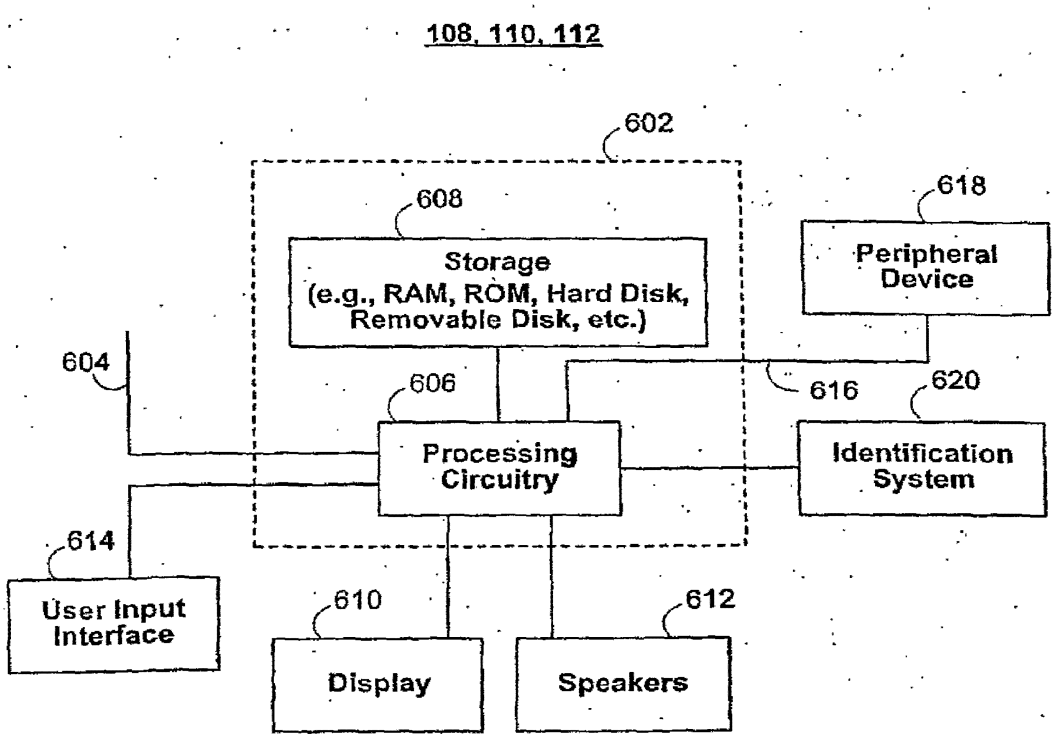

108, 110, 112
602
608
Storage
(e.g., RAM, ROM, Hard Disk, Removable Disk, etc.)
618
Peripheral Device
604
606
616
620
Processing Circuitry
Identification System
614
User Input Interface
610
612
Display
Speakers

FIG. 6

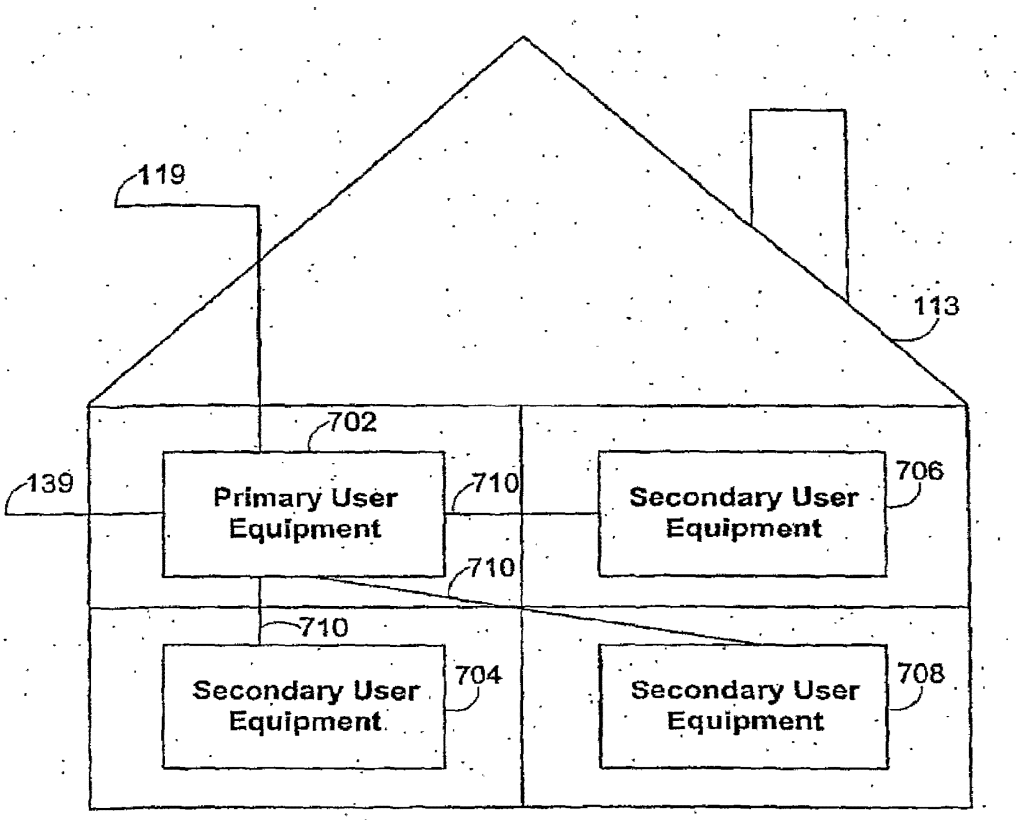

119
113
702
139
Primary User Equipment
710
Secondary User Equipment
706
710
710
Secondary User Equipment
704
Secondary User Equipment
708

FIG. 7

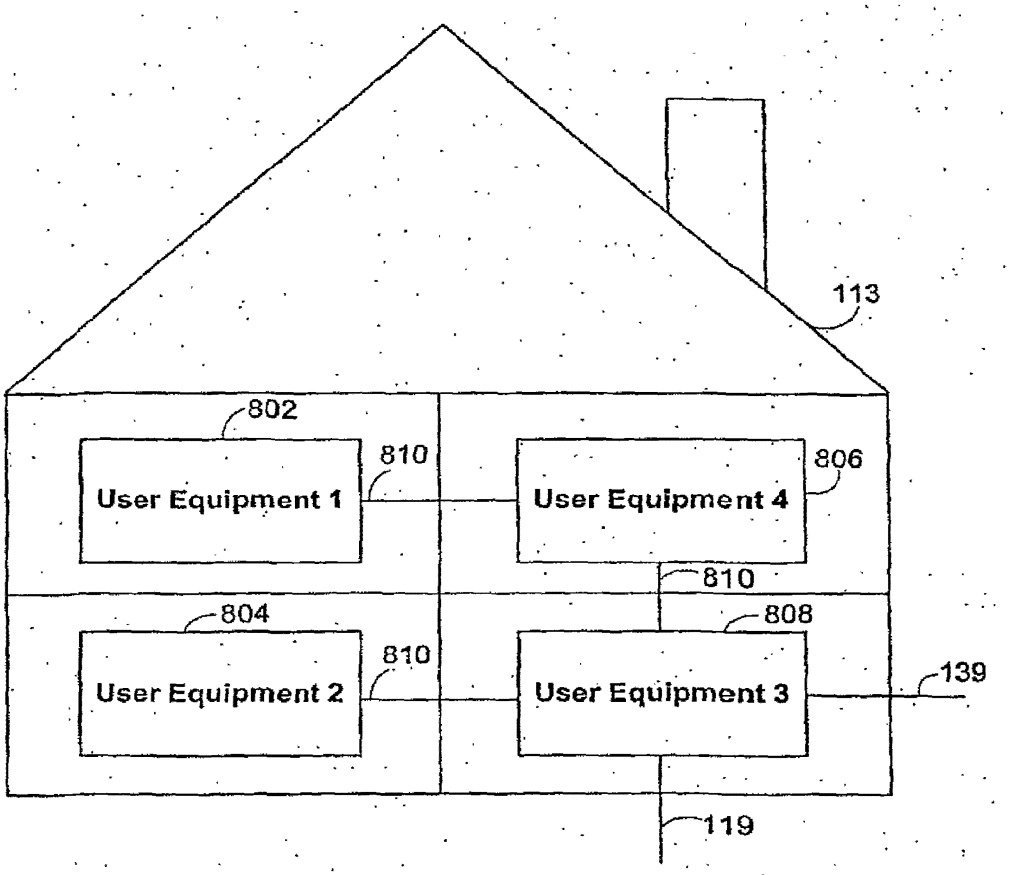

113
802
User Equipment 1
810
User Equipment 4
806
810
804
User Equipment 2
810
808
User Equipment 3
139
119

FIG. 8a

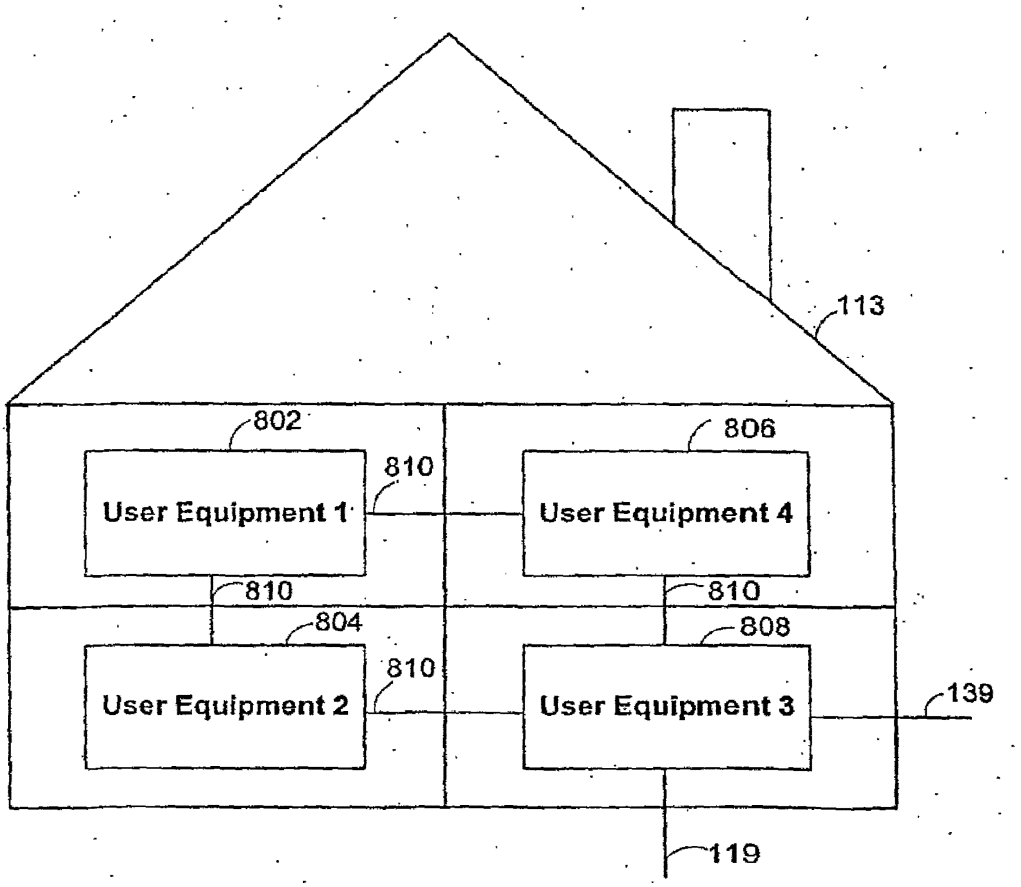

113
802
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810
User Equipment 1
User Equipment 4
810
810
804
808
810
User Equipment 2
User Equipment 3
139
119

FIG. 8b

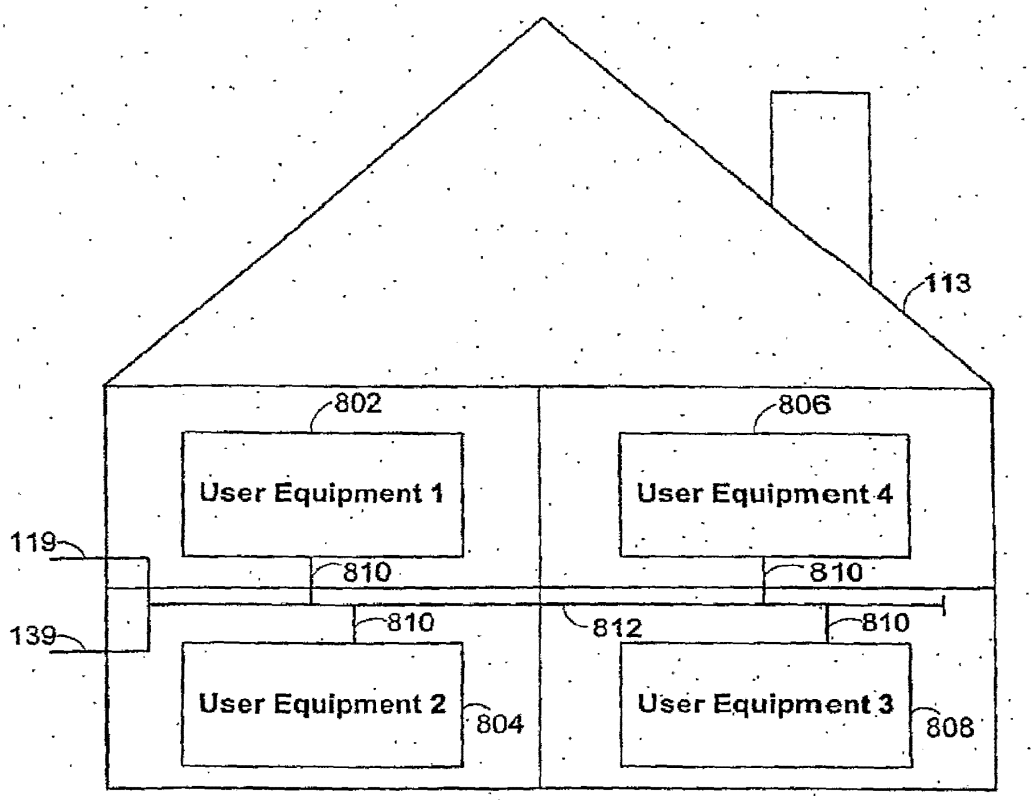

113
802
806
User Equipment 1
User Equipment 4
119
810
810
139
810
812
810
User Equipment 2
804
User Equipment 3
808

FIG. 8c

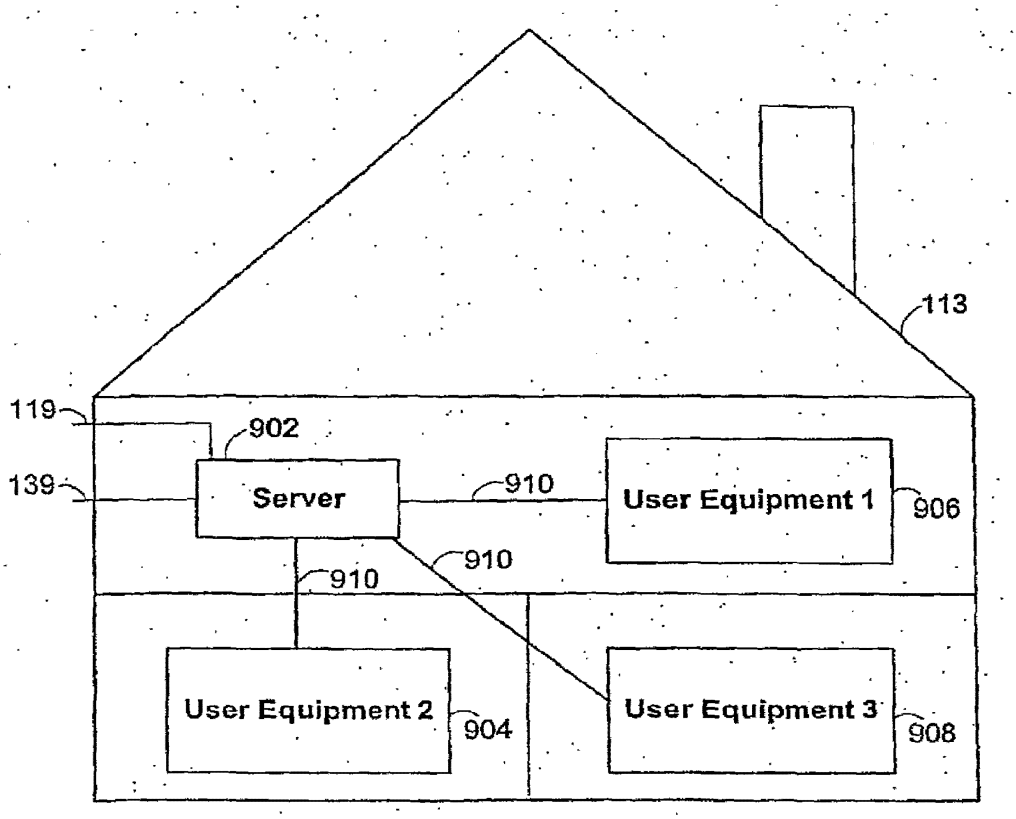

113
119
902
139
Server
910
User Equipment 1
906
910
910
User Equipment 2
904
User Equipment 3
908

FIG. 9

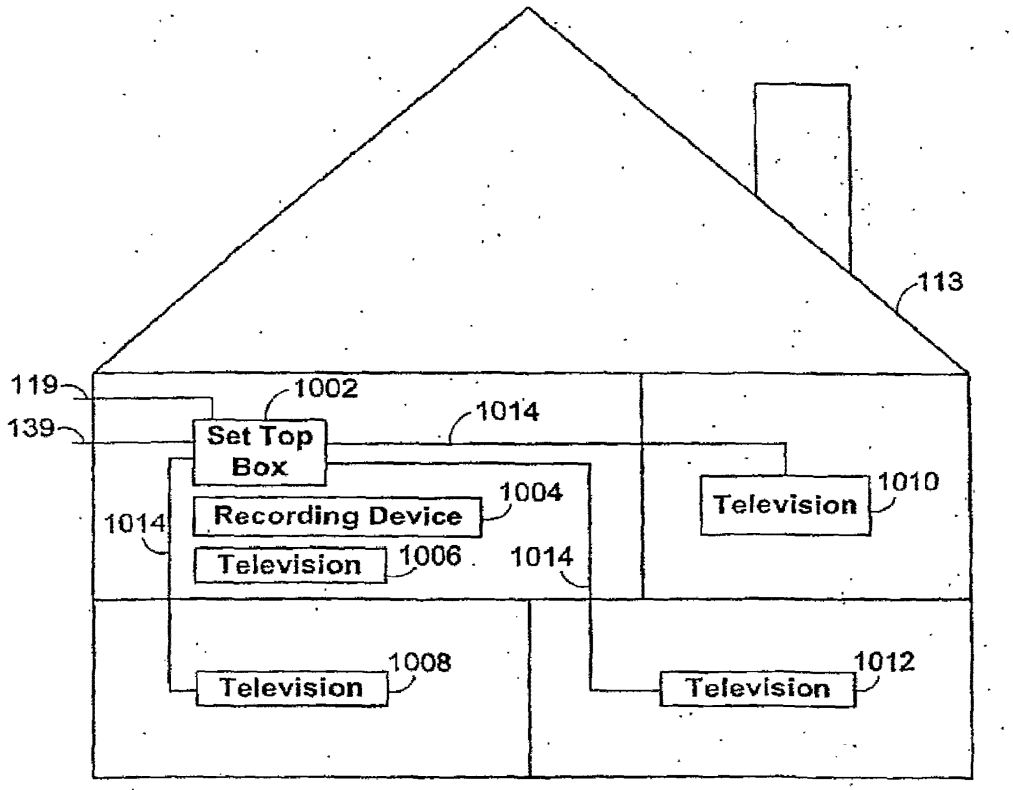

113
119
139
1002
1014
Set Top Box
Recording Device
1004
1014
Television
1006
1014
Television
1010
Television
1008
Television
1012

FIG. 10

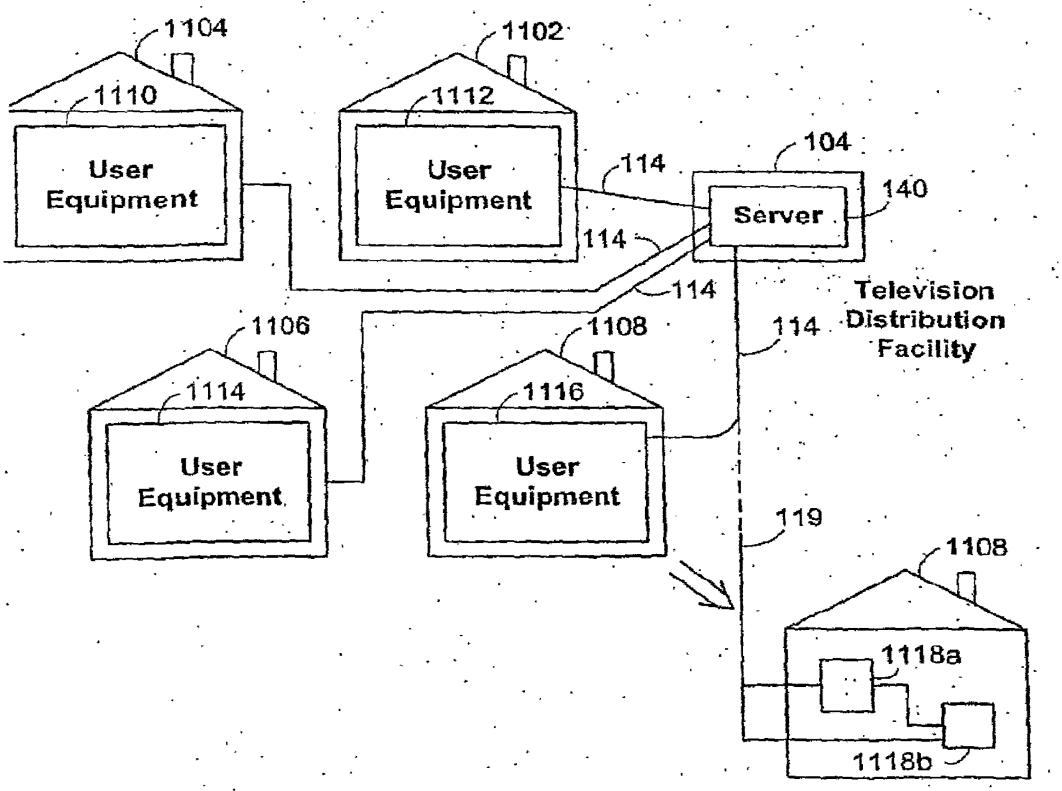

1104
1110
User Equipment
1102
1112
User Equipment
114
104
Server
140
114
114
Television Distribution Facility
1106
1114
User Equipment
1108
1116
User Equipment
114
119
1108
1118a
1118b

FIG. 11a

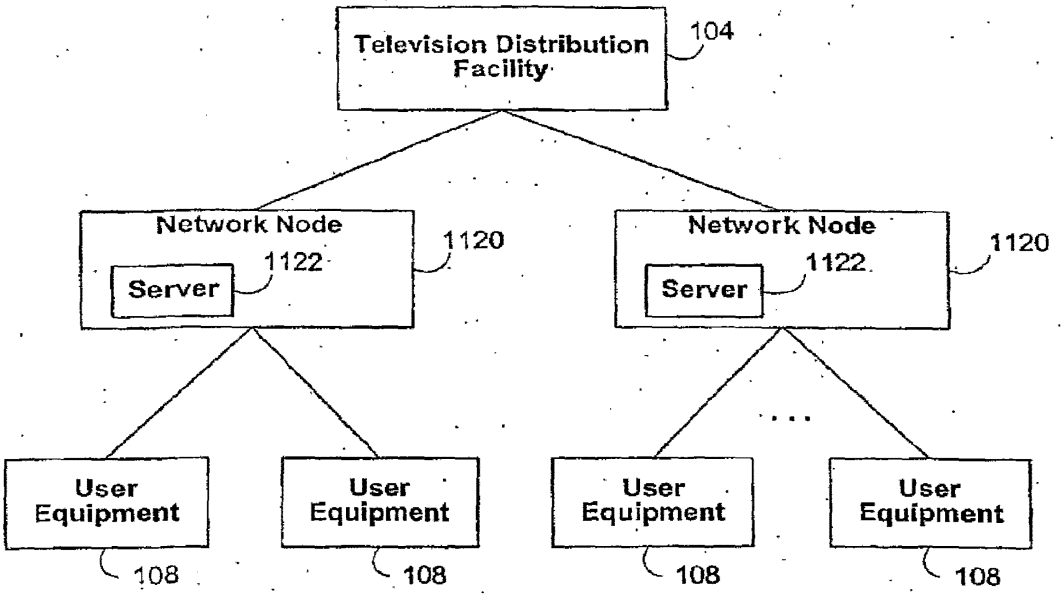

Television Distribution Facility
104
Network Node
1120
Server
1122
Network Node
1120
Server
1122
User Equipment
108
User Equipment
108
User Equipment
108
User Equipment
108

FIG. 11b

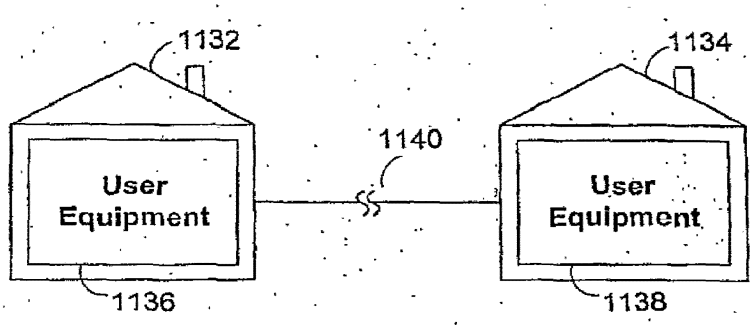


FIG. 11c

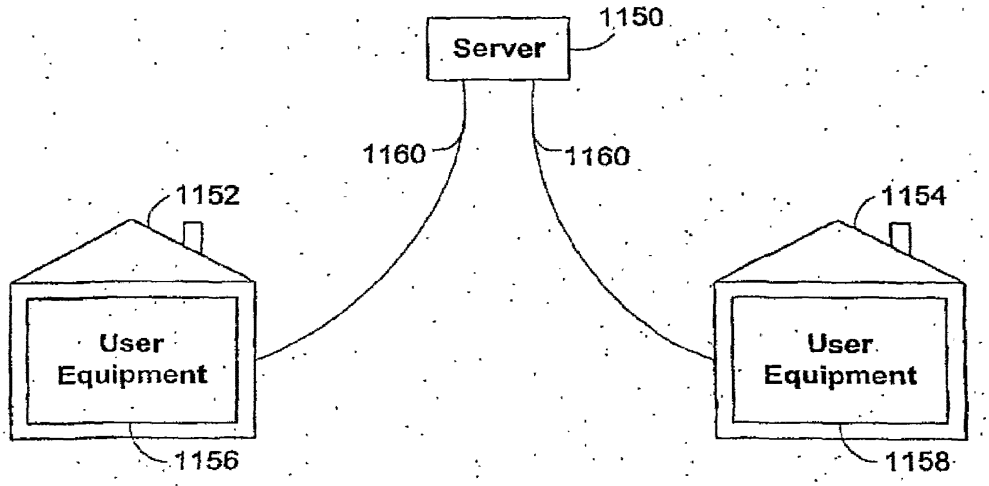


FIG. 11d

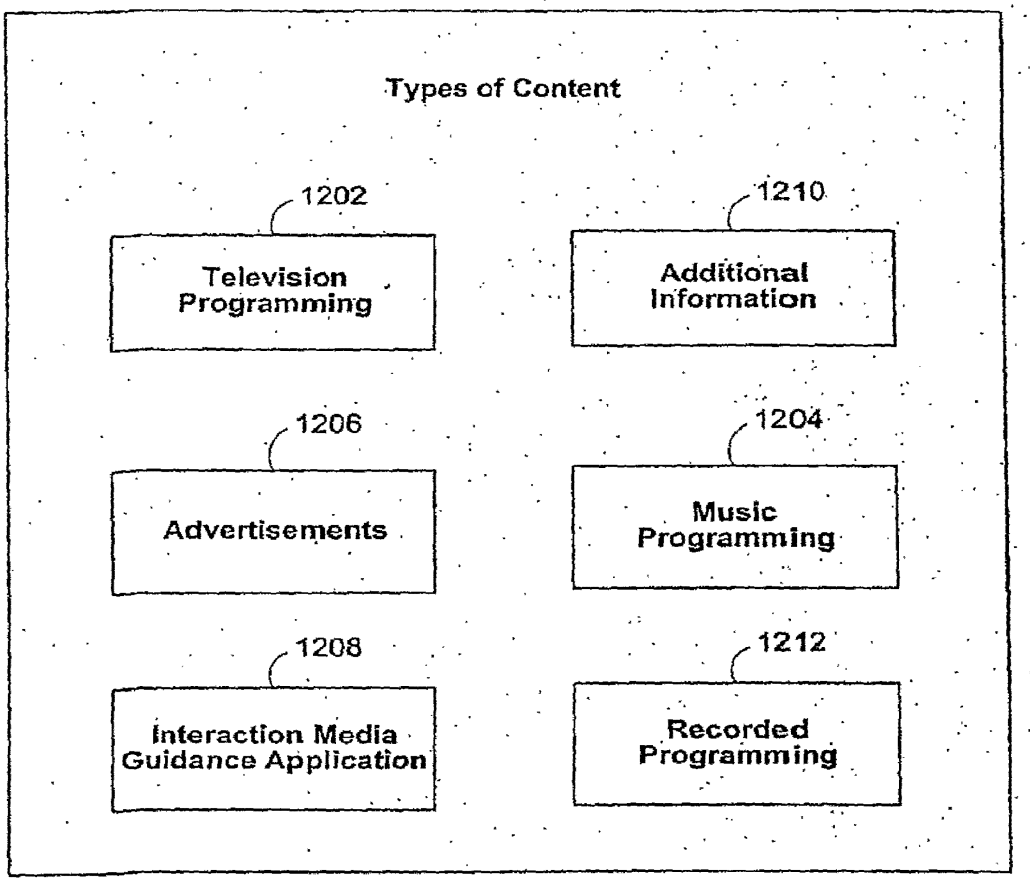

Types of Content
1202
Television Programming
1210
Additional Information
1206
Advertisements
1204
Music Programming
1208
Interaction Media Guidance Application
1212
Recorded Programming

FIG. 12

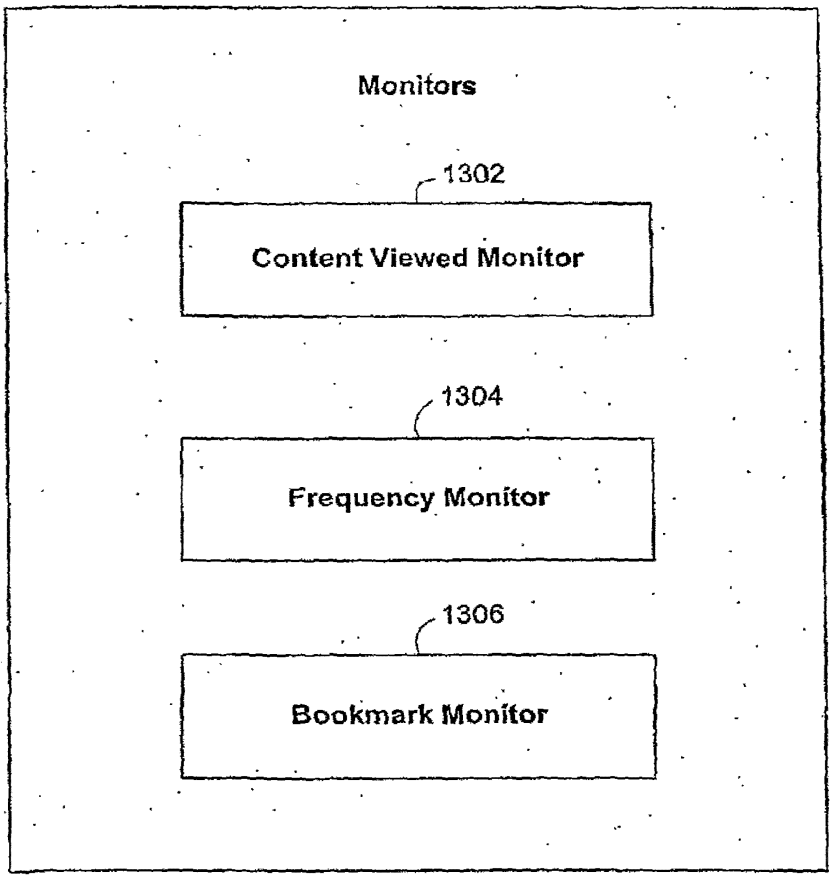

Monitors
1302
Content Viewed Monitor
1304
Frequency Monitor
1306
Bookmark Monitor

FIG. 13

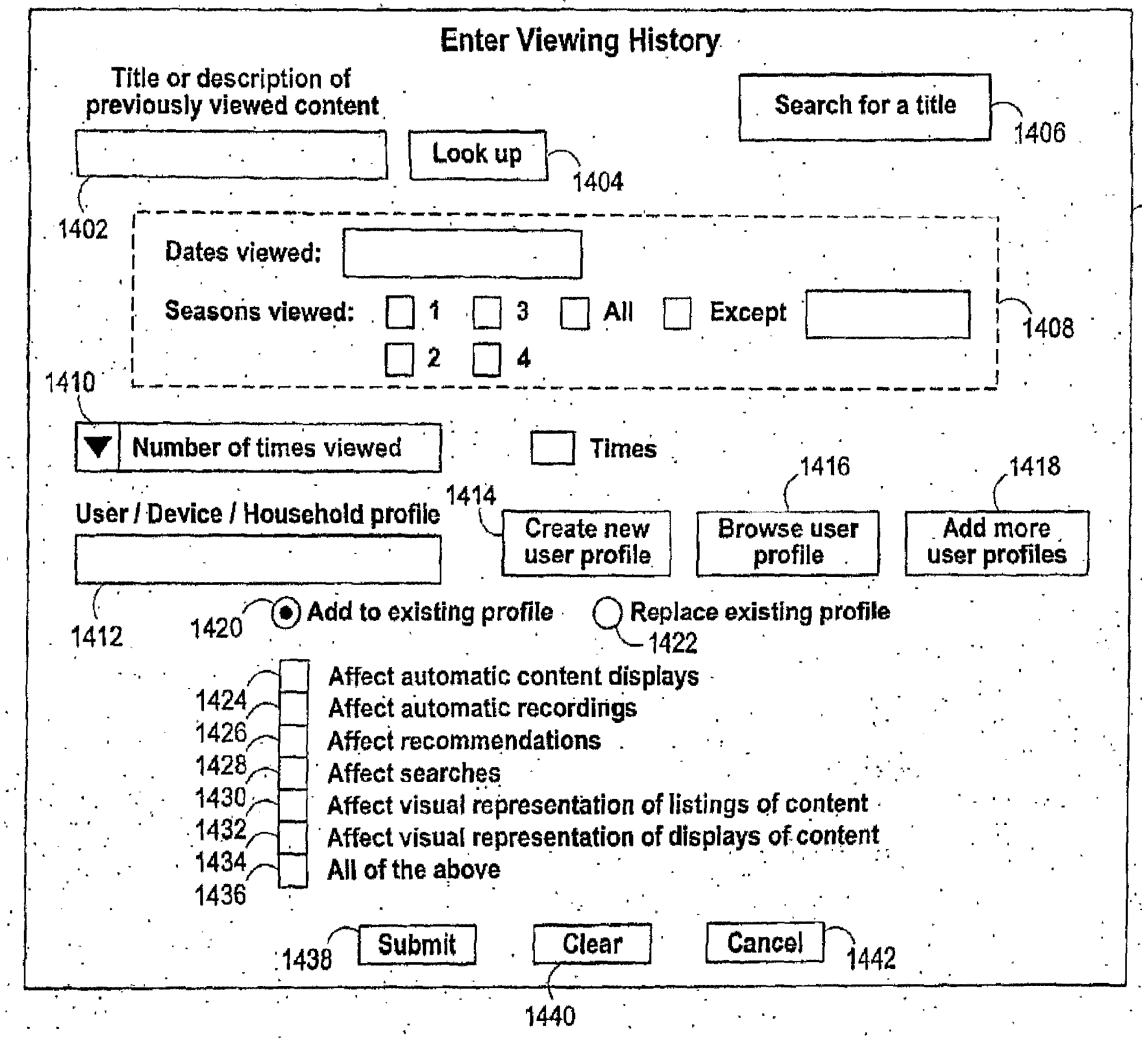


FIG. 14

EP 2 328 346 A1

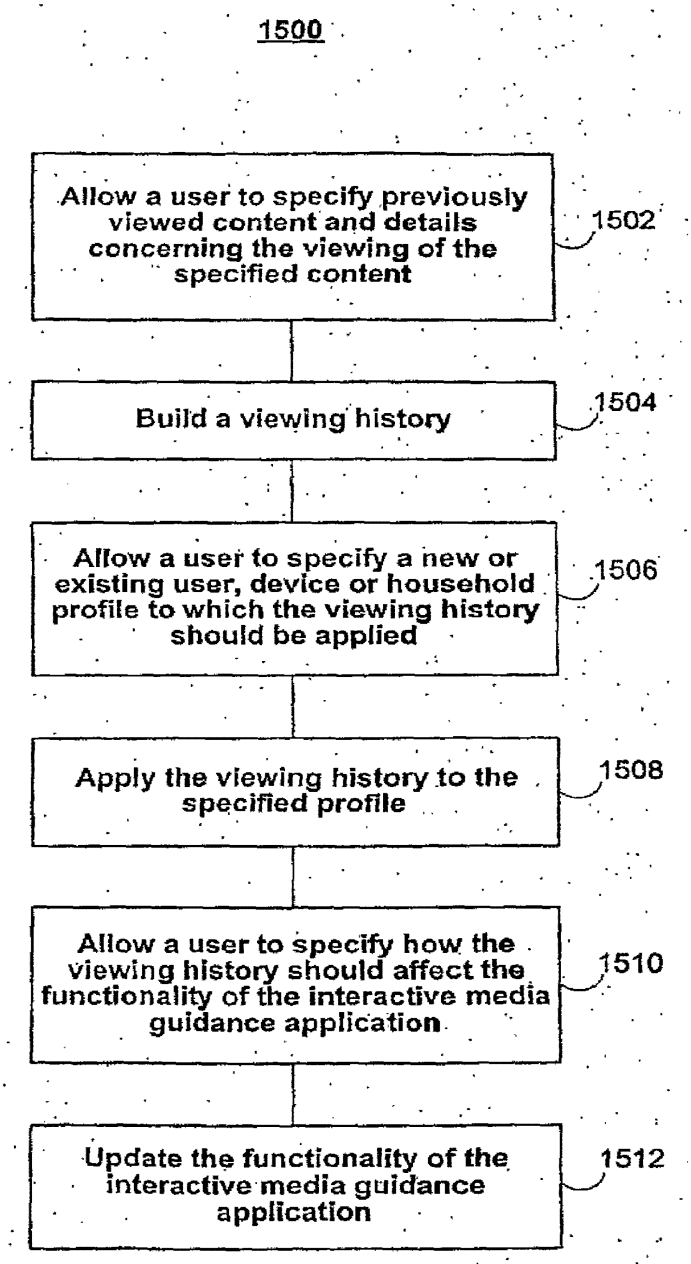

1500
Allow a user to specify previously viewed content and details concerning the viewing of the specified content
1502
Build a viewing history
1504
Allow a user to specify a new or existing user, device or household profile to which the viewing history should be applied
1506
Apply the viewing history to the specified profile
1508
Allow a user to specify how the viewing history should affect the functionality of the interactive media guidance application
1510
Update the functionality of the interactive media guidance application
1512

FIG. 15

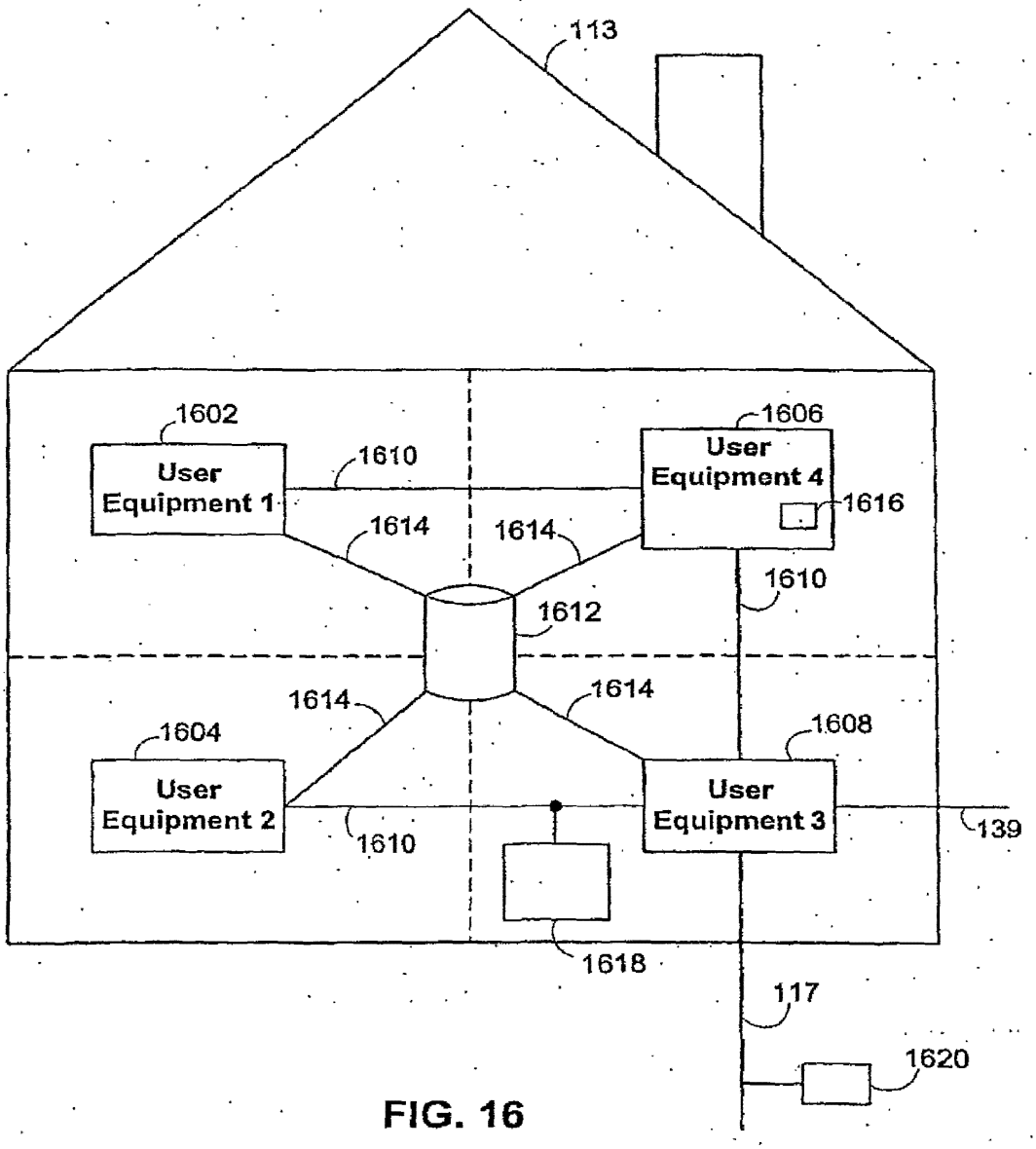

113
1602
User Equipment 1
1610
1606
User Equipment 4
1616
1614
1614
1610
1612
1614
1614
1604
User Equipment 2
1610
1608
User Equipment 3
139
1618
117
1620

FIG. 16

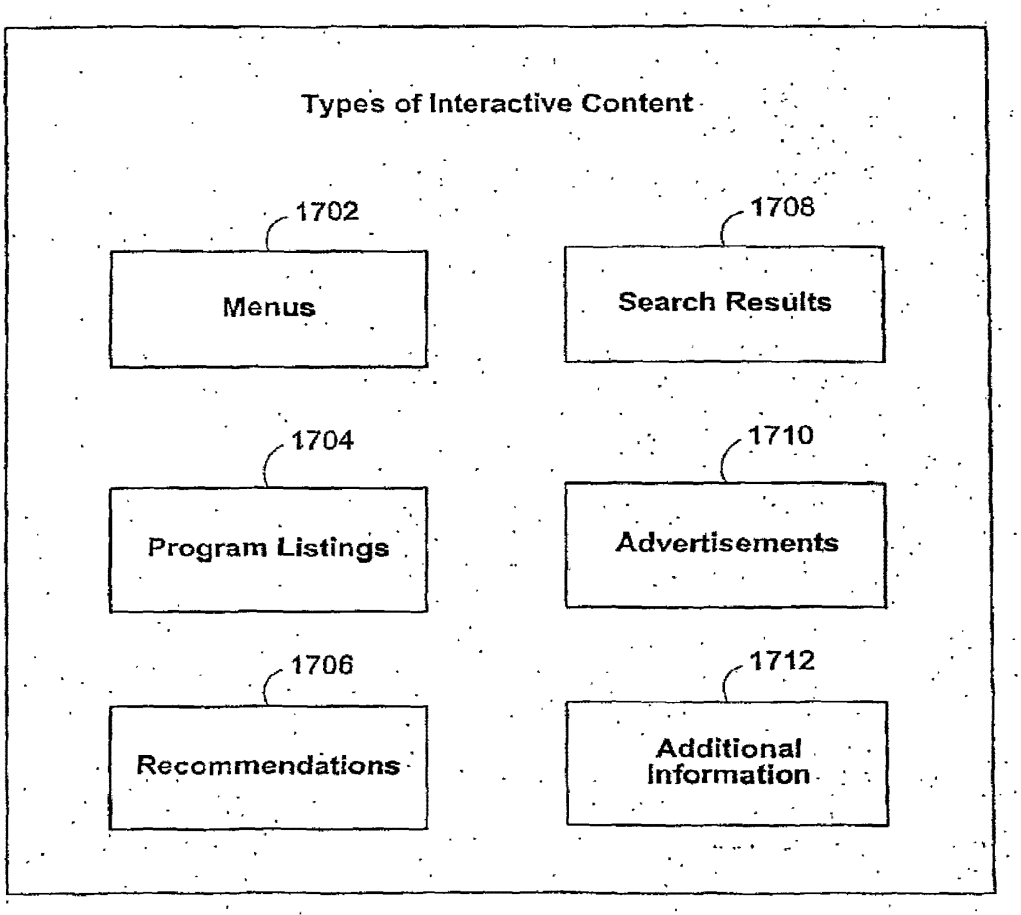

Types of Interactive Content
1702
Menus
1704
Program Listings
1706
Recommendations
1708
Search Results
1710
Advertisements
1712
Additional Information

FIG. 17

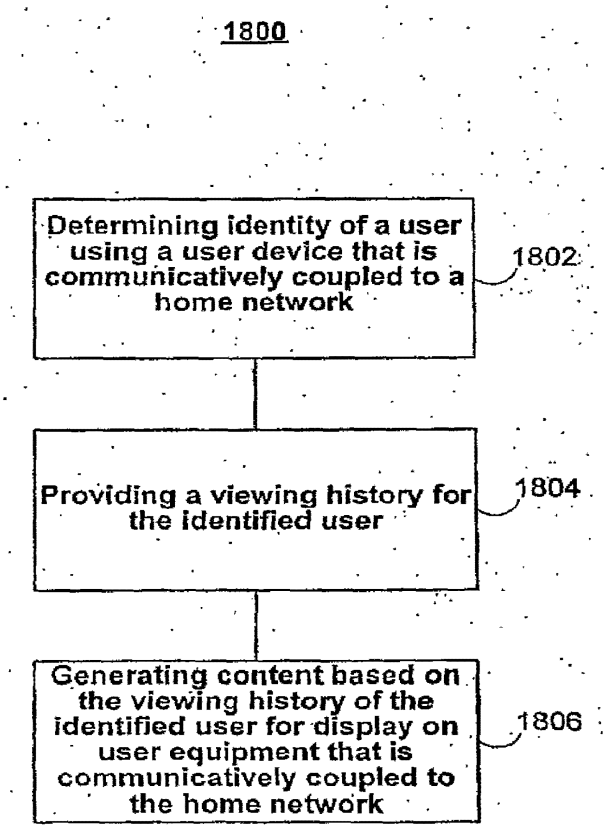

1800
Determining identity of a user using a user device that is communicatively coupled to a home network
1802
Providing a viewing history for the identified user
1804
Generating content based on the viewing history of the identified user for display on user equipment that is communicatively coupled to the home network
1806

FIG. 18a

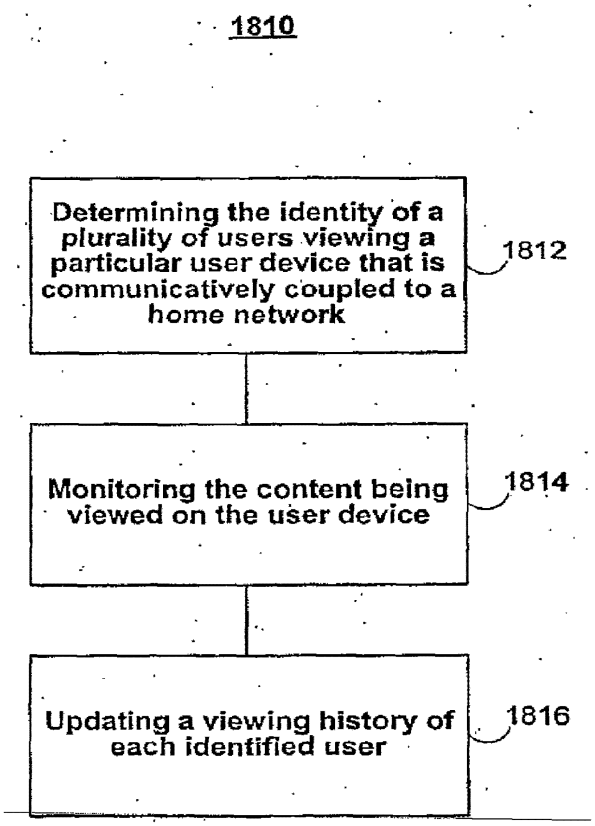

1810
Determining the identity of a plurality of users viewing a particular user device that is communicatively coupled to a home network
1812
Monitoring the content being viewed on the user device
1814
Updating a viewing history of each identified user
1816

FIG. 18b

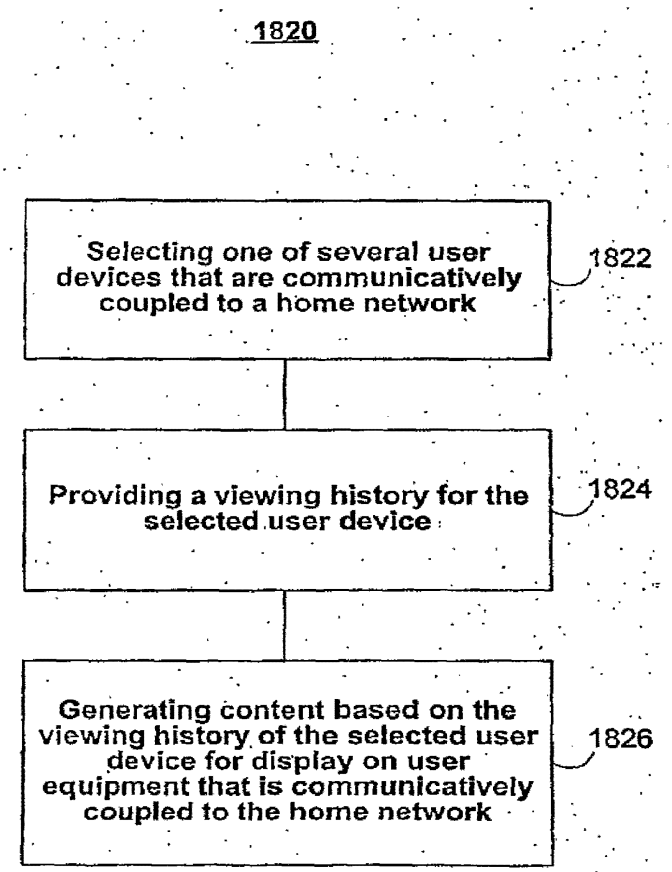

1820
Selecting one of several user devices that are communicatively coupled to a home network
1822
Providing a viewing history for the selected user device
1824
Generating content based on the viewing history of the selected user device for display on user equipment that is communicatively coupled to the home network
1826

FIG. 18c

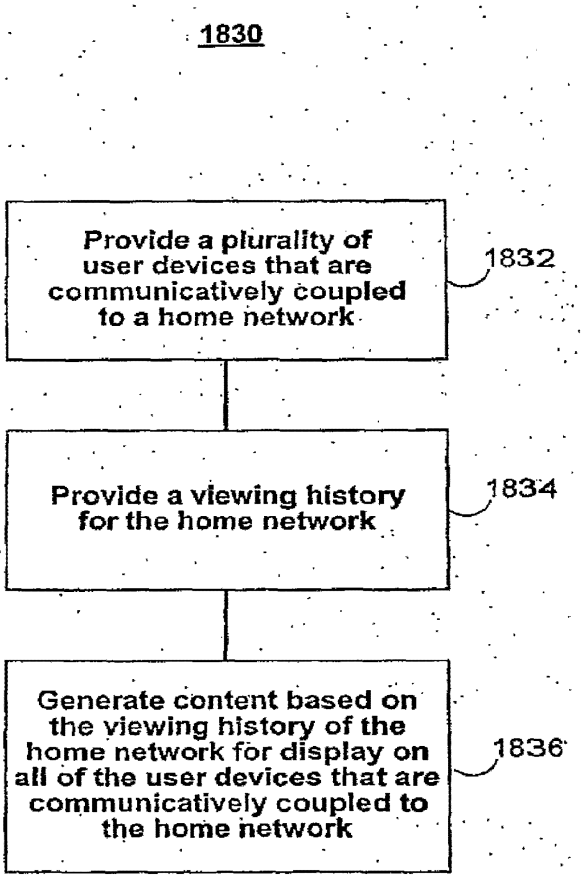

1830
Provide a plurality of user devices that are communicatively coupled to a home network
1832
Provide a viewing history for the home network
1834
Generate content based on the viewing history of the home network for display on all of the user devices that are communicatively coupled to the home network
1836

FIG. 18d

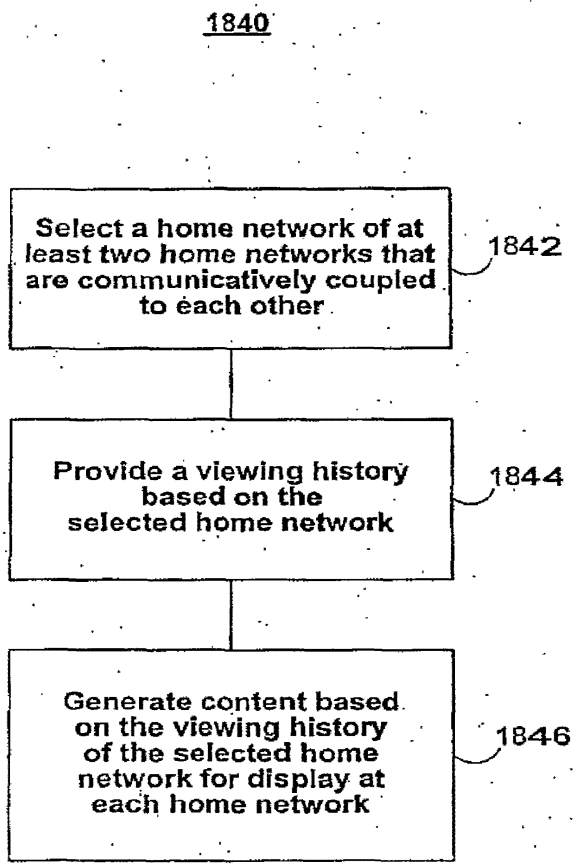

1840
Select a home network of at least two home networks that are communicatively coupled to each other
1842
Provide a viewing history based on the selected home network
1844
Generate content based on the viewing history of the selected home network for display at each home network
1846

FIG. 18e

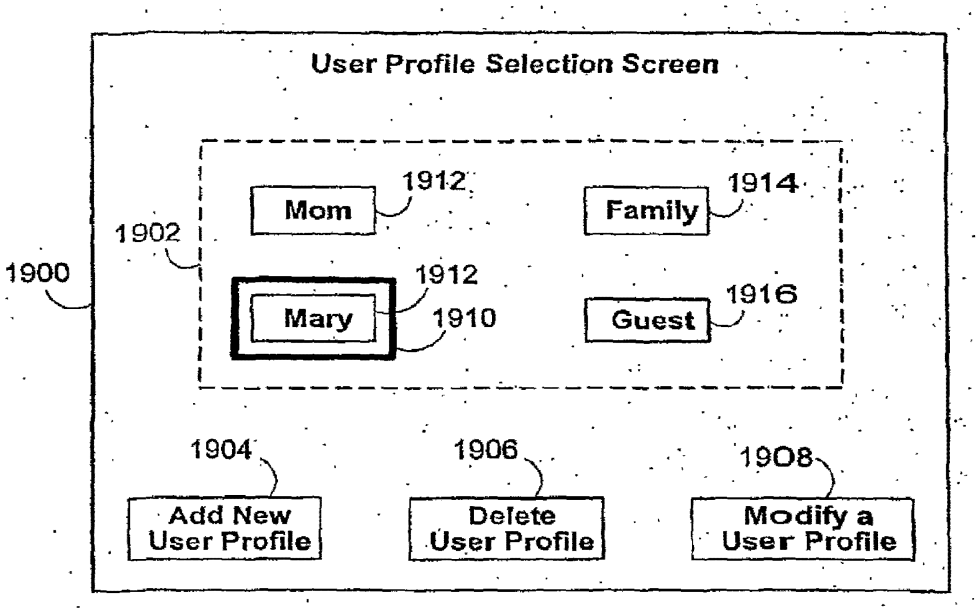

User Profile Selection Screen
1900
1902
Mom
1912
Family
1914
Mary
1912
1910
Guest
1916
1904
Add New User Profile
1906
Delete User Profile
1908
Modify a User Profile

FIG. 19

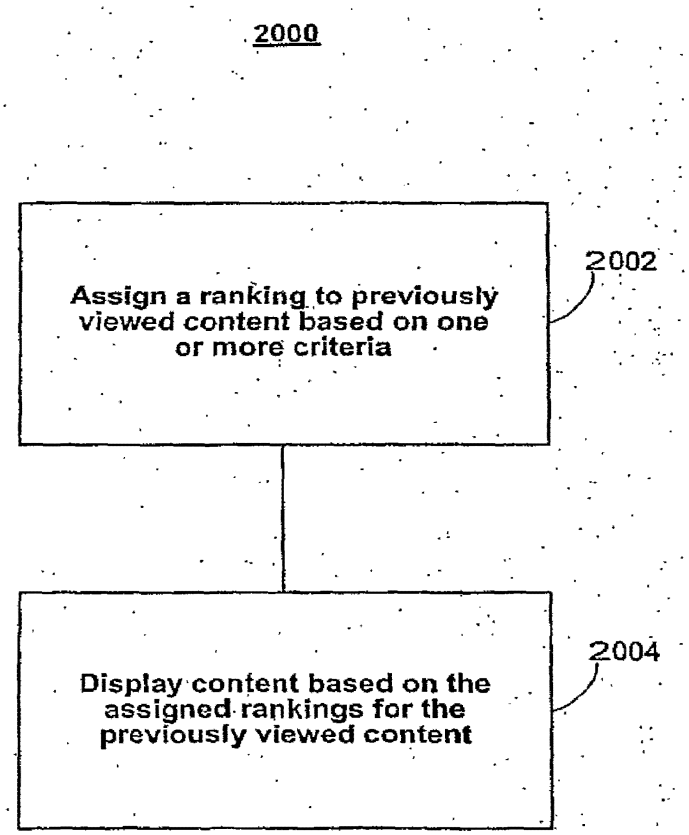

2000
Assign a ranking to previously viewed content based on one or more criteria
2002
Display content based on the assigned rankings for the previously viewed content
2004

FIG. 20

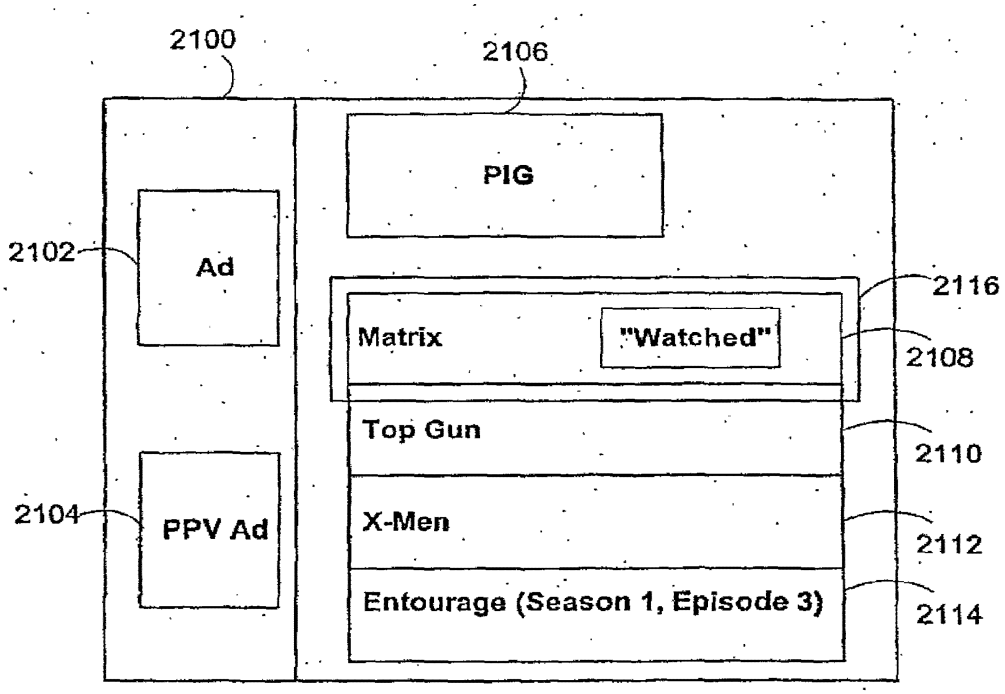

2100
2106
PIG
2102
Ad
2116
Matrix
"Watched"
2108
Top Gun
2110
2104
PPV Ad
X-Men
2112
Entourage (Season 1, Episode 3)
2114

FIG. 21a

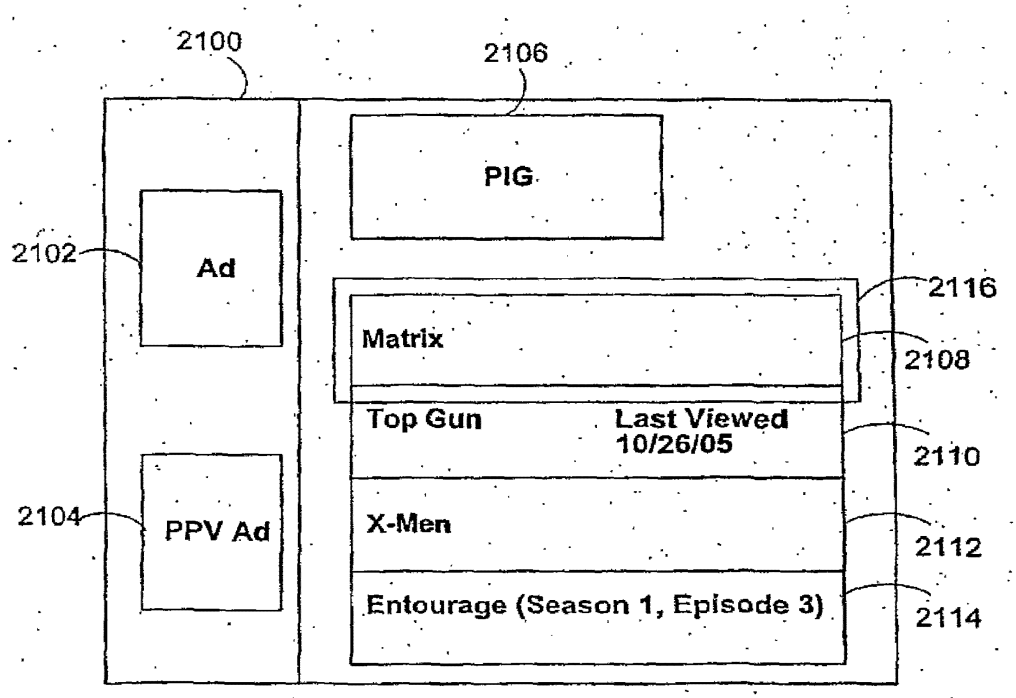

2100
2106
PIG
2102
Ad
2116
Matrix
2108
Top Gun
Last Viewed
10/26/05
2110
2104
PPV Ad
X-Men
2112
Entourage (Season 1, Episode 3)
2114

FIG. 21b

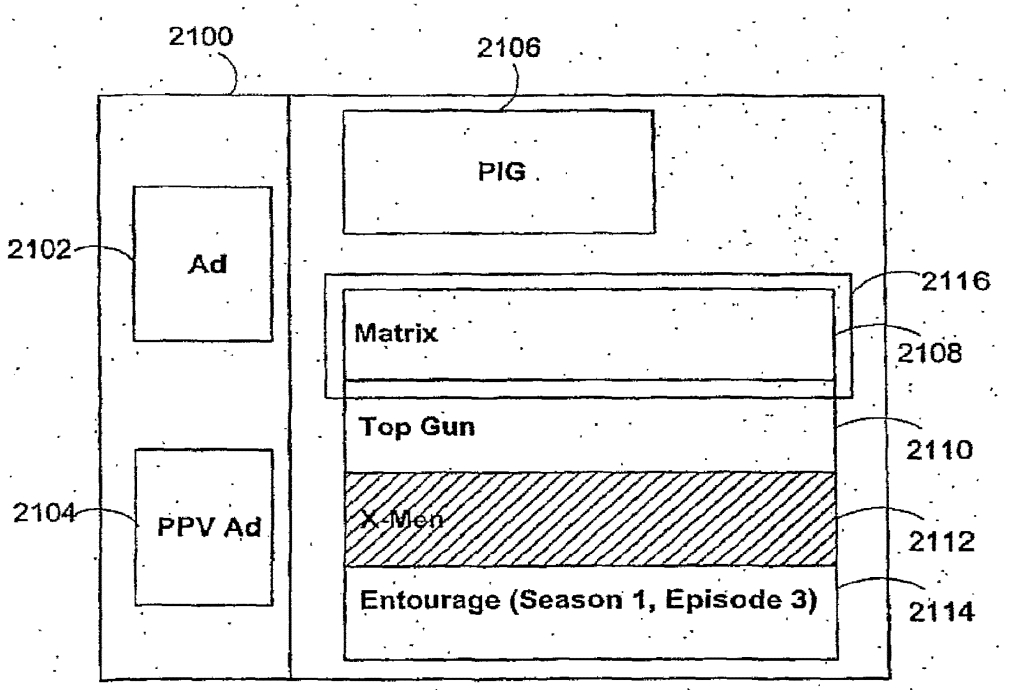

2100
2106
PIG
2102
Ad
2116
Matrix
2108
Top Gun
2110
2104
PPV Ad
X-Men
2112
Entourage (Season 1, Episode 3)
2114

FIG. 21c

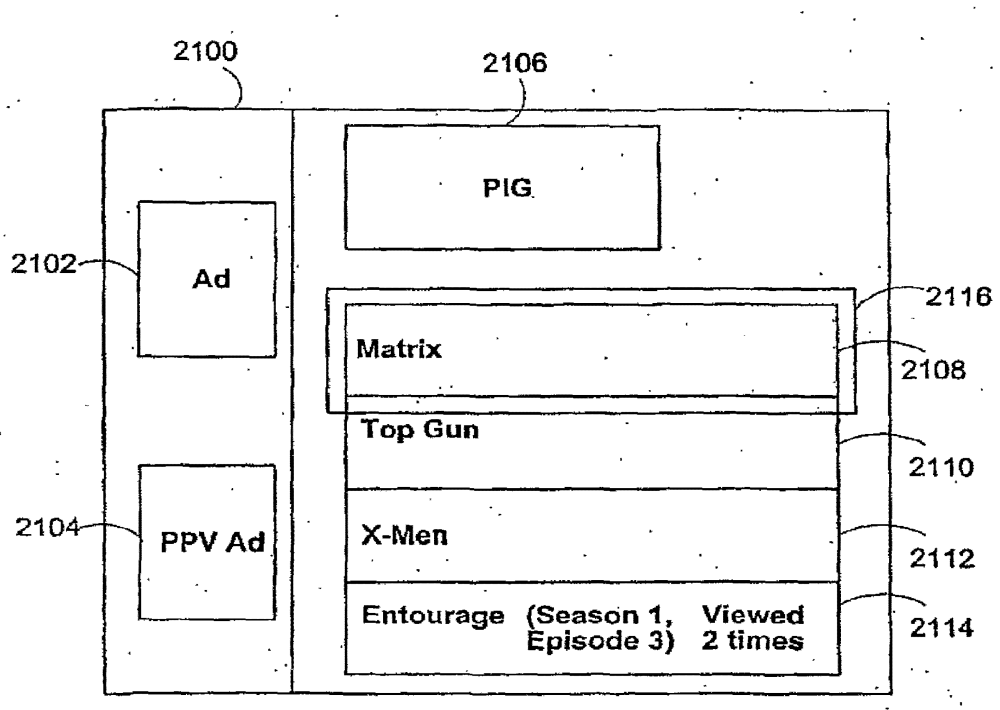

2100
2106
PIG
2102
Ad
2116
Matrix
2108
Top Gun
2110
2104
PPV Ad
X-Men
2112
Entourage (Season 1, Episode 3) Viewed 2 times
2114

FIG. 21d

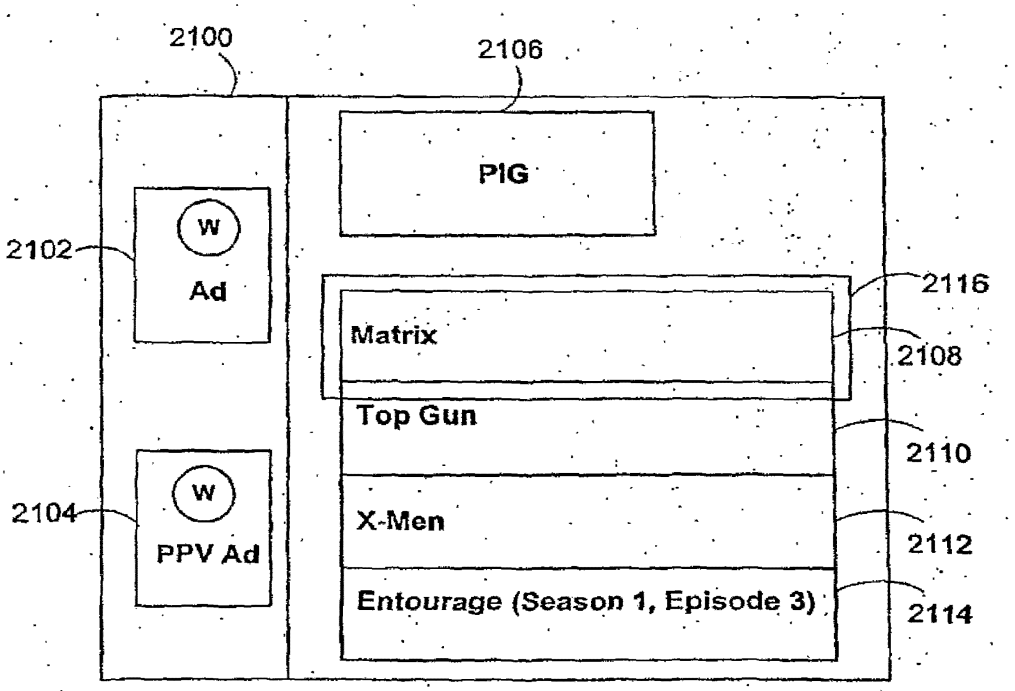

2100
2106
PIG
W
Ad
2102
2116
Matrix
2108
Top Gun
2110
W
PPV Ad
2104
X-Men
2112
Entourage (Season 1, Episode 3)
2114

FIG. 21e

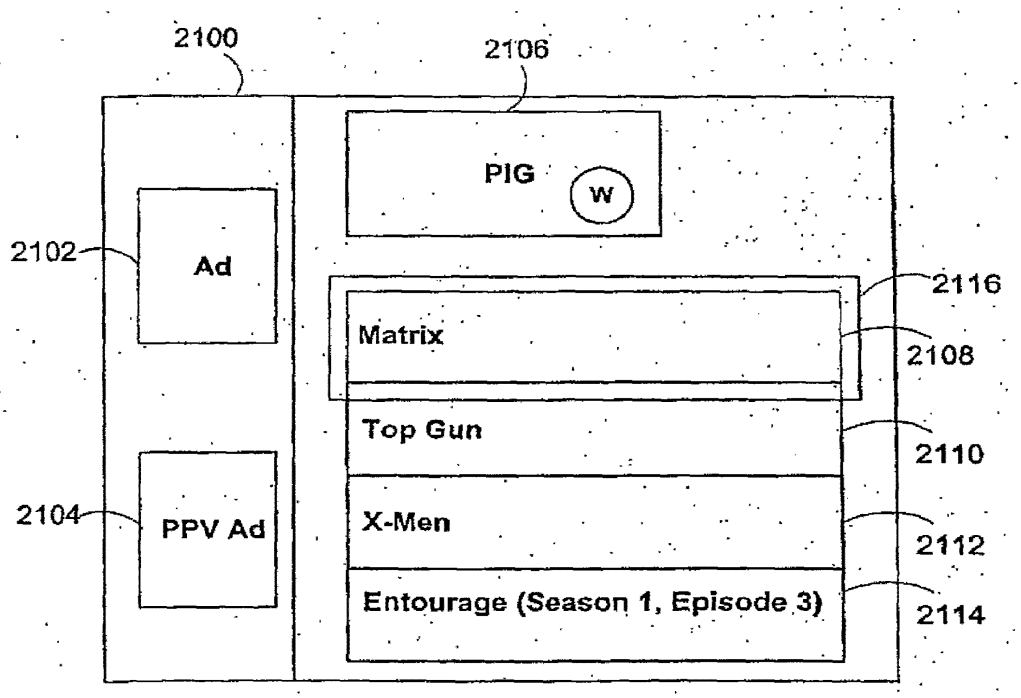

2100
2106
PIG
W
2102
Ad
2116
Matrix
2108
Top Gun
2110
2104
PPV Ad
X-Men
2112
Entourage (Season 1, Episode 3)
2114

FIG. 21f

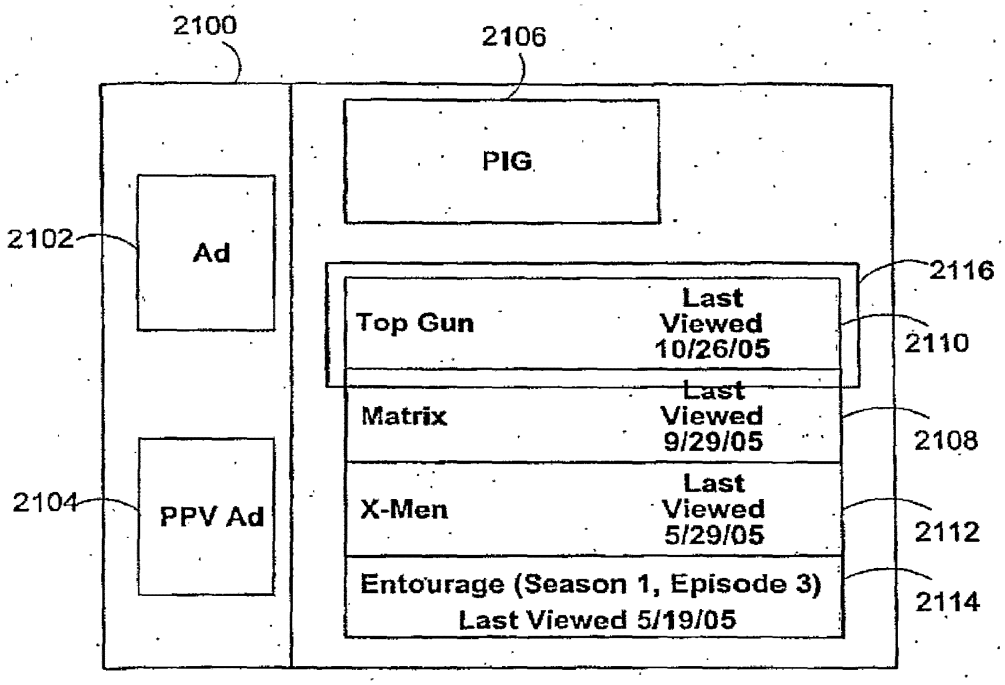

2100
2106
PIG
2102
Ad
2116
Top Gun
Last Viewed 10/26/05
2110
Matrix
Last Viewed 9/29/05
2108
2104
PPV Ad
X-Men
Last Viewed 5/29/05
2112
Entourage (Season 1, Episode 3)
Last Viewed 5/19/05
2114

FIG. 21g

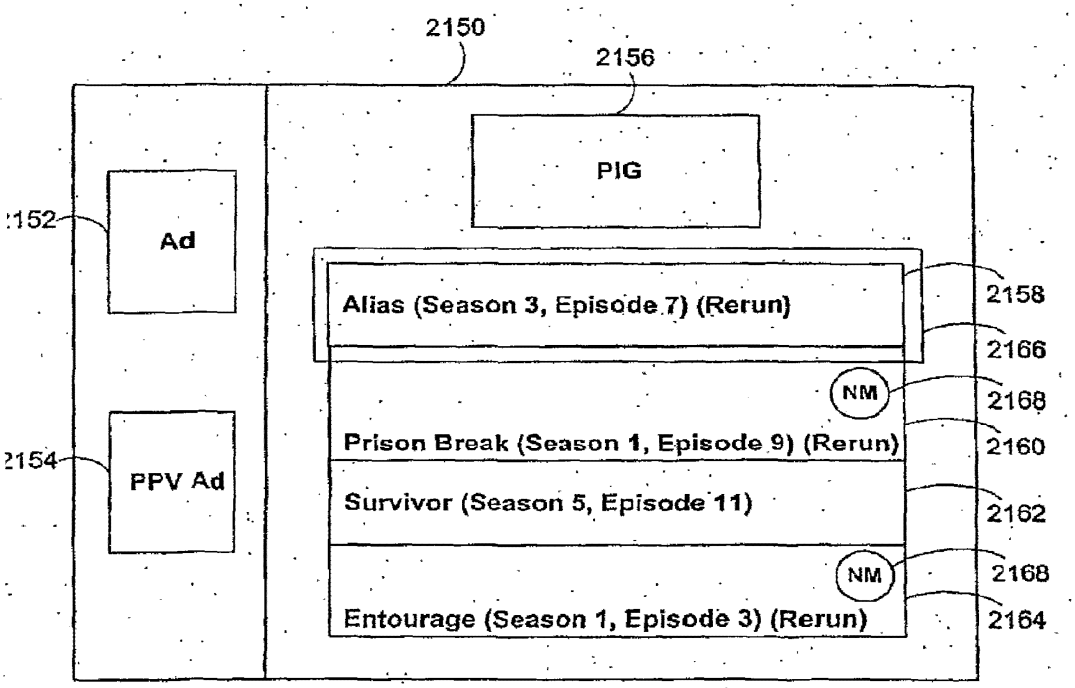

2150
2156
PIG
2152
Ad
Alias (Season 3, Episode 7) (Rerun)
2158
2166
NM
2168
Prison Break (Season 1, Episode 9) (Rerun)
2160
2154
PPV Ad
Survivor (Season 5, Episode 11)
2162
NM
2168
Entourage (Season 1, Episode 3) (Rerun)
2164

FIG. 21h

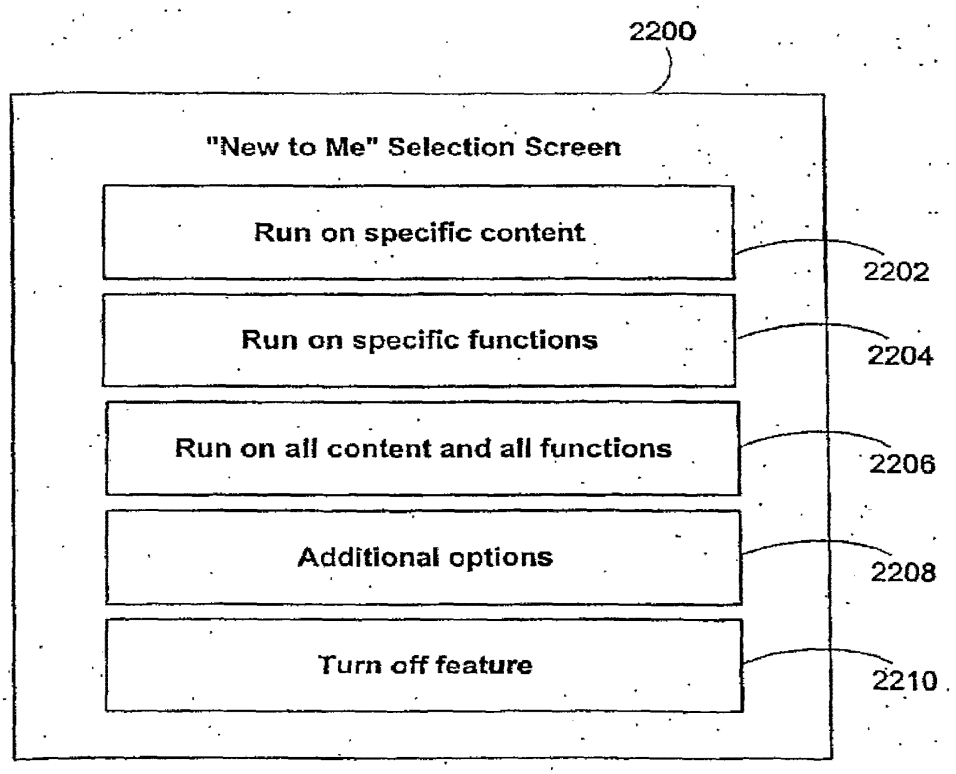

2200
"New to Me" Selection Screen
Run on specific content
2202
Run on specific functions
2204
Run on all content and all functions
2206
Additional options
2208
Turn off feature
2210

FIG. 22

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EUROPEAN SEARCH REPORT

Application Number
EP 11 15 1835

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	EP 1 515 549 A1 (SAMSUNG ELECTRONICS CO LTD [KR]) 16 March 2005 (2005-03-16) * abstract * * paragraphs [0010] - [0020], [0024] - [0029], [0032] - [0044] * * figure 4 * -----	1-14	INV. H04N7/16 H04N5/00
X	WO 2004/054264 A1 (KONINKL PHILIPS ELECTRONICS NV [NL]; GUTTA SRINIVAS [US]) 24 June 2004 (2004-06-24) * abstract * * page 2, line 4 - line 27 * * page 4, line 19 - line 20 * * page 6, line 3 - page 9, line 7 * * figures 2,3a,3b * -----	1-14	
X	EP 1 538 838 A1 (SONY CORP [JP]) 8 June 2005 (2005-06-08) * abstract * * paragraphs [0009] - [0015], [0022] - [0032], [0043] - [0049], [0060] - [0065], [0090] - [0094], [0099] - [0108] * * figures 14-16 * -----	1-14	TECHNICAL FIELDS SEARCHED (IPC) H04N
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-/--

1

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	14 April 2011	Dobbelaere, Dirk

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LG Electronics, Inc.

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EUROPEAN SEARCH REPORT

Application Number
EP 11 15 1835

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 2005/193414 A1 (HORVITZ ERIC J [US] ET AL) 1 September 2005 (2005-09-01) * abstract * * figure 2 * * paragraphs [0005], [0006], [0009], [0010], [0028] - [0046] *	1-14	
A	US 2004/098744 A1 (GUTTA SRINIVAS [US]) 20 May 2004 (2004-05-20) * abstract * * figures 1,3,4,6 * * paragraphs [0007], [0023] - [0032] *	1-14	

TECHNICAL FIELDS SEARCHED (IPC)

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	14 April 2011	Dobbelaere, Dirk

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same category
A : technological background
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1

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14-04-2011

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		KR 20050086671 A	30-08-2005

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Patent documents cited in the description

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(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 2 487 922 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
15.08.2012 Bulletin 2012/33

(51) Int Cl.:
H04N 21/462 *(2011.01)* ***H04N 21/4788*** *(2011.01)*

(21) Application number: **12000575.6**

(22) Date of filing: **30.01.2012**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

(30) Priority: **10.02.2011 US 201161441632 P**
28.04.2011 US 201161479865 P
29.08.2011 KR 20110086691

(71) Applicant: **LG Electronics Inc.**
Seoul 150-721 (KR)

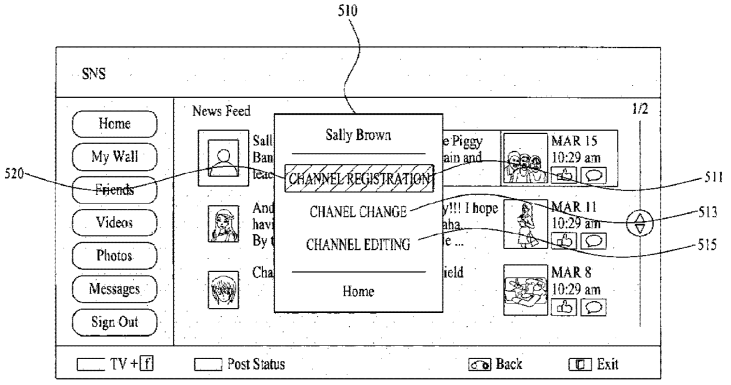
(72) Inventors:
- **Kim, Uniyoung**
  Seoul 137-130 (KR)
- **Lee, Hyungnam**
  Seoul 137-130 (KR)
- **Challagali, Samavarthy**
  Seoul 137-130 (KR)
- **Bipin, T.S.**
  Seoul 137-130 (KR)
- **Patalappa, Kiran**
  Seoul 137-130 (KR)

(74) Representative: **Beyer, Andreas**
Wuesthoff & Wuesthoff
Patent- und Rechtsanwälte
Schweigerstrasse 2
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(54) Multi-functional display device having an electronic programming guide and method for controlling the same

(57) A multi-functional display device and a method for displaying an electronic programming guide (EPG) in the same are disclosed herein. The multi-functional display device may include a display for displaying broadcast programs or data, a network interface configured to receive event information associated with a social network service (SNS) account for an individual or entity, a storage device configured to store at least one channel number and at least one SNS account information assigned to the at least one channel number, and a controller for controlling the multi-functional display device. The controller may map the event information to one of the at least one channel numbers and may construct an EPG that includes the mapped event information and the corresponding channel number for display on the display.

FIG. 5



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Description

BACKGROUND

Field

[0001] A multi-functional display device having an electronic programming guide and method for controlling the same are disclosed herein.

Background

[0002] Multi-functional display devices having electronic programming guides and methods for controlling the same are known. However they suffer from various disadvantages.

BRIEF DESCRIPTION OF THE DRAWINGS

[0003] The embodiments will be described in detail with reference to the following drawings in which like reference numerals refer to like elements wherein:

FIG. 1	is a schematic diagram illustrating a configuration of an exemplary embodiment for a broadcast system in accordance with the present invention;
FIG. 2	is a block diagram illustrating a configuration of an exemplary embodiment for a server in accordance with the present invention;
FIG. 3	is a block diagram illustrating a configuration of an exemplary embodiment for an electronic device in accordance with the present invention;
FIG. 4	is a diagram illustrating an exemplary embodiment of a screen on which a Web page of a Social Network Service (SNS) is displayed;
FIG. 5	is a diagram illustrating a screen on which an exemplary embodiment of a Graphical User Interface (GUI) for designation of a human address is displayed;
FIG. 6	is a diagram illustrating a screen on which an exemplary embodiment of a GUI for designation of a channel number is displayed;
FIG. 7	is a diagram illustrating one example of a screen on which the result of assigning a human address to a channel number is displayed;
FIG. 8	is a diagram illustrating an exemplary embodiment of a screen on which a menu is displayed;
FIG. 9	is a diagram illustrating a screen on which another exemplary embodiment of a GUI for designation of a human address is displayed;
FIG. 10	is a diagram illustrating a screen on which another exemplary embodiment of a GUI for designation of a human address is displayed;
FIG. 11	is a diagram illustrating a screen on which a further exemplary embodiment of a GUI for designation of a human address is displayed;
FIG. 12	is a diagram illustrating an exemplary embodiment for a human channel map;
FIG. 13	is a flowchart illustrating an implementation procedure of one exemplary embodiment for a method of constructing a human channel map in accordance with the present invention;
FIG. 14	is a flowchart illustrating an implementation procedure of another exemplary embodiment for a method of constructing a human channel map in accordance with the present invention;

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FIG. 15 is a diagram illustrating one exemplary embodiment of a screen on which a human channel map and content of a selected human channel are displayed;

FIG. 16 is a diagram illustrating another exemplary embodiment of a screen on which a human channel map and content of a selected human channel are displayed;

FIG. 17 is a diagram illustrating a further exemplary embodiment of a screen on which a human channel map and content of a selected human channel are displayed;

FIG. 18 is a diagram illustrating an implementation procedure of an exemplary embodiment for a method of providing a human channel service in accordance with the present invention;

FIG. 19 is a diagram illustrating an implementation procedure of one exemplary embodiment for a method of receiving content of a human channel;

FIG. 20 is a diagram illustrating an implementation procedure of another exemplary embodiment for a method of receiving content of a human channel;

FIG. 21 is a diagram illustrating an implementation procedure of a further exemplary embodiment for a method of receiving content of a human channel;

FIG. 22 is a diagram illustrating a method of setting up connection between two electronic devices;

FIG. 23 is a schematic diagram illustrating a configuration of another exemplary embodiment of a broadcast system in accordance with the present invention;

FIG. 24 is a diagram illustrating an exemplary embodiment of a Network Address Translation (NAT) table;

FIG. 25 is a diagram illustrating an exemplary embodiment of an address matching table recorded in a server;

FIG. 26 is a diagram illustrating an implementation procedure of an exemplary embodiment for a method of setting up connection between two electronic devices;

FIG. 27 is a diagram illustrating a screen on which one exemplary embodiment of a GUI for setting up a human channel is displayed;

FIG. 28 is a diagram illustrating a screen in a state in which a human address is being dragged on the displayed GUI of FIG. 27;

FIG. 29 is a diagram illustrating a screen on which another exemplary embodiment of a GUI for setting up a human channel is displayed;

FIG. 30 is a diagram illustrating a screen in a state in which a human address is being dragged on the displayed GUI of FIG. 29;

FIG. 31 is a diagram illustrating a screen on which an exemplary embodiment of a GUI for setting up a channel is displayed;

FIG. 32 is a diagram illustrating a screen in a state in which a human address is being dragged on the displayed GUI of FIG. 31;

FIG. 33 is a diagram illustrating a screen in a state in which a broadcast channel, a human address and an App channel are dragged onto a channel number region of the displayed GUI of FIG. 31;

FIGs. 34A and 34B are flowcharts illustrating an implementation procedure of a further exemplary em-

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bodiment for a method of constructing a channel map in accordance with the present invention;

Figure 35 is a diagram illustrating an exemplary embodiment of a broadcast screen on which a human channel map is displayed;

Figure 36 is a diagram illustrating an exemplary embodiment of a screen for invitation to view a channel;

Figure 37 is a schematic diagram illustrating a configuration of another exemplary embodiment of a broadcast system in accordance with the present disclosure;

Figure 38 is a diagram illustrating a configuration of an exemplary embodiment for a channel invitation packet;

Figure 39 is a diagram illustrating an exemplary embodiment of a screen displayed when invitation to view a channel is made;

Figure 40 is a diagram illustrating one exemplary embodiment of a guidance message with regard to invitation to view a channel;

Figure 41 is a diagram illustrating another exemplary embodiment of a guidance message with regard to invitation to view a channel;

Figure 42 is a diagram illustrating a further exemplary embodiment of a guidance message with regard to invitation to view a channel;

Figures 43A and 43B are diagrams illustrating an exemplary embodiment of a screen displayed when invitation to view a channel is accepted;

Figure 44 is a diagram illustrating an exemplary embodiment of a channel matching table;

Figure 45 is a diagram illustrating an implementation procedure of one exemplary embodiment for a method of making invitation to view a channel in accordance with the present disclosure;

Figure 46 is a flowchart illustrating an implement procedure of another exemplary embodiment for a method of making invitation to view a channel in accordance with the present disclosure; and

Figure 47 is a flowchart illustrating an implement procedure of an exemplary embodiment for a method of processing invitation to view a channel in accordance with the present disclosure.

Figure 48 is a diagram illustrating an embodiment of a screen on which content is displayed;

Figure 49 is a diagram illustrating one embodiment of a screen on which content is displayed in a simultaneous viewing mode;

Figure 50 is a diagram illustrating another embodiment of a screen on which content is displayed in a simultaneous viewing mode;

Figure 51 is a diagram illustrating a further embodiment of a screen on which content is displayed in a simultaneous viewing mode;

Figure 52 is a diagram explaining an embodiment of a method for confirming viewing of the same content;

Figure 53 is a diagram explaining a method for detecting user emotions;

Figure 54 is a diagram illustrating the contour of a silhouette mapped to user emotions;

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Figure 55	is a diagram illustrating an embodiment of a screen on which different silhouettes depending on user emotions are displayed;
Figure 56	is a diagram explaining a procedure for registering a facial image;
Figure 57	is a diagram explaining a procedure for training a facial image;
Figure 58	is a diagram explaining a method for detecting a user motion;
Figures 59A to 59D	are diagrams explaining a method for reflecting a screen effect on content;
Figure 60	is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for remotely viewing content at the same time;
Figure 61	is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for remotely viewing content at the same time;
Figure 62	is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for remotely viewing content at the same time;
Figure 63	is a flowchart illustrating an implementation procedure of a further exemplary embodiment in relation to a method for remotely viewing content at the same time;
Figure 64	is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for confirming viewing of the same content;
Figure 65	is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for confirming viewing of the same content;
Figure 66	is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for providing a viewing list;
Figure 67	is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for displaying a silhouette;
Figure 68	is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for displaying a silhouette;
Figure 69	is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for displaying a silhouette as a 3D image;
Figure 70	is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for sharing a screen effect;
Figure 71	is a diagram illustrating a broadcast screen on which one exemplary embodiment of a channel map is displayed;
Figure 72	is a diagram illustrating a broadcast screen on which another exemplary embodiment of a channel map is displayed;
Figure 73	is a diagram illustrating a broadcast screen on which a further exemplary embodiment of a channel map is displayed;
Figure 74	is a diagram illustrating a screen on which one exemplary embodiment of a full channel map is displayed;
Figure 75	is a diagram illustrating a screen on which another exemplary embodiment of a full channel map is displayed;

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Figure 76	is a diagram illustrating a screen on which another exemplary embodiment of a full channel map is displayed;
Figure 77	is a diagram illustrating a screen on which a human channel sheet of the full channel map of Figure 76 is displayed;
Figure 78	is a diagram illustrating a screen on which an App channel sheet of the full channel map of Figure 76 is displayed;
Figure 79	is a diagram illustrating a screen on which an exemplary embodiment of a recently viewed channel map is displayed;
Figure 80	is a diagram illustrating a screen on which a further exemplary embodiment of a full channel map is displayed;
Figures 81A to 81D	are a diagrams explaining a connection state of an owner of a human channel; and
Figure 82	is a flowchart illustrating an implement procedure of an exemplary embodiment for a method of providing a channel map service in accordance with the present disclosure.
Figure 83	is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a user registration method in accordance with the present disclosure;
Figure 84	is a diagram illustrating an embodiment of a GUI to receive user registration information;
Figure 85	is a diagram illustrating an embodiment of a GUI to select an SNS site;
Figure 86	is a diagram illustrating an embodiment of a GUI to receive authentication information for an SNS site;
Figure 87	is a diagram illustrating an embodiment of a GUI to confirm execution of a channel scan;
Figure 88	is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for providing a channel scan interface in accordance with the present disclosure;
Figure 89	is a diagram illustrating an embodiment of a GUI to select a scan method;
Figure 90	is a diagram illustrating an embodiment of a GUI to select a service type;
Figure 91	is a diagram illustrating an embodiment of a screen which displays the progress of a human channel scan;
Figure 92	is a diagram illustrating an embodiment of a screen which displays the result of a human channel scan;
Figure 93	is a diagram illustrating another embodiment of a screen which displays the result of a human channel scan;
Figure 94	is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for scanning a human channel in accordance with the present disclosure;
Figure 95	is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for constructing a channel map in accordance with the present disclosure;
Figure 96	is a diagram illustrating an embodiment of a GUI for display of other human addresses of a friend who has a human address associated with a channel number;

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Figure 97	is a diagram illustrating another exemplary embodiment for a human channel map;
Figure 98	is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for providing a human channel service in accordance with the present disclosure;
Figure 99	is a diagram illustrating an embodiment of a GUI for designation of a human address;
Figure 100	is a diagram illustrating another embodiment of a screen on which a human channel map and content of a selected human channel are displayed;
Figure 101	is a diagram illustrating an embodiment of a screen on which an Electronic Program Guide (EPG) for a human channel in accordance with the present disclosure is displayed;
Figure 102	is a diagram illustrating an embodiment of a screen in which detailed information about an event is displayed on an electronic program guide in accordance with the present disclosure is displayed;
Figure 103	is a diagram illustrating an embodiment of a screen in which channel numbers are selected on an electronic program guide in accordance with the present disclosure;
Figure 104	is a diagram illustrating an embodiment of a screen on which content of a human channel is displayed;
Figures 105 to 107	are diagrams illustrating an embodiment in which an electronic program guide in accordance with the present disclosure is dragged;
Figure 108	is a diagram illustrating an embodiment of a screen on which a content list is displayed on an electronic program guide in accordance with the present disclosure;
Figure 109	is a diagram illustrating an embodiment of a screen on which a preview of content selected from among the content list of Figure 108 is displayed;
Figure 110	is a diagram illustrating an embodiment of a screen on which a graphical user interface to produce an event is displayed;
Figure 111	is a diagram illustrating an embodiment of a screen in which an event input into the graphical user interface of Figure 110 is displayed;
Figures 112A and 112B	are diagrams illustrating a screen on which an electronic program guide in accordance with the present disclosure, which reflects the event input in Figure 111, is displayed;
Figure 113	is a diagram illustrating an implementation procedure of an exemplary embodiment in relation to a method for providing service information in accordance with the present disclosure;
Figure 114	is a diagram illustrating an implementation procedure of an exemplary embodiment in relation to a method for constructing service information in accordance with the present disclosure;
Figure 115	is a diagram illustrating an implementation procedure of an exemplary embodiment in relation to a method for displaying service information in accordance with the present disclosure; and
Figure 116	is a diagram illustrating an implementation procedure of an exemplary embodiment in relation to a method for producing an event in accordance with the present disclosure.

DETAILED DESCRIPTION

[0004] An electronic device as disclosed herein may be a multi-functional display device. The multi-functional display device may be a television or a Smart TV that includes a broadcast receiver. The broadcast receiver may include, for

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example, a function for receiving and processing a broadcast image viewable by a user. The broadcast receiver may display a broadcast, which is selected by the user from among broadcast signals transmitted from a broadcast station, on a display. Broadcasts may be transitioned from analog broadcasting to digital broadcasting.

[0005] Digital broadcasting may refer to digital audio and video signal broadcast. Digital broadcasting has low data loss due to robustness against external noise, favorable error correction, high resolution, and high-definition screen as compared with analog broadcasting. In addition, digital broadcasting may provide a bidirectional service unlike analog broadcasting.

[0006] In addition to providing digital broadcasting, the broadcast receiver may provide a Social Network Service (SNS). SNS may refer to a service for establishing and maintaining online social networks among various individuals and may enable personal media and information sharing. Examples of SNS may include Twitter, MySpace, and facebook widely used in America as well as Cyworld and Me2Day used in Korea, among others. SNS may be used for communication and information sharing among users. SNS assists users in making new connections or reinforcing existing connections with other users.

[0007] An electronic device as set forth herein is an intelligent electronic device equipped with a computer support function in addition to a broadcasting reception function, for example. Since an Internet function is added to a broadcasting reception function, the electronic device may have an interface which is more convenient than a handwriting input device, a touch screen, a touch pad, or a remote controller. Further, because the electronic device supports wired or wireless Internet, the electronic device may include e-mail transmission/reception, Web browsing, banking, and gaming functions and the like when connected to the Internet or a computer. To implement these functions, the electronic device may operate based on a standard, general-purpose Operating System (OS).

[0008] Various applications may be freely added to or deleted from, for example, a general-purpose OS kernel of the electronic device according to the present disclosure. Therefore, the electronic device may perform a number of user-friendly functions. The electronic device may be a network TV, a Hybrid Broadcast Broadband TV (HBBTV), a smart TV, an Open Hybrid TV (OHTV), etc. and as occasion demands, is applicable to smart phones, Personal Computers (PC) and home appliances.

[0009] Embodiments of the present disclosure will be described in detail with reference to the attached drawings, but it should be understood that they are merely illustrative of the present disclosure and should not be interpreted as limiting the scope of the present disclosure.

[0010] In addition, although the terms used in the present disclosure are selected from generally known and used terms, some of the terms mentioned in the description of the present disclosure, the detailed meanings of which are described in relevant parts of the description herein, have been selected at the discretion of the applicant. Furthermore, the present disclosure must be understood, not simply by the actual terms used but by the meanings of each term lying within. Accordingly, the terms used herein should be understood not simply by the actual terms used but by the meaning lying within and the description disclosed herein.

[0011] Figure 1 is a schematic diagram illustrating a configuration of an exemplary embodiment for a broadcast system in accordance with the present disclosure.

[0012] Referring to Figure 1, the broadcast system 1 in accordance with the present disclosure may include a first server 10, a second server 20, a first digital TV 100, a second digital TV 110, a personal computer system 120, a notebook computer 130 and a mobile terminal 140. The first server 10, the second server 20, the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 may be connected to one another via a network 2. Broadcast system 1 may include other appropriate types of multi-functional display devices in addition to the examples as shown in Figure 1.

[0013] The network 2 may include a backbone network and an access network. The backbone network may include an X.25 network, a frame relay network, an Asynchronous Transfer Mode (ATM) network, a Multi Protocol Label Switching (MPLS) network and a Generalized Multi Protocol Label Switching (GMPLS) network, alone or in combination. The access network may be a Fiber To The Home (FTTH) network, an Asymmetric Digital Subscriber Line (ADSL) network, a cable network, a wireless LAN (IEEE 802.11b, IEEE 802.11a, IEEE 802.11g, IEEE 802.11n) network, a Wireless Broadband (WIBro) network, a WiMax network and a High Speed Downlink Packet Access (HSDPA) network. In some embodiments, the network 2 may be an Internet network or mobile communication network.

[0014] The first server 10 may provide a service for connection between the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140. The first server 10 may provide User Datagram Protocol (UDP) hole punching. In addition, the first server 10 may have a static IP address. The first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 may be connected to the first server 10 using the static IP address.

[0015] The second server 20 may provide the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 with a human channel service. Here, a human channel refers to a communication channel for transmission of content provided by an individual. The human channel may refer to an identification sign for identification of the communication channel in terms of a user, and may refer to a

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communication channel corresponding to a channel number mapped to a human address in terms of a device, i.e. a communication channel accessible using the human address. As broadly described herein the human channel service may include, for example, a service to provide access to a Social Network Service (SNS) provided by an SNS service provider on a channel of a multi-functional display device (e.g., a social network channel service or SNS channel service). The human channel may be a particular channel on the multi-functional display device (e.g., digital TV) for accessing an SNS account for an individual or an entity. The human channel may also be referred to as a social network channel or SNS channel. A human channel may be associated with a channel number similar to a conventional broadcast channel on the multi-functional display device (e.g., digital TV), but unlike the broadcast channel, the human channel is also associated with a human address that identifies an SNS account.

[0016] The human address as broadly described herein refers to an identification character string for identification of a human or individual. The human address may also be referred to herein as an SNS identifier or a user identifier. The human address may correspond to a channel assigned to an individual, a group of individuals, or an entity and may be referred to as an SNS channel name. The human address may include at least one of an e-mail address, an account name, a family name and a Session Initiation Protocol-Uniform Resource Locator (SIP-URL), or another appropriate type of identifier or address. The human address may be an address or identifier given to a human or individual and is different from an address assigned to an electronic device. For example, the human address may include an SNS address for an individual or user (e.g., a social network address or SNS address). Moreover, the human address may include multiple SNS addresses for a particular user (e.g., a user's facebook and twitter accounts), or multiple SNS addresses for a group of users (e.g., dad's facebook account and mom's facebook account). As described above, the human channel service may refer to a service for providing a human channel of at least one individual. The second server 20 may be a conventional Social Network Service (SNS) server.

[0017] The first digital TV 100 and the second digital TV 110 may be a network TV, a smart TV, an HBBTV, a 3-dimensional (3D) TV, an OHTV, etc.

[0018] The personal computer system 120 may be a desktop, computer, a laptop computer, a tablet, a handheld computer, etc.

[0019] The mobile terminal 140 may be a cellular phone, a smart phone, a Digital Multimedia Broadcasting (DMB) terminal, a Personal Digital Assistant (PDA), a Portable Multimedia Player (PMP), a navigator, etc.

[0020] The first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 may serve not only as a subject for providing the human channel service, but also as an object affected by the human channel service of the second server 20 or another first digital TV 100, second digital TV 110, personal computer system 120, notebook computer 130 and mobile terminal 140.

[0021] The first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 may have a static IP address or a dynamic IP address, or may have a private IP address.

[0022] The first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 may receive a dynamic IP address or a private IP address from the first server 10, if a device for providing a human channel has the dynamic IP address or the private IP address.

[0023] Alternatively, if the device has a static IP address, the user may input the static IP address to the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140.

[0024] Figure 2 is a block diagram illustrating a configuration of an exemplary embodiment for a server in accordance with the present disclosure.

[0025] Referring to Figure 2, a server 200 may function as the first server 10 or the second server 20, or may perform functions of both the first and second servers 10 and 20. The server 200 may include a communication unit 210, a controller 220 and a storage unit 230 (or storage device).

[0026] The communication unit 210 may receive packets transmitted through the network 2 and may transmit the packets to the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 through the network 2. The packets may be transmitted by a Session Initiation Protocol (SIP), User Datagram Protocol (UDP) and Transmission Control Protocol (TCP). The packets may include registration request signals, response signals, connection request signals, connection set-up signals, moving image streaming, Web pages and files.

[0027] The controller 220 may control transmission of the packets by the communication unit 210 based on at least one protocol of SIP, Simple Mail Transfer Protocol (SMTP), Hypertext Transfer Protocol (HTTP), File Transfer Protocol (FTP), Real-Time Streaming Protocol (RTSP) and Multi Media Streaming (MMS).

[0028] The controller 220 may control storing an address of an electronic device which transmits a registration request signal and a human address included in the registration request signal to the storage unit 230, in response to the received registration request signal. The address of the electronic device and the human address may be stored in association with each other. The controller 220 may extract the address of the electronic device from the registration request signal or from the packet including the registration request signal. The address of the electronic device may include at least

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one of a Media Access Control (MAC) address, an IP address, a port number, a Domain Name System (DNS) name and a URL. The IP address may include a static IP address, a dynamic IP address and a private IP address.

[0029] The controller 220 reads an address of an electronic device associated with a human address included in a connection request signal from the storage unit 230, in response to the received connection request signal. The controller 220 controls transmission of the read address of the electronic device to an electronic device which issues the connection request signal. Also, the controller 220 may control transmission of an address of the electronic device which issues the connection request signal to the electronic device, the address of which has been read.

[0030] The storage unit 230 may store the address of the electronic device address and the human address. The address of the electronic device address and the human address may be stored in association with each other.

[0031] Figure 3 is a block diagram illustrating a configuration of an exemplary embodiment for an electronic device in accordance with the present disclosure.

[0032] Referring to Figure 3, the electronic device 300 may function as at least one of the first broadcast receiver 100, the second broadcast receiver 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140.

[0033] The electronic device 300 may include a tuner 305, a demodulator 310, a demultiplexer 315, a network interface 320, an external signal input unit 325, a video decoder 330, an audio decoder 335, a controller 340, a storage unit 345, a scaler 350, a mixer 360, a formatter 370, a communication unit 380 and a sound sensor 390. The electronic device 300 may further include an image capture device 301, a display 302, spectacles 303 and a remote controller 304.

[0034] The tuner 305 selects a Radio Frequency (RF) broadcast signal corresponding to a channel selected by the user from among RF broadcast signals transmitted through an antenna and converts the selected RF broadcast signal into an Intermediate Frequency (IF) signal or a base-band video or audio signal.

[0035] The demodulator 310 receives a Digital IF (DIF) signal converted by the tuner 305 and demodulates the DIF signal.

[0036] The demodulator 310 may also perform channel decoding. To this end, the demodulator 310 may include a Trellis decoder, a deinterleaver and a Reed Solomon decoder, to perform Trellis decoding, deinterleaving and Reed-Solomon decoding.

[0037] The demodulator 310 may output a Transport Stream (TS) signal after performing demodulation and channel decoding. An audio signal, a video signal or a data signal may be multiplexed in the TS signal.

[0038] The demultiplexer 315 may receive a stream signal from the demodulator 310, the network interface 320 and the external signal input unit 325. The demultiplexer 315 may demultiplex the received stream signal to a video signal, an audio signal and a data signal to output the demultiplexed signal to the video decoder 330, the audio decoder 335 and the controller 340.

[0039] The video decoder 330 receives a video signal from the demultiplexer 315 and restores the received video signal to output the restored video signal to the scaler 350. The video signal may include a 3D video signal.

[0040] The audio decoder 335 receives an audio signal from the demultiplexer 315 and restores the received audio signal to output the restored audio signal to the display 302 or the scaler 350.

[0041] The network interface 320 receives the packets from the network 2 and transmits the packets to the network 2. The network interface 320 may transmit a registration request signal and a connection request signal to the server 10 and may receive a response signal with respect to the transmitted registration request signal and connection request signal from the server 10. The registration request signal may include a human address, an address of the electronic device 300, an Identifier (ID) and a password. The connection request signal may include a human address.

[0042] The network interface 320 may receive content from the second server 20, the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 through the network 2. The content may include applications, moving image streams, moving image files, music files and picture files. The content may be provided through a particular human channel.

[0043] The network interface 320 may also receive an IP packet for transmission of broadcast data from a service provider through the network 2. The broadcast data may be real-time broadcast service data and Internet service data.

[0044] If the IP packet includes a stream signal, the network interface 320 may extract the stream signal from the IP packet to output the stream signal to the demultiplexer 315. The stream signal may be transmitted from the second server 20, the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140. The stream signal may be provided through a particular human channel.

[0045] The network interface 320 may output the received signal and content to the controller 340.

[0046] The external signal input unit 325 may provide a user interface and an interface capable of connecting an external device and the electronic device 300 to each other. The external device may be a variety of types of video or audio output devices, such as a Digital Versatile Disk (DVD) player, a Blu-ray player, a gaming device, a camcorder and a computer (e.g., a notebook computer). The electronic device 300 may display video and audio signals transmitted from the external signal input unit 325 and may store or use data signals.

[0047] The external device may be the image capture device 301. The image capture device 301 may include a

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plurality of cameras. The image capture device 301 may capture an image of a human. In one example, the image capture device 301 may recognize, focus on, and capture a human hand shape by zooming in. Here, the captured hand shape may be recognized as a spatial gesture. More specifically, the controller 340 may recognize the captured hand shape as a spatial gesture and may execute commands for performing operations associated with the recognized spatial gesture. The spatial gesture may be defined as a gesture recognized from a video frame or an image which is mapped to one or more particular computing operations and is transmitted from the image capture device 301.

[0048] In some embodiments, the electronic device 300 may include the image capture device 301.

[0049] The external signal input unit 325 may be a touch pad or a touch screen. The touch screen may be integrally formed with the display 302, or may be a separate element. If the touch screen is integrally formed with the display 302, the display 302 may be called a touch screen display. The touch screen is arranged at the front of the display 302, which allows the user to directly operate a Graphical User Interface (GUI) displayed on a screen. For example, the user may place his or her finger on an object to be controlled.

[0050] With regard to the touch pad, the touch pad is separately put on a different plane from the display 302. For example, the display unit 302 is generally located on a vertical plane and the touch pad is generally located on a horizontal plane. Thus, the touch pad is less intuitive and therefore, is difficult to use as compared with the touch screen.

[0051] The touch pad and the touch screen may be a multi-point input device.

[0052] The controller 340 may recognize a touch gesture applied to the external signal input unit 325 and may control the electronic device 300 based on the touch gesture. The touch gesture may be defined as a stylized interaction with the external signal input unit 325, mapped to one or more particular computing operations. The touch gesture may be implemented through hand, more particularly, finger movement. Alternatively or additionally, the touch gesture may be implemented through a stylus. A subject implementing the touch gesture, such as a finger or a stylus, is called an object.

[0053] The external signal input unit 325 receives the touch gesture, and the controller 340 executes commands for performing operations associated with the touch gesture. The storage unit 345 may include a gesture operating program which may be a part of an operating system or an additional application. The gesture operating program includes a series of commands for recognizing the occurrence of a gesture (e.g., a touch gesture or a spatial gesture) and informing one or more software agents of the gesture and/or which actions should be taken in response to the gesture.

[0054] When the user performs one or more gestures, the external signal input unit 325 transmits gesture information to the controller 340. The controller 340 analyzes the touch gesture using commands from the storage unit 345, more particularly, using the gesture operating program and then, controls different constituent elements of the electronic device 300, such as the display 302, the demultiplexer 315, the network interface 320, the external signal input unit 325, the storage unit 345, the scaler 350, the mixer 360, the formatter 370 and the sound sensor 390. The gesture may be identified as commands for performing operations of applications stored in the storage unit 345, for correcting a GUI object represented on the display 302 and data stored in the storage unit 345 and for performing operations in the multiplexer 315, the network interface 320, the scaler 350, the mixer 360 and the formatter 370. In one example, these commands may be associated with zooming-in, panning, scrolling, page-eject, rotation, scaling, video channel switch, content reception, Internet connection and the like.

[0055] In another example, the commands may be associated with designating a channel number, designating a human address, selecting a displayed object, dragging a displayed object, dropping a displayed object, switching a channel, displaying a channel map, switching a displayed channel map, transmitting a channel viewing request signal, booting a particular program, requesting a particular GUI, opening a file or a document, looking at a menu, selecting a menu, executing a command, log-in to an Internet site, allowing an authorized person to access a limited system region, loading a user profile associated with a user preference arrangement on the desktop, and/or the like. The displayed object may include images, channels listed in a channel map, selected regions on a GUI, menu items and displayed content.

[0056] A wide range of different touch gestures may be used. For example, touch gestures may include a single-point or multi-point gesture, a static or dynamic gesture, a continuous or segmented gesture, and/or the like. The single point gesture may be performed through a single contact point. For example, the single-point gesture is performed by a single touch using a single finger, palm or stylus. The multi-point gesture may be performed through a plurality of points. For example, the multi-point gesture is performed by multiple touches using plural fingers, a finger and a palm, a finger and a stylus, plural styluses and/or combinations thereof. The static gesture does not contain movement, and the dynamic gesture contains movement. The continuous gesture is performed by a single stroke and the segmented gesture is performed by a sequence of separate steps or strokes.

[0057] Contact between the object and the touch screen conventionally has various different patterns. For example, the single-point gesture on the touch screen includes a down event and a subsequent up event, the down event and the up event occurring at the same or almost the same position. The dynamic gesture on the touch screen includes a down event, at least one dragging event subsequent to the down event, and other following events.

[0058] In some embodiments, parameters are used to describe a process in which a finger accesses, comes into contact with and moves away from a touch screen display. These parameters may be a mathematical function of at

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least one of a distance between the finger and the touch screen display, pressure applied to the touch screen display by the finger, a contact area between the finger and the touch screen display, a voltage between the finger and the touch screen, a capacitance between the finger and the touch screen display or other physical parameters.

[0059] In some embodiments, according to the magnitude of each parameter (e.g., capacitance) between the finger and the touch screen display, a down event occurs when the parameter exceeds a predetermined threshold value, a dragging event occurs when a position of a cursor corresponding to the finger is moved from position A to position B while the parameter exceeds the predetermined threshold voltage, and an up event occurs when the parameter falls below the threshold level.

[0060] The controller 340 executes a command and performs an operation associated with the electronic device 300. For example, the controller 340 may control data reception and processing and input and output of signals between constituent elements of the electronic device 300 using commands found in the storage unit 345. The controller 340 may be implemented as a single chip, a plurality of chips, or a plurality of electric components. For example, a variety of architectures including a dedicated or embedded processor, a single purpose processor, a controller, an Application Specific Integrated Circuit (ASIC), etc. may be used as the controller 340. The controller 340 may include at least one processor.

[0061] The controller 340 may detect a user action and may control the electronic device 300 based on the detected user action. The user action may include selecting a physical button of a display appliance or a remote controller, executing a prescribed touch gesture or selecting a soft button on a touch screen display, executing a prescribed spatial gesture recognized from an image captured through an image capture device, and producing prescribed sound by recognizing sound received by the sound sensor 390. The controller 340 may analyze a user action as at least one executable command. The controller 340 may control constituent elements of the electronic device 300 in response to the at least one analyzed command. That is, the controller 340 may control data reception and processing and input and output of signals between constituent elements of the electronic device 300 using the at least one command.

[0062] The controller 340 may detect a user action for requesting a GUI for designation of a human address and may control displaying the GUI for designation of the human address in response to the detected user action. The controller 340 may detect a user action for designating a human address and may control displaying a GUI for designation of a channel number in response to the detected user action. The controller 340 may detect a user action for designating a channel number and may store the designated channel number, the designated human address and information associating the designed channel number and human address with each other to a human channel map, in response to the detected user action. The human channel map as broadly described herein may be a channel map that correlates a channel with a human address (or SNS identifier). The human channel map may also be referred to herein as a social network channel map, SNS channel map, or SNS channel listing, and may be displayed in a similar manner and format as a broadcast channel map (e.g., broadcast channel listing).

[0063] The controller 340 may detect a user action for designating a channel number, may read a human address associated with the designated channel number from the human channel map in response to the detected user action, and may control acquiring an address of an electronic device to access, based on the read human address. In some embodiments, the controller 340 may read the address of the electronic device based on the human address from the storage unit 345. In some embodiments, the controller 340 may control transmitting a connection request signal including the read human address to the server 10 and may acquire the address of the electronic device to access from the server 10.

[0064] The controller 340 may control transmitting a registration request signal to the server 10 upon booting or when a user action for requesting server registration is detected. The registration request signal may include an address of an electronic device, a human address, an ID and a password.

[0065] The controller 340 may control transmitting a connection set-up signal to another electronic device. The connection set-up signal may include a human address. When the controller 340 receives a connection set-up signal from another electronic device, the controller 340 may initialize connection with the electronic device which transmits the connection set-up signal, in response to the received connection set-up signal, and may transmit a response signal to the electronic device. During initialization, the controller 340 may open a particular port based on information included in the connection set-up signal and may transmit a response signal including a port number of the port.

[0066] If the controller 340 receives the response signal with respect to the connection set-up signal from the electronic device, the controller 340 may confirm whether or not the response signal includes a particular port number. If the response signal includes the particular port number, the controller 340 may receive and transmit data from and to the electronic device through a port corresponding to the particular port number. In one example, the particular port number may correspond to a port for providing a human channel. In this case, the electronic device 300 may receive content of a human channel through the port.

[0067] The controller 340 may control routing a packet transmitted to the network interface 320 using at least one of an IP address or a port number included in the packet. That is, the controller 340 may control outputting a packet having a particular port to the demultiplexer 315 and may control storing the packet in the storage unit 345.

[0068] The controller 340 may extract data included in the packet and may perform routing of the extracted data using

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at least one of the IP address or the port number included in the packet. That is, the controller 340 may control outputting the packet having the particular port to the demultiplexer 315 and may control storing the packet in the storage unit 345. The controller 340 may directly process the data included in the packet and may control displaying the processed result on a screen.

[0069] The controller 340 executes a computer code together with an Operating System (OS) and generates and uses data. The OS is generally known and therefore a detailed description thereof is omitted. An example of the OS may include Windows OS, Unix, Linux, Palm OS, DOS, Android, and Mac OS. The OS, other computer codes and data may be present within the storage unit 345 which is linked to and operated by the controller 340.

[0070] The storage unit 345 generally stores program codes and data used by the electronic device 300. For example, the storage unit 345 may be implemented as a Read-Only Memory (ROM), a Random Access Memory (RAM), a hard disk drive, etc. The program codes and data may be stored in a separable storage medium and, if necessary, may be loaded or installed onto the electronic device 300. The separable storage medium may include a CD-ROM, a PC card, a memory card, a floppy disk, a magnetic tape and a network component.

[0071] The storage unit 345 may store a human channel map. The storage unit 345 may also catch port numbers and addresses of other electronic devices connected to the electronic device 300. The port numbers and addresses of the electronic devices may be stored in association with human addresses. If a human channel associated with a particular human address is redisplayed, the controller 340 may read a port number and address of an electronic device associated with the particular human address from among the caught port numbers and addresses of the electronic devices and may receive content of the human channel using the read port number and address of the electronic device.

[0072] The scaler 350 performs scaling of signals processed in the video decoder 330 and the audio decoder 335, so as to provide the signals with a magnitude suitable to be output through the display 302 or a speaker (not shown).

[0073] The scaler 350 adjusts and outputs combinations of at least two of a GUI, a video signal and an aspect ratio of a 3D image, according to the kind of content to be displayed or user set-up conditions. An aspect ratio value may be 21:9, 16:9, 4:3 or 3:2. The scaler 350 may perform scaling such that a ratio of a horizontal screen length to a vertical screen length has a particular value.

[0074] The mixer 360 mixes outputs of the scaler 350 and the controller 340.

[0075] The formatter 370 changes the format of audio and video signals output from the mixer 360 to suit the display 302. The formatter 370 passes input signals without implementing a format change function when a 2D image is displayed. When a 3D image is displayed, the formatter 370 may serve as a 3D formatter for processing a signal into a 3D video signal based on the format of a 3D image and the output frequency of the display 302 under control of the controller 340.

[0076] The formatter 370 may output the resultant 3D video signal to form a 3D image to the display 302 and may produce a Sync signal relating to the 3D video signal to output the sync signal to the communication unit 380. The sync signal is a signal for synchronizing display times of left eye viewpoint video data and right eye viewpoint video data and opening/closing times of a left eye lens and a right eye lens of the shutter spectacles 303.

[0077] The communication unit 380 is a communication module for providing omnidirectional (or non-directional) communication and performs wireless communication with other communication appliances based on predetermined communication standards. The communication standards may be Zigbee, Bluetooth, Ultra WideBand (UWB), Radio Frequency Identification (RFID) and wireless Lan. The communication appliances may be the electronic device 300, the spectacles 303 and the remote controller 304.

[0078] The communication unit 380 may include an infrared receiver capable of receiving infrared light from the remote controller 304.

[0079] The sound sensor 390 may receive sound and output the received sound to the controller 340. The controller 340 may recognize sound output from the sound sensor 390 and may control the electronic device 300 based on the recognized sound.

[0080] Figure 4 is a diagram illustrating an exemplary embodiment of a screen on which a Web page of a Social Network Service (SNS) is displayed.

[0081] Referring to Figure 4, the display 302 may display a Web page 400 of the server 200. The network interface 320 may receive the Web page 400 from the server 200, the controller 340 may produce video image data of the Web page 400 to enable displaying the received Web page 400, and the scaler 350 may adjust a resolution of the produced video image data. The display 302 may display the video image data 400, the resolution of which has been adjusted by the scaler 350.

[0082] The Web page 400 may list one or more human addresses 411, 412 and 413. The human address 411 represents 'Sally Brown', the human address 412 represents 'Andy Fox', and the human address 413 represents 'Charlie Brown'. The listed human addresses 411, 412 and 413 are selectable by an indicator 401.

[0083] In some embodiments, an indicator 401may be provided to highlight one of the human addresses 411, 412 and 413, and/or a corresponding item (e.g., news feed). Once highlighted, the address or item may be selected to perform a prescribed process, for example, for designating the corresponding human address. The selection may be made through a remote controller by pressing a particular button (for example, an 'OK' button) or by performing a spatial

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gesture corresponding to a selection. The selection may be made by other methods, such as a touch input.

[0084] Figure 5 is a diagram illustrating a screen on which an exemplary embodiment of a GUI for designation of a human address is displayed.

[0085] Referring to Figure 5, if the electronic device 300 detects a user action for designating a human address, the electronic device 300 may display a GUI 510 in response to the detected user action. The GUI 510 may be a pop-up window.

[0086] The GUI 510 may include a menu item 511 for channel registration, a menu item 513 for channel switch, and a menu item 515 for channel editing. The menu items 511, 513 and 515 are selectable by an indicator 520.

[0087] If the electronic device 300 detects a user action for selecting the menu item 511, the electronic device 300 may display a GUI for designation of a channel number in response to the detected user action.

[0088] If the electronic device 300 detects a user action for selecting the menu item 513, the electronic device 300 may display a GUI for switching a channel number in response to the detected user action.

[0089] Also, if the electronic device 300 detects a user action for selecting the menu item 515, the electronic device 300 may display a GUI for editing a channel number in response to the detected user action.

[0090] Figure 6 is a diagram illustrating a screen on which an exemplary embodiment of a GUI for designation of a channel number is displayed.

[0091] Referring to Figure 6, if the electronic device 300 detects a user action for designating a human address, the electronic device 300 may display a GUI 610 in response to the detected user action. Also, if the electronic device 300 detects a user action for selecting the menu item 511, the electronic device 300 may display the GUI 610 in response to the detected user action.

[0092] The GUI 610 lists channel numbers from 41 to 61. The channel numbers from 41 to 61 are selectable by an indicator 620. The GUI 610 may display the channel numbers in such a manner that a channel number to which a human address has been assigned is discriminated from an empty channel number. In the drawing, the channel numbers '41', '43' to '45', '48' to '55', '58', '59' and '61' are channel numbers to which human addresses have been assigned, and the other channel numbers '42', '46', '47', '56', '57' and '60' may be empty channel numbers and distinguished by a bold font. The controller 340 may confirm the channel numbers and whether or not human addresses have been assigned to the channel numbers using a human channel map stored in the storage unit 345 and may produce the GUI 610 based on the confirmed results.

[0093] The channel numbers listed in the GUI 610 may be channel numbers to which human addresses have been assigned, or may be channel numbers to which channels are not assigned.

[0094] In some embodiments, a channel number to which a channel is not assigned may be a channel number which does not belong to any one of a sky wave broadcast channel, a cable channel, an IPTV channel or a satellite channel. Thus, the electronic device 300 may simultaneously perform browsing of a human channel and one of a sky wave broadcast channel, a cable channel, an IPTV channel or a satellite channel.

[0095] In some embodiments, a channel number to which a channel is not assigned may be a channel number which belongs to some kinds of channels including a broadcast channel and an App channel, but does not belong to a human channel.

[0096] Figure 7 is a diagram illustrating one example of a screen on which the result of assigning a human address to a channel number is displayed.

[0097] Referring to Figure 7, if the user performs a user action for issuing a selection order to the indicator 620 in a state in which the indicator 620 is located at one of the channel numbers from 41 to 61 listed in the GUI 610, the electronic device 300 may detect a user action for designating a channel number and may display a message 710 in response to the detected user action. The message 710 may indicate that the designated channel number is assigned to the designated human address. For example, the message 710 indicates that the channel number '60' is assigned to 'Sally Brown'.

[0098] The electronic device 300 may store the human address 'Sally Brown', the channel number '60' and information associating the human address 'Sally Brown' and the channel number '60' with each other in a human channel map, in response to the detected user action.

[0099] Figure 8 is a diagram illustrating an exemplary embodiment of a screen on which a menu is displayed.

[0100] Referring to Figure 8, the electronic device 300 may display a menu 800 including a menu item 810 for requesting displaying a GUI for designation of a human address.

[0101] If the user performs a user action for selecting the menu item 810, the electronic device 300 may detect the user action for selecting the menu item 810 and may display a message 820 in response to the detected user action.

[0102] Figure 9 is a diagram illustrating a screen on which another exemplary embodiment of a GUI for designation of a human address is displayed.

[0103] Referring to Figure 9, if the user performs a user action for selecting a button 821, the electronic device 300 may detect the user action for selecting the button 821 and may display a GUI 910 in response to the detected user action. In another embodiment, if the user performs a user action for selecting the menu item 810, the electronic device 300 may detect the user action for selecting the menu item 810 and display the GUI 910 in response to the detected

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user action.

[0104] The user may input an IP address to the GUI 910. After the user completes the user action for inputting the IP address, the electronic device 300 may detect the user action and may display the GUI 610 in response to the detected user action.

[0105] If the user performs a user action for issuing a selection order to the indicator 620 in a state in which the indicator 620 is located at one of the channel numbers from 41 to 61 listed in the GUI 610, the electronic device 300 may detect the user action for designating a channel number and may display a message in response to the detected user action. The message may indicate that the designated channel number is assigned to the input IP address.

[0106] The electronic device 300 may store the input IP address, the channel number '60' and information associating the input IP address and the channel number '60' with each other in the human channel map, in response to the detected user action.

[0107] In some embodiments, the user may further input the human address 'Sally brown' via the GUI 910. If the user completes the user action for inputting the human address 'Sally Brown' and the IP address, the electronic device 300 may detect the user action and may display the GUI 610 in response to the detected user action. If the electronic device 300 detects a user action for designating the channel number '60' among the displayed channel numbers, the electronic device 300 may display a message 710 in response to the detected user action. The electronic device 300 may store the human address 'Sally Brown', the IP address, the channel number '60', and information associating the human address 'Sally Brown' and the IP address with each other and information associating the channel number '60' and the human address 'Sally Brown' with each other in the human channel map, in response to the detected user action.

[0108] Figure 10 is a diagram illustrating a screen on which another exemplary embodiment of a GUI for designation of a human address is displayed.

[0109] Referring to Figure 10, if the user performs a user action for selecting the menu item 810, the electronic device 300 may detect the user action for selecting the menu item 810 and may display a GUI 1010 in response to the detected user action.

[0110] The user may input a human address to the GUI 1010. The human address may include at least one of an e-mail address, an account name, a family name or an SIP-URL. If the user completes the user action for inputting the human address, the electronic device 300 may detect the user action and may display the GUI 610 in response to the detected user action.

[0111] If the user performs a user action for issuing a selection order to the indicator 620 in a state in which the indicator 620 is located at one of the channel numbers from 41 to 61 of the GUI 610, the electronic device 300 may detect the user action for designating a channel number and may display a message in response to the detected user action. The message may indicate that the designated channel number is assigned to the input human address. The message may be the message 710 illustrated in Figure 7.

[0112] The electronic device 300 may store the input human address, the channel number '60' and information associating the input human address and the channel number '60' with each other in the human channel map, in response to the detected user action.

[0113] Figure 11 is a diagram illustrating a screen on which a further exemplary embodiment of a GUI for designation of a human address is displayed.

[0114] Referring to Figure 11, if the user performs a user action for selecting the menu item 810, the electronic device 300 may detect the user action for selecting the menu item 810 and may display a GUI 1110 in response to the detected user action.

[0115] The user may input a human address to the GUI 1110. The GUI 1110 may be a pull-down menu, or the like, that lists one or more selectable human addresses. The human address may include at least one of an e-mail address, an account name or an SIP-URL. If the user completes the user action for inputting the human address, the electronic device 300 may detect the user action and may display the GUI 610 in response to the detected user action.

[0116] In some embodiments, the user may perform a user action for selecting one human address from among the human addresses listed in the GUI 1110. If the user completes the user action for inputting the human address, the electronic device 300 may detect the user action and may display the GUI 610 in response to the detected user action.

[0117] If the user performs a user action for issuing a selection order to the indicator 620 in a state in which the indicator 620 is located at one of the channel numbers from 41 to 61 listed in the GUI 610, the electronic device 300 may detect the user action for designating a channel number and may display a message in response to the detected user action. The message may indicate that the designated channel number is assigned to the input human address. The message may be the message 710 illustrated in Figure 7.

[0118] The electronic device 300 may store the input human address, the channel number '60' and information associating the input human address and the channel number '60' with each other in the human channel map, in response to the detected user action.

[0119] Figure 12 is a diagram illustrating an exemplary embodiment for a human channel map.

[0120] Referring to Figure 12, a human channel map 1210 may include channel numbers, human addresses and

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pointers. In the human channel map, a channel number, a human address to which the channel number is assigned, and a pointer associated with the human address may be arranged in a single line. That is, information representing a line may be information associating a channel number and a human address with each other. In one example, since a channel number '71' and a human address 'Zoe' are located in the second line, the electronic device 300 may confirm that the channel number '71' is assigned to the human address 'Zoe'.

[0121] Access information maps 1230, 1240, 1250, 1260 and 1270 store information required to access the human channels. The access information maps 1230, 1240, 1250, 1260 and 1270 may respectively store different kinds of information according to access methods thereof. The first access information map 1230 may store type information indicating an access method, IP addresses, port numbers and authentication information. The second access information map 1240 may store type information indicating an access method, SIP-URLs and authentication information. The third access information map 1250 may store type information indicating an access method, IP addresses, port numbers, accounts and authentication information. The fourth access information map 1260 may store type information indicating an access method, IP addresses, port numbers, e-mail addresses and authentication information. The fifth access information map 1270 may store type information indicating an access method, shortcuts and authentication information. The information stored in the access information maps 1230, 1240, 1250, 1260 and 1270 may be input by the user, or may be transmitted from the server 10 and the server 20. In addition, the information may be stored in the access information maps before and after the information associating the channel number and the human address with each other is stored in the human channel map 1210.

[0122] An access method may be one of a first access method using IP addresses and port numbers, a second access method using SIP-URLs, a third access method for accessing a server and receiving a service associated with a particular account, a fourth access method for accessing an SNS server and receiving a service associated with a particular e-mail address and a fifth access method using shortcuts. The first access method, the second access method, the third access method, the fourth access method and the fifth access method may respectively be denoted by type 1, type 2, type 3, type 4 and type 5.

[0123] The pointers may indicate positions where information associated with the human addresses is stored. A pointer 1221 indicates a position where information associated with 'Me' is stored. That is, the pointer 1221 indicates the first line of the first access information map 1230. An IP address associated with 'Me' is 127.0.0.1, and a port number associated with 'Me' is 88. Access to a human channel of 'Me' may be implemented by the access method denoted by type 1. A pointer 1222 indicates a position where information associated with 'Zoe' is stored. That is, the pointer 1222 indicates the second line of the first access information map 1230. An IP address associated with 'Zoe' is 210.1.7.29, and a port number associated with 'Zoe' is 545. Access to a human channel of 'Zoe' may be implemented by the access method denoted by type 1. Also, a pointer 1223 indicates a position where information associated with 'Susan' is stored. That is, the pointer 1223 indicates the third line of the first access information map 1230. An IP address associated with 'Susan' is 198.10.8.102, and a port number associated with 'Susan' is 546. Access to a human channel of 'Susan' may be implemented by the access method denoted by type 1.

[0124] A pointer 1225 indicates a position where information associated with 'Chuck' is stored. That is, the pointer 1225 indicates the first line of the second access information map 1240. An SIP-URL associated with 'Chuck' is chuck@TV.com. Access to a human channel representing 'Chuck' may be implemented by the access method denoted by type 2. A pointer 1226 indicates a position where information associated with 'Dad' is stored. That is, the pointer 1226 indicates the second line of the second access information map 1240. An SIP-URL associated with 'Dad' is Dad@TV.com. Access to a human channel of 'Dad' may be implemented by the access method denoted by type 2.

[0125] A pointer 1224 indicates a position where information associated with 'Sophie' is stored. That is, the pointer 1224 indicates the first line of the third access information map 1250. An IP address associated with 'Sophie' is 202.131.29.70, a port number associated with 'Sophie' is 80, and an account name is Sophie. Access to a human channel of 'Sophie' may be implemented by the access method denoted by type 3. A pointer 1227 indicates a position where information associated with 'George' is stored. That is, the pointer 1227 indicates the second line of the third access information map 1250. An IP address associated with 'George' is 209.62.105.13, and a port number associated with 'George' is 80. Access to a human channel of 'George' may be implemented by the access method denoted by type 3.

[0126] A pointer 1228 indicates a position where information associated with 'Carrie' is stored. That is, the pointer 1228 indicates the first line of the fourth access information map 1260. An IP address associated with 'Carrie' is 69.171.224.12, a port number associated with 'Carrie' is 80, and an e-mail address associated with 'Carrie' is Carrie@SNS.com.

[0127] A pointer 1229 indicates a position where information associated with 'Paul' is stored. That is, the pointer 1229 indicates the first line of the fifth access information map 1270. A shortcut associated with 'Paul' is ftp://Paul.sns.com:21.

[0128] The authentication information of the access information maps 1230, 1240, 1250, 1260 and 1270 may include IDs and passwords as well as stored character strings. In addition, the authentication information may be encoded and stored.

[0129] Figure 13 is a flowchart illustrating an implementation procedure of one exemplary embodiment for a method

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of constructing a human channel map in accordance with the present disclosure.

[0130] Referring to Figure 13, the display 302 displays a first GUI for designation of a human address (S100). The displayed first GUI may list at least one selectable human address. The listed human address may be transmitted from one of the first server 10 and the second server 20. The network interface 320 may receive the human address from one of the first server 10 and the second server 20. The controller 340 may control displaying the first GUI which provides the human address. The first GUI may be one of the Web page 400 in Figure 4, the GUI 910 in Figure 9, the GUI 1010 in Figure 10 and the GUI 1110 in Figure 11.

[0131] The controller 340 detects a first user action for designating a human address (S110).

[0132] The display 302 displays a second GUI for designation of a channel number in response to the detected first user action (S120). The displayed second GUI may list a plurality of selectable channel numbers. The second GUI may include an indicia that indicates the channel numbers which are currently available. The second GUI may be the GUI 610 in Figure 6.

[0133] The controller 340 detects a second user action for designating a channel number (S130).

[0134] The controller 340 stores a human address, a channel number and information associating the human address and the channel number with each other in a human channel map in response to the detected second user action (S140). The human channel map may be the human channel map 1210 in Figure 12, or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0135] Figure 14 is a flowchart illustrating an implementation procedure of another exemplary embodiment for a method of constructing a human channel map in accordance with the present disclosure.

[0136] Referring to Figure 14, the display 302 displays a first GUI for designation of a channel number (S200). The displayed first GUI may list a plurality of selectable channel numbers. The channel numbers may include an indicia identifying channel numbers which are available such as highlighting, bold text, or the like. The first GUI may be the GUI 610 in Figure 6.

[0137] The controller 340 detects a first user action for designating a channel number (S210).

[0138] The display 302 displays a second GUI for designating a human address in response to the detected first user action (S220). The displayed second GUI may list at least one selectable human address. The listed human address may be transmitted from one of the first server 10 and the second server 20. The network interface 320 may receive the human address transmitted from one of the first server 10 and the second server 20, and the controller 340 may control displaying the second GUI which provides the received human address. The second GUI may be one of the Web page 400 in Figure 4, the GUI 910 in Figure 9, the GUI 1010 in Figure 10 and the GUI 1110 in Figure 11.

[0139] The controller 340 detects a second user action for designating a human address (S230).

[0140] The controller 340 stores a human address, a channel number and information associating the human address and the channel number with each other in a human channel map in response to the detected second user action (S240). The human channel map may be the human channel map 1210 in Figure 12, or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0141] Figure 15 is a diagram illustrating one exemplary embodiment of a screen on which a human channel map and content of a selected human channel are displayed.

[0142] Referring to Figure 15, the controller 340 may control displaying a screen 1500. The screen 1500 may include a channel map region 1510, a channel display region 1520, a content list region 1530 and a human display region 1540.

[0143] The channel map region 1510 provides a human address and a channel number mapped to the human address. In one example, the channel map region 1510 provides a human address 'Me', denoted by reference numeral 1511, and a channel number '00', denoted by reference numeral 1512, mapped to the human address 'Me'. The controller 340 may produce an image displayed on the channel map region 1510 using information of the human channel map. The human address and channel number of the channel map region 1510 may be selected using a cursor 1501 and an indicator 1502. For example, when the cursor 1501 is positioned over a particular human address (e.g., human address'Sophie', denoted by reference numeral 1513, and channel number '72' denoted by reference numeral 1514), the indicator 1502 may be located over a designated human address and channel number, as illustrated in Figure 15. The cursor 1501 may be a pointer, arrow, or the like, and the indicator 1502 may be a highlight, bold text, or the like.

[0144] The channel display region 1520 may display a human channel corresponding to a designated channel number. In Figure 15, since the indicator 1502 and cursor 1501 are positioned over the channel number '72', a designated channel number is 72 and thus, the channel display region 1520 displays a human channel corresponding to the channel number '72'. The human channel corresponding to the channel number '72' is a human channel of the human address mapped to the channel number '72'. That is, the channel display region 1520 displays the human channel of'Sophie'.

[0145] The content list region 1530 provides a content list provided by a human channel corresponding to a designated channel number. The content list region 1530 may provide a thumbnail of content. If a user action for selecting particular content from among content provided in the content list region 1530 is detected, the controller 340 may control displaying

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the selected content on the channel display region 1520 in response to the detected user action. In addition, it is possible to discriminate between content displayed on the channel display region 1520 and content displayed on the content list region 1530. To this end, for example, the content displayed on the channel display region 1520 may be highlighted in the content list region 1530.

[0146] The human display region 1540 displays a human having a human address associated with a selected channel number. The human display region 1540 may display a picture of an owner of a human channel indicated by the indicator 1501.

[0147] Figure 16 is a diagram illustrating another exemplary embodiment of a screen on which a human channel map and content of a selected human channel are displayed.

[0148] Referring to Figure 16, the controller 340 may detect a user action for requesting channel switch to Channel 73. The user action for requesting channel switch may include executing a spatial gesture for requesting channel increment, or pressing a button of a remote controller for requesting channel increment.

[0149] The controller 340 may control displaying a screen 1600 in response to the detected user action. In a channel map region 1610, an indicator 1601 is located at the channel number '73' designated by the user action. A channel display region 1620 displays a human channel corresponding to the channel number '73', i.e. the human channel of 'Chuck'. A content list region 1630 displays a content list provided by the human channel mapped to the channel number '73'.

[0150] Figure 17 is a diagram illustrating a further exemplary embodiment of a screen on which a human channel map and content of a selected human channel are displayed.

[0151] Referring to Figure 17, the controller 340 may detect a user action for requesting channel switch to Channel 75. The controller 340 may control displaying a screen 1700 in response to the detected user action. In a channel map region 1710, an indicator 1701 is located at the channel number '75' designated by the user action. A channel display region 1720 displays a human channel corresponding to the channel number '75', i.e. the human channel of 'Susan'. A content list region 1730 displays a content list provided by the human channel mapped to the channel number '75'.

[0152] Figure 18 is a diagram illustrating an implementation procedure of an exemplary embodiment for a method of providing a human channel service in accordance with the present disclosure.

[0153] Referring to Figure 18, the controller 340 detects a user action for designating a channel number (S300). Step S300 may be performed while the display 302 is displaying at least one of a human channel, a broadcast channel or an App channel. For example, the controller 340 may detect the user action for designating a channel number while the display 302 is displaying the screen 1500 of Figure 15, the screen 1600 of Figure 16 or the screen 1700 of Figure 17. The broadcast channel may include at least one of a sky wave broadcast channel, a cable channel, a satellite channel or an IPTV channel.

[0154] The controller 340 receives content of a human channel indicated by the designated channel number in response to the detected user action (S310). The content may be first content of a content list provided by the human channel or initial content introducing the human channel.

[0155] The controller 340 controls displaying the received content (S320). The display 302 may display the screen 1500 of Figure 15, the screen 1600 of Figure 16 or the screen 1700 of Figure 17.

[0156] Figure 19 is a diagram illustrating an implementation procedure of one exemplary embodiment for a method of receiving content of a human channel.

[0157] Referring to Figure 19, the controller 340 reads a human address associated with a designated channel number from a human channel map (S400). The human channel map may be the human channel map 1210 of Figure 12 or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0158] The controller 340 reads an address of an electronic device to access, based on the read human address (S410). The electronic device to access may be one of the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130, the mobile terminal 140, or another appropriate type of multi-functional display device. The address of the electronic device to access may be stored in the access information map 1230 illustrated in Figure 12. The address of the electronic device to access may include an IP address and a port number.

[0159] The network interface 320 receives content from the electronic device using the read address of the electronic device (S420). The electronic device 300 may set up communication with the electronic device using the address of the electronic device read in Step S410 and may receive content of a human channel from the electronic device. The content may be transmitted based on a protocol such as SMTP, HTTP, FTP, RTSP or MMS.

[0160] The method of receiving content of a human channel illustrated in Figure 19 may be one example of the first access method as described with reference to Figure 12.

[0161] Figure 20 is a diagram illustrating an implementation procedure of another exemplary embodiment for a method of receiving content of a human channel.

[0162] Referring to Figure 20, the controller 340 reads a human address associated with a designated channel number

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from a human channel map (S500). The human channel map may be the human channel map 1210 of Figure 12, or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0163] The controller 340 reads an address of a server to be connected, based on the read human address (S510). The server may be the server 10 or the server 20. The address of the server may be stored in the access information map 1250, the access information map 1260 and the access information map 1270. The address of the server may include an IP address, a port number and an account name, or may include an IP address, a port number and an e-mail address, or may include a shortcut.

[0164] The network interface 320 receives content from the server using the read address of the server (S520). The electronic device 300 may access the server using the address of the server read in Step S510 and may receive content of a human channel from the server. The content may be transmitted based on a protocol such as SMTP, HTTP, FTP, RTSP or MMS.

[0165] The method of receiving content of a human channel illustrated in Figure 19 may be one example of one of the third access method, the fourth access method and the fifth access method as described with reference to Figure 12, according to the address of the server read in Step S510.

[0166] Figure 21 is a diagram illustrating an implementation procedure of a further exemplary embodiment for a method of receiving content of a human channel.

[0167] Referring to Figure 21, the controller 340 reads a human address associated with a designated channel number from a human channel map (S600). The human channel map may be the human channel map 1210 of Figure 12, or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12. Also, the read human address may include an SIP-URL.

[0168] The network interface 320 transmits a connection request signal including the read human address to a server (S610). The connection request signal may include an SIP-URL. Also, the server may be the server 10.

[0169] The network interface 320 receives a signal including an address of an electronic device from the server (S620). The signal may be a response signal with respect to the connection request signal. The address of the electronic device 300 may include an IP address and a port number. The electronic device 300 may be one of the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140.

[0170] The controller 340 controls receiving content using the received address of an electronic device (S630). The electronic device 300 may set up communication with the electronic device using the received address of the electronic device read in operation 620 and may receive content of a human channel from the electronic device. The content may be transmitted based on a protocol such as SMTP, HTTP, FTP, RTSP or MMS.

[0171] Figure 22 is a diagram illustrating a method of setting up connection between two electronic devices.

[0172] Referring to Figure 22, an electronic device 2210 may set up (or configure) a first connection 2211 with a server 2230. During set up of the first connection 2211, the server 2230 acquires and stores an IP address and port number of the electronic device 2210. The first connection 2211 may be set up during booting of the electronic device 2210, or may be set up when a user requests connection between the electronic device 2210 and the server 2230. The electronic device 2210 may be one of the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 or the mobile terminal 140, and the server 2230 may be the server 10, for example.

[0173] An electronic device 2220 may set up a second connection 2231 with the server 2230. During set up of the second connection 2231, the server 2230 acquires and stores an IP address and a port number of the electronic device 2220. The second connection 2231 may be set up during booting of the electronic device 2220, or may be set up when a user requests connection between the electronic device 2220 and the server 2230.

[0174] The second connection 2231 may be set up after the server 2230 completes set up of the first connection 2211 with the electronic device 2210. When requesting the second connection 2231, the server 2230 may use the previously stored IP address and port number of the electronic device 2220. The electronic device 2220 may be one of the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 or the mobile terminal 140.

[0175] The electronic device 2210 may set up a third connection 2221 with the electronic device 2220. In this case, the electronic device 2210 may receive the IP address and port number of the electronic device 2220 from the server 2230 which has previously acquired the IP address and port number through the second connection 2231, and may transmit a signal to the electronic device 2220 using the received IP address and port number. The transmitted signal may be a connection set-up signal or a human channel request signal.

[0176] The electronic device 2220 may receive the IP address and port number of the electronic device 2210 from the server 2230 which has previously acquired the IP address and port number through the first connection 2211, and may transmit a response signal to the electronic device 2210 using the received IP address and port number. In some embodiments, the electronic device 2220 may extract the IP address and port number of the electronic device 2210

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from the connection set-up signal transmitted from the electronic device 2210 and may transmit a response signal to the electronic device 2210 using the extracted IP address and port number.

[0177] Figure 23 is a schematic diagram illustrating a configuration of another exemplary embodiment of a broadcast system in accordance with the present disclosure, and Figure 24 is a diagram illustrating an exemplary embodiment of a Network Address Translation (NAT) table, and Figure 25 is a diagram illustrating an exemplary embodiment of an address matching table recorded in a server.

[0178] Referring to Figures 23 to 25, the broadcast system 2300 may include a first electronic device 2310, a second electronic device 2320, a network device 2330, a network device 2340 and a server 2350.

[0179] The first electronic device 2310 and the second electronic device 2320 respectively have private IP addresses. Specifically, the private IP address of the electronic device 2310 is private_ip1 and the private IP address of the electronic device 2320 is private_ip2. The electronic device 2310 and the electronic device 2320 may be one of the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 or the mobile terminal 140.

[0180] The network device 2330, as set up in the NAT table, translates the private IP address of the first electronic device 2310 into a public IP address, i.e. from private_ip1 to public_ip1. More specifically, the network device 2330 translates a source IP address of a packet, transmitted from the first electronic device 2310 to the server 2350, from pivate_ip1 into public_ip1. The network device 2330 may be one of a router, a sharer or a gateway.

[0181] The network device 2340, as set up in the NAT table, translates the private IP address of the second electronic device 2320 into a public IP address, i.e. from private_ip2 to public_ip2. More specifically, the network device 2340 translates a source IP address of a packet, transmitted from the second electronic device 2320 to the server 2350, from pivate_ip2 into public_ip2. The network device 2340 may be one of a router, a sharer or a gateway.

[0182] The server 2350 may be the server 10 illustrated in Figure 1. The server 2350 may store an address matching table 2500. The address matching table 2500 may be permanently or temporarily stored in the storage unit. The address matching table 2500 may store a human address, an IP address and information associating the human address and the IP address with each other. The information associating the human address and the IP address with each other may be information representing a line of the table.

[0183] In the address matching table 2500, a human address 1 is associated with public_ip1, and a human address 2 is associated with public_ip 2. The human address 1 is user1@TV.com, which is a human address transmitted by the first electronic device 2310, and the human address 2 is user2@TV.com, which is a human address transmitted by the second electronic device 2320.

[0184] If the server 2350 receives a connection request signal including the human address 2 'user2@TV.com' from the first electronic device 2310, the server 2350 reads the IP address 'public_ip2' matching to the human address 2 from the address matching table 2500 and transmits a response signal including the read IP address 'public_ip2' to the first electronic device 2310. Also, the server 2350 reads the IP address 'public_ip1' of the first electronic device 2310 from the address matching table 2500 and transmits a signal including the read IP address 'public_ip1' to the second electronic device 2320. In conclusion, the first electronic device 2310 may implement data reception/transmission with the second electronic device 2320 having the private IP address using the received IP address 'public_ip2'.

[0185] Figure 26 is a diagram illustrating an implementation procedure of an exemplary embodiment for a method of setting up connection between two electronic devices.

[0186] Referring to Figure 26, the first electronic device 2610 transmits a registration request signal to a server 2630 (S700). The server 2630 may receive the registration request signal. The first electronic device 2610 may be one of the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 or the mobile terminal 140. The registration request signal may include a human address 'user1@TV.com' and information required to log-in to the server 2630. The log-in information may be authentication information stored in a human channel map.

[0187] The server 2630 transmits a response signal with respect to the registration request signal to the first electronic device 2610 (S705). The server 2630 may store the human address 'user1@TV.com' included in the registration request signal and the address of the first electronic device 2610 in an address matching table. Also, the server 2630 may implement a log-in procedure using information included in the registration request signal. The address matching table may be the address matching table 2500 illustrated in Figure 26. The server 2630 may be the server 10 illustrated in Figure 1.

[0188] The second electronic device 2620 transmits a registration request signal to the server 2630 (S710). The server 2630 may receive the registration request signal. The second electronic device 2620 may be one of the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 or the mobile terminal 140. The registration request signal may include the human address 'user2@TV.com' and information required to log-in to the server 2630.

[0189] The server 2630 transmits a response signal with respect to the received registration request signal to the second electronic device 2620 (S715). The server 2630 may store the human address 'user2@TV.com' included in the registration request signal and the address of the second electronic device 2620 in the address matching table. Also,

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the server 2630 may implement a log-in procedure using information included in the registration request signal.

[0190] The first electronic device 2610 transmits a connection request signal including the human address 'user2@TV.com' to the server 2630 (S720). The server 2630 receives the connection request signal.

[0191] The server 2630 transmits a connection response signal including 'public_ip2' to the first electronic device 2610 in response to the received connection request signal (S725). 'Public_ip2' is the public IP address of the second electronic device 2620. The first electronic device 2610 receives the connection response signal and acquires the address of the second electronic device 2620 using the connection response signal.

[0192] The server 2630 transmits a connection response signal including 'public_ip1' to the second electronic device 2620 (S730). 'Public_ip1' is the public IP address of the first electronic device 2610. The second electronic device 2620 receives the connection response signal and acquires the address of the first electronic device 2610 using the connection response signal.

[0193] The first electronic device 2610 transmits a connection set-up signal to the second electronic device 2620 using the IP address 'public-ip2' (S735). The second electronic device 2620 receives the connection set-up signal.

[0194] The second electronic device 2620 transmits a connection response signal with respect to the connection set-up signal to the first electronic device 2610 using the IP address 'public_ip1' (S740). The first electronic device 2610 receives the connection response signal. With Step S735 and Step S740, communication between the first electronic device 2610 and the second electronic device 2620 is initialized. The connection response signal may include a particular port number, and the second electronic device 2620 may open a port corresponding to the particular port number.

[0195] The first electronic device 2610 transmits a human channel request signal to the second electronic device 2620 in response to the received connection response signal (S745). The second electronic device 2620 receives the human channel request signal. The human channel request signal may be transmitted to a port corresponding to the port number included in the connection response signal.

[0196] The second electronic device 2620 transmits a response signal with respect to the received human channel request signal to the first electronic device 2610 (S750).

[0197] The response signal may include content of a human channel or a content list of a human channel. The first electronic device 2610 receives the response signal. The first electronic device 2610 may display content when the content is transmitted as the response signal, or may display a content list when the content list is transmitted as the response signal.

[0198] Figure 27 is a diagram illustrating a screen on which one exemplary embodiment of a GUI for setting up a human channel is displayed.

[0199] Referring to Figure 27, the display 302 may display a GUI 2700. If the controller 340 detects a user action for setting up a human channel in a state in which the Web page 400 is displayed, the controller 340 may control displaying the GUI 2700 in response to the detected user action. In some embodiments, the controller 340 may control displaying the GUI 2700 after the Web page 400 is received.

[0200] The GUI 2700 includes a channel number region 2710 including at least one channel number and a human channel region 2720 including at least one human address. In one example, the Web page 400 illustrated in Figure 4 may be displayed on the human channel region 2720, and the GUI 610 illustrated in Figure 6 may be displayed on the channel number region 2710.

[0201] The user may drag each human address 411, 412 or 413 to the channel number region 2710 on the GUI 2700 and drop the dragged human address onto one of the channel numbers listed on the channel number region 2710. The human address 411, 412, and 413 may be represented by an icon, or another appropriate type of selectable object. The icon may have an image associated with the individual. Then, the controller 340 may store the channel number onto which the human address was dropped, the dropped human address and information associating the channel number and human address with each other in a human channel map. The human channel map may be the human channel map 1210 in Figure 12, or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0202] Figure 28 is a diagram illustrating a screen in a state in which a human address is being dragged on the displayed GUI of Figure 27.

[0203] Referring to Figure 28, an image 2810 represents a state in which the human address 411 is being dragged. If the image 2810 drops onto a channel number '60', the human address 411, the channel number '60' and information associating the human address 411 and the channel number '60' with each other may be stored in the human channel map.

[0204] Figure 29 is a diagram illustrating a screen on which another exemplary embodiment of a GUI for setting up a human channel is displayed.

[0205] Referring to Figure 29, the display 302 may display a GUI 2900. If the controller 340 detects a user action for setting up a human channel, the controller 340 may control display of the GUI 2900 in response to the detected user action. The user action is, for example, a user action for selecting the menu item 810 illustrated in Figure 8, or a user action for selecting a separate channel set-up menu item.

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[0206] The GUI 2900 includes a channel number region 2910 including at least one channel number and a human channel region 2920 including at least one human address. The GUI 1110 illustrated in Figure 11 may be displayed on the human channel region 2920 and the GUI 610 illustrated in Figure 6 may be displayed on the channel number region 2910.

[0207] The user may drag each human address "user99@TV.com', 'user91@TV.com', 'user23@TV.com', etc., to the channel number region 2910 on the GUI 2900 and drop the dragged human address onto one of the channel numbers listed on the channel number region 2910. Then, the controller 340 may store the channel number to which the human address was dropped, the dropped human address and information associating the channel number and the human address with each other in a human channel map. The human channel map may be the human channel map 1210 in Figure 12, or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0208] Figure 30 is a diagram illustrating a screen in a state in which a human address is being dragged on the displayed GUI of Figure 29.

[0209] Referring to Figure 30, an image 3010 represents a state in which the human address 'user91@TV.com' is being dragged. If the image 3010 is dragged onto the channel number '60', the human address 'user91@TV.com', the channel number '60' and information associating the human address 'user91@TV.com' and the channel number '60' with each other may be stored in the human channel map.

[0210] Figure 31 is a diagram illustrating a screen on which an exemplary embodiment of a GUI for setting up a channel is displayed.

[0211] Referring to Figure 31, the display 302 may display a GUI 3100. If the controller 340 detects a user action for setting up a channel, the controller 340 may control displaying the GUI 3100 in response to the detected user action. The user action is, for example, the user action for selecting the menu item 810 illustrated in Figure 8, the user action for selecting the menu item 513 or the menu item 515 illustrated in Figure 5, a user action for selecting a channel set-up menu item, or the like, which may be configured to display the GUI 3100.

[0212] The GUI 3100 includes a broadcast channel region 3110 including at least one broadcast channel, a human channel region 3120 including at least one human address and an App channel region 3130 including at least one App channel. The broadcast channel refers to a channel for providing real-time broadcasting received through a satellite, a terrestrial broadcast system or an IP network. The App channel may refer to a content provider or a service provider connectable through an IP network, or may refer to a channel for providing data reception/transmission with the content provider or the service provider. Also, the App channel may refer to a channel capable of receiving an Internet service provided by the content provider or the service provider. The Internet service refers to a Content on Demand (CoD) service, a YouTube service, an information service for providing weather, news and local information and enabling information retrieval and the like, an entertainment service related to gaming, singing and the like, a communication service related to TV mail and TV SMS services and the like, and other Internet services including an application providing service and the like.

[0213] The broadcast channel region 3110 lists broadcast channels, such as 'NBC', 'FOX', 'CNN', 'SBS', 'KBS' and 'OCN'. The human channel region 3120 lists human addresses, such as 'Marek Foss', 'Ellisabeth Daveine' and 'Anne'. The App channel region 3130 lists App channels, such as 'Farmville', 'Chess', 'Angry birds' and 'Unblock Me'.

[0214] The GUI 3100 further includes a channel number region 3140, a next channel call button 3150 and a cancel button 3160. The channel number region 3140 serves to indicate a particular channel number, and the next channel call button 3150 serves to switch the channel number indicated on the channel number region 3140 to another channel number. The cancel button 3160 serves to cancel a user action implemented on the GUI 3100.

[0215] The user may drag each human address 'Marek Foss', 'Ellisabeth Daveine' or 'Anne' to the channel number region 3140 on the GUI 3100 and may drop the dragged human address onto the channel number region 3140. Then, the controller 340 may store the channel number indicated on the channel number region 3140, the dropped human address and information associating the channel number and the human address with each other in a human channel map. The human channel map may be the human channel map 1210 in Figure 12, or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0216] Also, the user may drag each broadcast channel 'NBC', 'FOX', 'CNN', 'SBS', 'KBS' or 'OCN' to the channel number region 3140 on the GUI 3100 and may drop the dragged broadcast channel onto the channel number region 3140. Then, the controller 340 may store the channel number indicated on the channel number region 3140, the dropped broadcast channel and information associating the channel number and the broadcast channel with each other in a broadcast channel map. The broadcast channel map refers to a channel map in which the broadcast channel and the channel number are stored in association with each other.

[0217] The user may also drag each App channel 'Farmville', 'Chess', 'Angry bird' or 'Unblock Me' to the channel number region 3140 on the GUI 3100 and may drop the dragged App channel onto the channel number region 3140.

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Then, the controller 340 may store the channel number indicated on the channel number region 3140, the dropped App channel and information associating the channel number and the App channel with each other in an App channel map. The App channel map refers to a channel map in which the App channel and the channel number are stored in association with each other.

[0218] Figure 32 is a diagram illustrating a screen in a state in which a human address is being dragged on the displayed GUI of Figure 31.

[0219] Referring to Figure 32, a screen 3200 displays an image 3125 on the GUI 3100. The image 3125 represents a state in which the human address 'Marek Foss' is being dragged. If the image 3125 drops onto the channel number region 3140, the human address 'Marek Foss', the channel number '100' and information associating the human address 'Marek Foss' and the channel number '100' with each other may be stored in the human channel map.

[0220] Figure 33 is a diagram illustrating a screen in a state in which a broadcast channel, a human address and an App channel are dropped onto the channel number region of the displayed GUI of Figure 31.

[0221] Referring to Figure 33, a screen 3300 displays images 3115, 3125 and 3135 dropped onto the channel number region 3140. The image 3115 and the image 3135 respectively represent a state in which the broadcast channel 'NBC' and the App channel 'Chess' were dropped. In this case, the broadcast channel, the human address and the App channel may be mapped to the same channel number. In other words, the same channel number may be assigned to a broadcast channel, a human channel and an App channel.

[0222] It should be appreciated that a particular channel number may be assigned multiple SNS accounts associated with a particular individual or multiple individuals. For example, an individual may have multiple SNS accounts, such as a facebook account and a twitter account, each represented by an image or icon in the human channel region 3120. In this case, the images or icons corresponding to each of the SNS accounts may be dragged into the channel number region 3140 and associated with the corresponding channel number (e.g., channel 100). Alternatively, the multiple SNS accounts for a particular individual may be assigned to different channels. In another embodiment, icons for multiple SNS accounts of different users (e.g., SNS accounts corresponding to Marek Foss and Anne) may be dropped in the channel number region 3140 and associated with a particular channel number (e.g., channel 100). In this case, the group of SNS addresses may be given a human address (or SNS identifier) that represents the group, for example, "family." The human address for the group may be associated with a particular channel number.

[0223] Figure 34A and Figure 34B are flowcharts illustrating an implementation procedure of a further exemplary embodiment for a method of constructing a channel map in accordance with the present disclosure.

[0224] Referring to Figure 34A and Figure 34B, the display 302 displays a GUI for setting up a channel (S800). The displayed GUI may be one of the GUI 2700 illustrated in Figure 27, the GUI 2900 illustrated in Figure 29 or the GUI 3100 illustrated in Figure 31.

[0225] The controller 340 detects a first user action for selecting a human address (S801). The first user action may be a user action for generating a down event (e.g., a selection) in a region at which the human address is located.

[0226] The controller 340 detects a second user action for requesting dragging (S802). The second user action may occur consecutively after the first user action. The second user action may be a user action for successively generating a dragging event. The controller 340 controls dragging the human address selected by the first user action.

[0227] The controller 340 detects a third user action for selecting a channel number (S803). The third user action may be a user action for generating a drop event in a region at which the channel number is located. The controller 340 controls dropping the dragged human address onto the region at which the channel number selected by the third user action is located, in response to the detected third user action.

[0228] The controller 340 confirms whether or not a human address associated with the selected channel number is present in a human channel map, in response to the detected third user action (S804). The human channel map may be the human channel map 1210 in Figure 12 or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0229] If the associated human address is present, the controller 304 deletes the associated human address, the selected channel number and information associating the associated human address and the selected channel number with each other from the human channel map (S805).

[0230] Then, the controller 340 stores the selected human address, the selected channel number and information associating the selected human address and the selected channel number with each other in the human channel map (S806).

[0231] The controller 340 detects a fourth user action for selecting a broadcast channel (S807). The fourth user action may be a user action for generating a down event in a region at which the broadcast channel is located.

[0232] The controller 340 detects a fifth user action for requesting dragging (S808). The fifth user action may occur consecutively after the fourth user action. The fifth user action may be a user action for successively generating a dragging event. The controller 340 controls dragging the broadcast channel selected by the fourth user action, in response to the detected fifth user action.

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[0233] The controller 340 detects a sixth user action for selecting a channel number (S809). The sixth user action may be a user action for generating a drop event in a region at which the channel number is located. The controller 340 controls dropping the dragged broadcast channel onto the region at which where the selected channel number is located, in response to the detected sixth user action.

[0234] The controller 340 confirms whether or not a broadcast channel associated with the selected channel number is present in a broadcast channel map, in response to the detected sixth user action (S810).

[0235] If the associated broadcast channel is present, the controller 304 deletes the associated broadcast channel, the selected channel number and information associating the associated broadcast channel and the selected channel number with each other from the broadcast channel map (S811).

[0236] Then, the controller 340 stores the selected broadcast channel, the selected channel number and information associating the selected broadcast channel and the selected channel number with each other in the broadcast channel map (S812).

[0237] The controller 340 detects a seventh user action for selecting an App channel (S813). The seventh user action may be a user action for generating a down event in a region at which the App channel is located.

[0238] The controller 340 detects an eighth user action for requesting dragging (S814). The eighth user action may occur consecutively after the seventh user action. The eighth user action may be a user action for successively generating a dragging event. The controller 340 controls dragging the App channel selected by the seventh user action, in response to the detected eighth user action.

[0239] The controller 340 detects a ninth user action for selecting a channel number (S815). The ninth user action may be a user action for generating a drop event in a region at which the channel number is located. The controller 340 controls dropping the dragged App channel onto the region at which the channel number selected by the ninth user action is present, in response to the detected ninth user action.

[0240] The controller 340 confirms whether or not an App channel associated with the selected channel number is present in an App channel map, in response to the detected ninth user action (S816).

[0241] If the associated App channel is present, the controller 304 deletes the associated App channel, the selected channel number and information associating the associated App channel and the selected channel number with each other from the App channel map (S817).

[0242] Then, the controller 340 stores the selected App channel, the selected channel number and information associating the selected App channel and the selected channel number with each other in the App channel map (S818).

[0243] Figure 35 is a diagram illustrating an exemplary embodiment of a broadcast screen on which a human channel map is displayed.

[0244] Referring to Figure 35, the display 302 may display a screen 3500. The screen 3500 displays a broadcast program 3510 of a broadcast channel and a human channel map. If the controller 340 detects a user action for requesting display of a human channel map in a state in which the broadcast program 3510 is displayed on the screen 3500, the controller 340 may control displaying a human channel map 3520 in response to the detected user action.

[0245] The human channel map 3520 displays a human address 3531 and a channel number 3533 associated with the human address 3531, which are stored in the human channel map 1210 of Figure 12. The human channel map 3520 also displays a broadcast channel 3535 that a person indicated by the human address 3531 is viewing, a broadcast program 3537 and display time information 3539 of the broadcast program 3537. A channel guiding signal (or a signal or message for identifying a channel), which includes at least one of the broadcast channel 3535, the broadcast program 3537 or the display time information 3539, may be received according to Step S310 of Figure 18. That is, instead of content, the channel guiding signal is received in Step S310.

[0246] In some embodiments, the channel guiding signal may be received from the server 10 illustrated in Figure 1.

[0247] The controller 340 may transmit a channel guiding signal, which includes at least one of the broadcast program 3510 which is being displayed, a broadcast channel which broadcasts the broadcast program 3510 or display time information of the broadcast program 3510, to an electronic device or a server. The channel guiding signal may be transmitted in a constant period or whenever a broadcast program being displayed is switched. The controller 340 may transmit the channel guiding signal to the electronic device or the server according to an access method associated with the channel numbers included in the human channel map. The server for receiving the channel guiding signal may be the server 10 illustrated in Figure 1. The human channel map may be the human channel map 1210 in Figure 12, or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0248] Figure 36 is a diagram illustrating an exemplary embodiment of a screen for invitation to view a channel.

[0249] Referring to Figure 36, the display 302 may display a GUI 3600. If the controller 340 detects a user action for requesting display of a human channel map while a broadcast program 3610 is being displayed on the screen 3600, the controller 340 may control displaying a human channel map 3620 in response to the detected user action.

[0250] The human channel map 3620 displays the human address 'Me' and the channel number '00' associated with

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the human address 'Me', which are stored in the human channel map 1210 of Figure 12.

[0251] The user may drag a broadcast program from an original display region 3610 thereof to the human channel map 3620 and then, may drop the dragged broadcast program 3630 onto a position at which a human channel 3622 is located. The controller 340 may control displaying an image 3630 representing the dragged broadcast program on the screen, in response to the user dragging action. The controller 340 also generates and controls transmitting a channel viewing request signal for requesting viewing of the broadcast program 3630 to an electronic device (e.g., a remote multi-functional display device) associated with the human channel 3622. The channel viewing request signal may be transmitted to the electronic device or the server according to an access method associated with the channel numbers included in the human channel map. The human channel map may be the human channel map 1210 in Figure 12, or may include the human channel map 1210, the first access information map 1230, the second access information map 1240, the third access information map 1250, the fourth access information map 1260 and the fifth access information map 1270 as illustrated in Figure 12.

[0252] In some embodiments, the controller 340 may control transmission of the signal for requesting viewing of the broadcast program 3630 to the server. The server may be the server 10 illustrated in Figure 1.

[0253] In some embodiments, when the image 3630 is located at the human channel, the controller 340 may control displaying a message 'User B' which represents a human address associated with the human channel.

[0254] In some embodiments, if the controller 340 detects a user action for selecting the broadcast program 3610 and a user action for selecting the channel number, the controller 340 controls transmitting a channel viewing request signal for requesting viewing of the broadcast program 3610 to an electronic device associated with the human channel indicated by the selected channel number, in response to the detected user action for selecting the channel number. The user action for selecting the broadcast program 3630 is, for example, touching a region where the broadcast program 3630 is displayed, pressing a predetermined button (e.g., a 'select' button) in a state in which an indicator is located at the region where the broadcast program 3630 is displayed, and pressing a predetermined button (e.g., a 'select' button) in a state in which the region where the broadcast program 3630 is displayed is focused. The user action for selecting the channel number is, for example, pressing a numeric key of a remote controller, touching the human channel listed in the human channel map 3620, pressing a predetermined button (e.g., a 'select' button) in a state in which an indicator is located at the human channel listed in the human channel map 3620, and pressing a predetermined button (e.g., a 'select' button) in a state in which the human channel listed in the human channel map 3620 is focused.

[0255] Figure 37 is a schematic diagram illustrating a configuration of another exemplary embodiment of a broadcast system in accordance with the present disclosure.

[0256] Referring to Figure 37, a broadcast system 3700 in accordance with the present disclosure may include the first server 10, the second server 20, the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130, the mobile terminal 140, a third digital TV 150 and a fourth digital TV 160. The first server 10, the second server 20, the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 respectively correspond to the first server 10, the second server 20, the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 and the mobile terminal 140 as described above with reference to Figure 1 and thus, a detailed description thereof is omitted. Even the third digital TV 150 and the fourth digital TV 160 correspond to the first digital TV 100 and thus, a detailed description thereof is omitted hereinafter.

[0257] The first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130, the mobile terminal 140, the third digital TV 150 and the fourth digital TV 160 may receive broadcast channels through different transmission media. The first digital TV 100 may receive broadcast channels through a satellite 3, the second digital TV 110 may receive broadcast channels through a terrestrial broadcast system 4, and the personal computer system 120 and the notebook computer 130 may receive broadcast channels through an IP network 5. Also, the mobile terminal 140 may receive broadcast channels through a Digital Multimedia Broadcasting (DMB) system 6, and the third digital TV 150 and the fourth digital TV 160 may receive broadcast channels through a cable 7.

[0258] The first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130, the mobile terminal 140, the third digital TV 150 and the fourth digital TV 160 may receive broadcast channels from different service providers respectively.

[0259] The first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130, the mobile terminal 140, the third digital TV 150 and the fourth digital TV 160 may receive broadcast channels from the same service provider, and kinds and range of broadcast channels transmitted from the service provider may be identical or different.

[0260] Even if the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130, the mobile terminal 140, the third digital TV 150 and the fourth digital TV 160 receive different kinds of broadcast services from different transmission media or service providers, the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130, the mobile terminal 140, the third digital TV 150 and the fourth digital TV 160 may search for a channel, which provides a broadcast program corresponding to the

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received channel viewing request signal, using Electronic Program Guide (EPG) data and information included in the received channel viewing request signal, and may receive the broadcast program through the channel.

[0261] Figure 38 is a diagram illustrating a configuration of an exemplary embodiment for a channel invitation packet.

[0262] Referring to Figure 38, the transmitted channel viewing request signal may have a format 3800. The packet 3800 may include a Details_of_user field, a Physical_channel_details field, a Service_Name field, a Service_ID field, a Channel_number field, an Event_Name field, an Event_ID field, a Transport_Stream_ID field, a Network_ID field, a ServiceProvider field, an Originating_medium field and an Originating_Country field.

[0263] The Details_of_user field includes detailed user information. Specifically, the Details_of_user field includes detailed information about a user who sends a channel viewing request signal.

[0264] The Physical_channel_details field includes detailed information about a physical channel which transmits a broadcast program requested to view.

[0265] The Service_Name field includes a service name of a broadcast program requested to view.

[0266] The Service_ID field includes a service ID of a broadcast program requested to view.

[0267] The Channel_number field includes a channel number of a broadcast program requested to view.

[0268] The Event_Name field includes an event name of a broadcast program requested to view.

[0269] The Event_ID field includes an event ID of a broadcast program requested to view.

[0270] The Transport_Stream_ID field includes a transport stream ID of a broadcast program requested to view.

[0271] The Network_ID field includes a network ID of a broadcast program requested to view.

[0272] The ServiceProvider field includes information about a service provider for providing a broadcast program requested to view.

[0273] The Originating_medium field includes information about a transmission medium for transmitting a broadcast program requested to view.

[0274] The Originating_Country field includes information about a nation or an area (e.g., geographical area or region) from which a broadcast program, requested to view, is transmitted.

[0275] Figure 39 is a diagram illustrating an exemplary embodiment of a screen displayed when invitation to view a channel is made.

[0276] Referring to Figure 39, the display 302 may display a screen 3900. The screen 3900 displays a broadcast program 3910 and a menu map 3920. The screen 3900 also displays a guidance message 3930, which indicates a broadcast channel included in a broadcast viewing request signal, and a message 3940 which indicates a user who sends a broadcast viewing request signal. The guidance message 3930 may be displayed as a message associated with a TV menu item 3922.

[0277] The controller 340 controls displaying the guidance message 3930 and the message 3940 when receiving the broadcast viewing request signal.

[0278] Figure 40 is a diagram illustrating one exemplary embodiment of a guidance message with regard to invitation to view a channel.

[0279] Referring to Figure 40, the display 302 may display a guidance message 4010. If a broadcast viewing request signal is transmitted to the controller 340, the controller 340 may generate the guidance message 4010 and control displaying the generated guidance message 4010. In some embodiments, if the controller 340 detects a user action for selecting the guidance message 3930 illustrated in Figure 39, the controller 340 may control displaying the guidance message 4010 in response to the detected user action.

[0280] The guidance message 4010 informs of a user A who sends a broadcast viewing request signal and makes inquiry about whether or not to view a requested broadcast program (e.g., a dance show on ESPN). The guidance message 4010 includes a 'Yes' button 4012 for accepting viewing and a 'No' button 4014 for rejecting viewing. In one embodiment, the guidance message 4010 may also display other users who are currently viewing the broadcast program or users who have been invited to view the broadcast program.

[0281] If the controller 340 detects a user action for accepting invitation to view a channel, the controller 340 controls displaying the requested broadcast program, in response to the detected user action. The user action may be a user action of pressing the button 4012.

[0282] If the controller 340 detects a user action for rejecting the invitation to view a channel, the controller 340 controls a screen 4000 to continuously display the broadcast program 3910. The user action may be a user action of pressing the button 4014.

[0283] Figure 41 is a diagram illustrating another exemplary embodiment of a guidance message with regard to invitation to view a channel.

[0284] Referring to Figure 41, the display 302 may display a message 4110. The controller 340 may control displaying the message 4110 when receiving a broadcast viewing request signal. In some embodiments, if the controller 340 detects a user action for selecting the guidance message 3930 illustrated in Figure 39, the controller 340 may control displaying the guidance message 4110 in response to the detected user action.

[0285] The guidance message 4110 informs of a user A who sends a broadcast viewing request signal and makes

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inquiry about whether or not to view a channel similar to a requested broadcast channel because the requested broadcast channel is not found. The guidance message 4110 includes a 'Yes' button 4112 for accepting viewing and a 'No' button 4114 for rejecting viewing.

[0286] If the controller 340 detects a user action for accepting invitation to view a channel, the controller 340 controls displaying a similar broadcast program, in response to the detected user action. The user action may be a user action of pressing the button 4112.

[0287] If the controller 340 detects a user action for rejecting invitation to view a channel, the controller 340 controls a screen 4100 to continuously display the broadcast program 3910. The user action may be a user action of pressing the button 4114.

[0288] Figure 42 is a diagram illustrating a further exemplary embodiment of a guidance message with regard to invitation to view a channel.

[0289] Referring to Figure 42, the display 302 may display a guidance message 4210. The controller 340 may control displaying a guidance message 4210 when receiving a broadcast viewing request signal. In some embodiments, if the controller 340 detects a user action for selecting the guidance message 3930 illustrated in Figure 39, the controller 340 may control displaying the guidance message 4210 in response to the detected user action.

[0290] The guidance message 4210 informs of a user A who sends a broadcast viewing request signal and also, informs that a channel, which is the same as or similar to a requested broadcast program, is not found. The guidance message 4210 includes an 'OK' button 4212.

[0291] If the controller 340 detects a user action for confirming that viewing of an invited channel is not possible, the controller 340 removes the guidance message 4210 from a screen 4200 in response to the detected user action and controls the screen 4200 to continuously display the broadcast program 3910. The user action may be a user action of pressing the button 4212.

[0292] Figures 43A and 43B are diagrams illustrating an exemplary embodiment of a screen displayed when invitation to view a channel is accepted.

[0293] Referring to Figures 43A and 43B, if Patrick accepts a viewing request of Susan, an electronic device of Susan may display a screen 4310 and an electronic device of Patrick may display a screen 4320. Patrick may accept the viewing request of Susan by pressing the button 4012 of the guidance message 4010 illustrated in Figure 40 or the button 4112 of the guidance message 4110 illustrated in Figure 41.

[0294] As Patrick accepts the viewing request, the electronic device of Patrick stops displaying the broadcast program 3910 and displays the broadcast program 3610 indicated by a broadcast viewing request signal. Thus, the electronic devices of Susan and Patrick display the same broadcast program 3610.

[0295] The screen 4310 displays a picture 4315 of Patrick who views the same broadcast, a chat input window 4318 and a chat window 4319. Susan may chat with Patrick using the chat input window 4318 and the chat window 4319.

[0296] The screen 4320 displays a picture 4325 of Susan who views the same broadcast, a chat input window 4328 and a chat window 4329. Patrick may chat with Susan using the chat input window 4328 and the chat window 4329.

[0297] Figure 44 is a diagram illustrating an exemplary embodiment of a channel matching table.

[0298] Referring to Figure 44, the server 10 may store a channel matching table 4400. The server 10 may match channels of electronic devices to each other using the channel matching table 4400. The server 10 matches a channel indicated by a broadcast viewing request signal to a channel which is receivable by an electronic device to which the broadcast viewing request signal is transmitted, using the channel matching table 4400.

[0299] A first electronic device receives a broadcast channel from a service provider 1 and a second electronic device receives a broadcast channel from a service provider 2. If the first electronic device transmits a channel viewing request signal for inviting a user to view a channel to a user of the second electronic device, the server 10 receives the channel viewing request signal and reads a channel 901 of the service provider 2, which matches to a channel 101 indicated by the channel viewing request signal, from the channel matching table 4400. The server 10 amends the channel viewing request signal so as to indicate the channel 901 and transmits the amended channel viewing request signal to the second electronic device.

[0300] If the channel viewing request signal has the format 3800 illustrated in Figure 38, the server 10 may confirm a service provider of the first electronic device based on information included in the ServiceProvider field. The server 10 may amend information, stored in the Physical_channel_detail field and in the Channel_number field, to detailed information (e.g., 11100 MHZ) about the physical channel 901 matching to the channel 101 indicated by the channel viewing request signal and the channel 901 respectively, and may transmit the amended channel viewing request signal to the second electronic device.

[0301] The channel matching table 4400 stores information in such a manner that the same channels of different service providers are associated with each other. If the channel 101 and the channel 202 of the service provider 1 are associated respectively with the channel 901 and the channel 345 of the service provider 2, the channel matching table 4400 may store the channel 910, the channel 101 and information associating the channels 101 and 910 with each other and also, may store the channel 202, the channel 345 and information associating the channels 202 and 234 with each

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other

[0302] The channel matching table 4400 may store the frequency of each channel. In one example, the channel matching table 4400 stores the frequency of the channel 101 of 10800 MHZ and the frequency of the channel 901 of 11100 MHZ. The channel matching table 4400 may be stored on the originating electronic device (inviter), the destination electronic device (invitee), and/or a server.

[0303] Figure 45 is a diagram illustrating an implementation procedure of one exemplary embodiment for a method of making invitation to view a channel in accordance with the present disclosure.

[0304] Referring to Figure 45, Steps S900 to S940 correspond to Steps S700 to S740 and thus, a description with respect to Steps S900 to S940 refers to Steps S700 to S740 and is omitted hereinafter.

[0305] A first electronic device 4510 transmits a broadcast viewing request signal to a second electronic device 4520 in response to the received connection response signal transmitted in Step S940 (S945). The second electronic device 4520 receives the broadcast viewing request signal. The broadcast viewing request signal may be transmitted to a port indicated by a port number included in the connection response signal. The broadcast viewing request signal may have the format 3800 illustrated in Figure 38.

[0306] The second electronic device 4520 transmits a response signal with respect to the broadcast viewing request signal to the first electronic device 4510 in response to the received broadcast viewing request signal (S950). The first electronic device 4510 receives the response signal. The response signal may be one of a viewing acceptance signal, a viewing not possible signal and a viewing rejection signal.

[0307] The electronic device 4510 and the electronic device 4520 may receive broadcast services from the same service provider or different service providers. Even when the electronic devices 4510 and 4520 receive broadcast services from the same service provider, the electronic devices 4510 and 4520 may receive different kinds of broadcast services and broadcast channels. The electronic device 4520 may confirm whether or not it receives a broadcast service from the same service provider as that in the first electronic device 4510 using information about the service provider included in the broadcast viewing request signal and EPG data. The electronic device 4520 may also confirm that it can receive a viewing requested channel using EPG data and at least one of detailed information about physical channels, service names, service IDs, channel numbers, event names, transport stream IDs or network IDs included in the broadcast viewing request signal.

[0308] If it is confirmed that the electronic device 4520 receives broadcast services from the same service provider as that in the electronic device 4510, but cannot receive a viewing requested channel from the service provider, the electronic device 4520 may search for and display a similar channel using EPG data and at least one of detailed information about physical channels, service names, service IDs, channel numbers, event names, transport stream IDs or network IDs included in the broadcast viewing request signal.

[0309] If the electronic device 4520 and the electronic device 4510 receive broadcast services from different service providers, the electronic device 4520 searches for a channel, which is the same as or similar to a viewing requested channel, from among channels provided by other service providers, based on EPG data and at least one of detailed information about physical channels, service names, service IDs, channel numbers, event names, transport stream IDs, network IDs, nation information or local information included in the channel viewing request signal. The electronic device 4520 may display the located channel. The electronic device 4520 may display one of the guidance message 4010, the guidance message 4110 and the guidance message 4210 based on the search results.

[0310] The electronic device 4520 and the electronic device 4510 may receive broadcast services from different transmission media. The electronic device 4520 may confirm this kind of reception using information about a transmission medium included in a broadcast viewing request signal. If it is confirmed that the electronic device 4520 and the electronic device 4510 receive broadcast services from different transmission media, the electronic device 4520 searches for a channel, which is the same as or similar to a viewing requested channel, from among channels provided by other service providers, based on EPG data and at least one of detailed information about physical channels, service names, service IDs, channel numbers, event names, transport stream IDs, network IDs, nation information or local information included in the channel viewing request signal. The electronic device 4520 may display the located channel. The electronic device 4520 may display one of the guidance message 4010, the guidance message 4110 and the guidance message 4210 based on the search results.

[0311] If the response signal is a viewing acceptance signal, the first electronic device 4510 may display a screen on which a chat window and a chat input window are displayed, and the second electronic device 4520 may display a screen on which a chat window and a chat input window are displayed. The screen displayed by the first electronic device 4510 may be the screen 4310 and the screen displayed by the second electronic device 4520 may be the screen 4320.

[0312] If the response signal is a viewing not possible signal, the first electronic device 4510 may transmit a broadcast program invited to view to the second electronic device 4520.

[0313] Figure 46 is a flowchart illustrating an implement procedure of another exemplary embodiment for a method of making invitation to view a channel in accordance with the present disclosure.

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[0314] Referring to Figure 46, the display 302 displays a human channel map (S1000). The human channel map may be the human channel map 3520 illustrated in Figure 35 or the human channel map 3620 illustrated in Figure 36.

[0315] The external signal input unit 325 receives a signal for requesting channel switch (S1010). The controller 340 detects the received channel switch request signal. The channel switch request signal may be generated when the user performs an action of pressing a predetermined key of a remote controller, or may be a video signal with regard to a spatial gesture for requesting channel switch.

[0316] The controller 340 controls a screen to display content of a requested channel in response to the detected channel switch request signal (S1020). The channel may be a broadcast channel, a human channel or an App channel. The screen may be the screen 1600 illustrated in Figure 16 or the screen 3500 illustrated in Figure 35.

[0317] The controller 304 detects a user action for requesting invitation to view a channel (S1030). The user action is, for example, an action of dragging a screen on which content is displayed and dropping the dragged screen onto a human channel listed in a human channel map. In one example, the controller 340 may drag the image 3630 illustrated in Figure 36 to the human channel '43' and may detect a user action for requesting invitation to view the human channel '43' when the image 3630 drops onto the human channel '43'. In another example, the user action may be a combination of a user action for selecting a displayed broadcast program and a user action for selecting a human channel (or a channel number).

[0318] The controller 340 transmits a channel viewing request signal in response to the detected user action (S1040). The channel viewing request signal may have the format 3800 illustrated in Figure 38.

[0319] In some embodiments, the controller 340 may control transmitting the channel viewing request signal to the electronic device which provides the human channel indicated by the channel number designated by the user action in Step S1030. The address of the electronic device may be acquired by the above described method as illustrated in Figures 19 to 21.

[0320] In some embodiments, the controller 340 may control transmitting the channel viewing request signal to a server. The server may be the server 10 illustrated in Figure 1.

[0321] The controller 340 receives a response signal with respect to the transmitted channel viewing request signal (S1050). The response signal may be one of a viewing acceptance signal, a viewing not possible signal and a viewing rejection signal.

[0322] If the response signal is a viewing acceptance signal, the controller 340 may display a screen on which a chat window and a chat input window are displayed. The screen may be the screen 4310 illustrated in Figures 43A and 43B.

[0323] If the response signal is a viewing not possible signal, the controller 340 may transmit a broadcast program invited to view to the electronic device which provides the human channel indicated by the channel number designated by the user action in Step S1030.

[0324] Figure 47 is a flowchart illustrating an implement procedure of an exemplary embodiment for a method of processing invitation to view a channel in accordance with the present disclosure.

[0325] Referring to Figure 47, the display 302 displays a broadcast program (S1100).

[0326] The network interface 302 receives a channel viewing request signal (S1110). The controller 340 generates a guidance message with regard to invitation to view a channel using information included in the received channel viewing request signal. The generated guidance message may be the message 3930 and the message 3940 illustrated in Figure 39, the guidance message 4010 illustrated in Figure 40, the guidance message 4110 illustrated in Figure 41, or the guidance message 4210 illustrated in Figure 42.

[0327] The controller 340 may confirm whether or not it can receive a viewing requested channel using information included in the channel viewing request signal. The controller 340 may confirm whether or not it can receive a viewing requested channel from a service provider using stored EPG data and information about the service provider included in the channel viewing request signal. The controller 340 generates a guidance message 4010 when it can receive the viewing requested channel from the service provider.

[0328] Even when the electronic device 300 can receive a broadcast service from a service provider indicated by the channel viewing request signal, the electronic device 300 may fail to receive the viewing requested channel from the service provider according to terms of a contract with the service provider. If this failure to receive the channel is confirmed, the controller 340 may search for a similar channel using EPG data and at least one of detailed information about physical channels, service names, service IDs, channel numbers, event names, transport stream IDs or network IDs included in the channel viewing request signal. If the electronic device 300 succeeds in searching for the similar channel, the controller 340 may generate the guidance message 4110 and if not, may generate the guidance message 4210.

[0329] If the controller 340 cannot receive the viewing requested channel from the service provider, the controller 304 confirms whether or not the viewing requested channel is receivable from another service provider. The controller 340 searches for the same channel as the viewing requested channel from among channels provided by another service provider based on EPG data and at least one of detailed information about physical channels, service names, service IDs, channel numbers, event names, transport stream IDs or network IDs included in the channel viewing request signal. If the channel is found, the controller 340 may generate the guidance message 4010. If the same channel is not found,

but a similar channel is found, the controller 340 may generate the guidance message 4110. If the same channel and the similar channel are not found, the controller 340 may generate the guidance message 4210. Here, another service provider may be a service provider which provides a broadcast service to the electronic device 300.

[0330] The controller 340 may confirm whether or not it can receive the viewing requested channel, using information about a transmission medium included in the channel viewing request signal. If the controller 340 receives a broadcast service from a transmission medium different from that indicated by the channel viewing request signal, the controller 340 searches for the same channel as the viewing requested channel from among channels provided by the different transmission medium, based on EPG data and at least one of detailed information about physical channels, service names, service IDs, channel numbers, event names, transport stream IDs or network IDs included in the channel viewing request signal. If the same channel is found, the controller 340 may generate the guidance message 4010. If the same channel is not found, but a similar channel is found, the controller 340 may generate the guidance message 4110. If the same channel and the similar channel are not found, the controller 340 may generate the guidance message 4210.

[0331] The display 302 displays the guidance message generated in Step S1110 on a screen (S1120). The screen may be one of the screen 3900, the screen 4000, the screen 4100 and the screen 4200 as illustrated in Figures 39 to 42. After the display 302 displays the screen 3900, one of the screen 4000, the screen 4100 and the screen 4200 may be displayed under control of the controller 340. If the controller 340 detects a user action for selecting the message 3930 in a state in which the screen 3900 is displayed, the controller 340 may control displaying one of the screen 4000, the screen 4100 and the screen 4200.

[0332] The controller 340 confirms whether or not a user action for accepting invitation to view a channel is detected (S1130). The controller 340 may detect a user action for rejecting invitation to view a channel and also, may detect a user action for confirming that viewing of an invited channel is not possible. The user actions may be performed according to the above described method as illustrated in Figures 40 to 42.

[0333] The controller 340 controls displaying content of a channel indicated by the channel viewing request signal in response to the detected user action for accepting invitation to view the channel (S1140). If the guidance message 4110 is displayed in Step S1120, the controller 340 controls displaying content of a channel similar to the channel indicated by the channel viewing request signal.

[0334] The controller 340 controls transmitting a response signal with respect to the channel viewing request signal to the electronic device which transmits the channel viewing request signal (S1150). The response signal may include a viewing acceptance signal, a viewing not possible signal or a viewing rejection signal. The controller 340 transmits the viewing acceptance signal when detecting a user action for accepting invitation to view a channel, the viewing rejection signal when detecting a user action for rejecting invitation to view a channel, and the viewing not possible signal when detecting a user action confirming that viewing of a channel is not possible.

[0335] When the viewing not possible signal is transmitted, the electronic device, which transmits the channel viewing request signal, may directly transmit the viewing requested broadcast program to the network interface 320. The controller 340 may control displaying the broadcast program received by the network interface 320.

[0336] Figure 48 is a diagram illustrating an embodiment of a screen on which content is displayed, Figure 49 is a diagram illustrating one embodiment of a screen on which content is displayed in a simultaneous viewing mode, and Figure 50 is a diagram illustrating another embodiment of a screen on which content is displayed in a simultaneous viewing mode.

[0337] Referring to Figures 48 to 50, the display 302 may display a screen 4800. The screen 4800 displays content.

[0338] If the controller 340 detects a user action for requesting display of content, the controller 340 may control displaying the screen 4800 in response to the detected user action. Also, if the controller 340 detects a user action for requesting a simultaneous viewing mode during display of the screen 4800, the controller 340 may control display of a screen 4900 or a screen 5000. The controller 340 may convert the screen 4900 to the screen 5000 or convert the screen 5000 to the screen 4900 according to a user action for requesting mode conversion.

[0339] The screen 4900 includes a content display region 4910 and a chat region 4920. The content display region 4910 displays content of the screen 4800, and the chat region 4920 includes a chat window 4930 and a chat input window 4940. The chat window 4930 shows a chat partner 4931 and a chat phrase 4932 input by a chat partner. The user can input a chat phrase into the chat input window 4940.

[0340] The screen 5000 may include a content display region 5010, a chat input window 5020, silhouette selecting marks 5021 to 5028, and silhouettes 5031, 5033, 5035 and 5037. The silhouettes 5031, 5033, 5035 and 5037 respectively represent chat partners. The silhouette 5031 represents a chat partner 'Arry', the silhouette 5033 represents a chat partner 'David', the silhouette 5035 represents the user who is in charge of the chat, and the silhouette 5037 represents a chat partner 'Susan'. A chat phrase may be displayed at a location associated with the user or the chat partner who inputs the chat phrase. For example, if the chat partner 'David' inputs a chat phrase 5043, the chat phrase 5043 is displayed at a location associated with the silhouette 5033 of 'David'.

[0341] If the controller 340 detects a user action for selecting one of the silhouette selecting marks 5021 to 5028, the controller 340 controls display of the silhouette 5035 of the user in response to the detected user action such that the

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silhouette 5035 is converted to a silhouette image associated with the selected silhouette selecting mark. Additionally, the controller 340 may transmit a signal to request conversion to the silhouette image to the server 10, the server 20, or other electronic devices.

[0342] A human channel owner who is viewing the same content may be determined as a chat partner. More particularly, the human channel owner who is viewing the same content as that displayed on the screen 4800 may be automatically determined as a chat partner. In some embodiments, the controller 340 may confirm the owner based on information included in the above described channel guiding signal of Figure 35.

[0343] In some embodiments, the controller 340 may receive an owner list, including the human channel owner who is viewing the same content, from the server 10 and confirm the owner via the received owner list.

[0344] Figure 51 is a diagram illustrating a further embodiment of a screen on which content is displayed in a simultaneous viewing mode.

[0345] Referring to Figure 51, silhouettes 5110, 5120, 5130, 5140 and 5150 may be displayed as 3D images having a particular depth value 5160. More particularly, the silhouettes 5031, 5033, 5035 and 5037 of Figure 50 may be respectively displayed as the 3D images 5110, 5120, 5130 and 5140.

[0346] Figure 52 is a diagram explaining an embodiment of a method for confirming viewing of the same content.

[0347] Referring to Figure 52, a controller of an electronic device 5210 may control transmission of an image frame request signal 5221 to an electronic device 5250. The electronic device 5250 may be an electronic device associated with a human channel included in a human channel map that is stored in the electronic device 5210. The image frame request signal 5211 may be transmitted to the electronic device or the server according to a connection method associated with a channel number included in the human channel map.

[0348] The image frame request signal 5211 may be a signal to request that an image frame be displayed for a particular period of time M starting from a particular time T. The electronic device 5250 receives the image frame request signal 5211 and acquires an image frame 5253 to be displayed for a particular period of time M starting from a particular time T according to the received image frame request signal 5211. The controller of the electronic device 5210 controls acquisition of an image frame 5213 to be displayed for a particular period of time M starting from a particular time T.

[0349] The electronic device 5250 transmits an image frame transmission signal 5255 to the electronic device 5210. The image frame transmission signal 5255 includes the image frame 5253.

[0350] The electronic device 5210 receives the transmitted image frame transmission signal 5255 and executes a comparison algorithm 5215 to confirm whether or not the image frame 5253 included in the received image frame transmission signal 5255 is equal to the image frame 5213. If the two image frames are equal to each other, the controller of the electronic device 5210 confirms that an owner of a human channel associated with the electronic device 5210 is viewing the same content. If the two image frames are not equal to each other, the controller of the electronic device 5210 can confirm that the owner is not viewing the same content. The comparison algorithm 5215 can confirm the equality of image frames in sequence starting from a particular time T. In this case, if the image frames have different resolutions, confirmation of the equality may be performed after equalizing the resolutions of the image frame 5213 and the image frame 5253.

[0351] With the method for confirming viewing of the same content as described in relation to Figure 52, a controller of one electronic device can confirm whether or not content displayed thereon is equal to content displayed on another electronic device, irrespective of different service providers and transmission media.

[0352] Figure 53 is a diagram explaining a method for detecting user emotions.

[0353] Referring to Figure 53, while a viewer 5301 is viewing content 5300, the image capture device 301 may capture an image of the viewer 5301.

[0354] The controller 340 detects a face zone from the captured image frame of the viewer 5301 output by the image capture device 301. Then, the controller 340 confirms the emotions of the viewer 5301 based on the detected face zone. The controller 340 may produce emotion data indicating the confirmed emotions and then, control transmission of the produced emotion data to an electronic device of a chat partner.

[0355] The image capture device 301 may capture the image of the viewer 5301 at a preset interval. The controller 340 may confirm the emotions of the viewer 5301 at the preset interval and then, produce emotion data if emotion change occurs, thereby controlling transmission of the emotion data to the electronic device of the chat partner.

[0356] Figure 54 is a diagram illustrating the contour of a silhouette mapped to user emotions.

[0357] Referring to Figure 54, the storage unit 345 may store the contour of a silhouette associated with particular emotions. For example, the storage unit 345 may store the contour of a silhouette 5410 associated with sadness, the contour of a silhouette 5420 associated with anger, and the contour of a silhouette 5430 associated with happiness.

[0358] Figure 55 is a diagram illustrating an embodiment of a screen on which different silhouettes depending on user emotions are displayed.

[0359] Referring to Figure 55, the controller 340 may acquire the contour of a silhouette associated with the confirmed emotions from the storage unit 345 and control display of a silhouette of an owner of the electronic device 300 such that the silhouette is converted to the acquired contour of a silhouette. Also, the controller 340 may acquire the contour of a

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silhouette, associated with emotions indicated by emotion data transmitted from the electronic device of the chat partner, from the storage unit 345 and control display of a silhouette of the chat partner such that the silhouette is converted to the acquired contour of a silhouette.

[0360] In one example, if it is confirmed that the owner of the electronic device 300 is angry, the controller 340 controls display of a silhouette 5520. If the controller 340 receives emotion data indicating sadness from an electronic device of a first chat partner, the controller 340 controls display of a silhouette of the first chat partner as a silhouette 5510. In addition, if the controller 340 receives emotion data indicating happiness from an electronic device of a second chat partner, the controller 340 controls display of a silhouette of the second chat partner as a silhouette 5530.

[0361] Figure 56 is a diagram explaining a procedure for registering a facial image, and Figure 57 is a diagram explaining a procedure for training a facial image.

[0362] Referring to Figures 56 and 57, the electronic device 300 may receive a user facial image 5620 on a per emotion basis registered by a user 5610. In one example, the electronic device 300 may receive an angry facial image 5710, a sad facial image 5720 and a happy facial image 5730, which are registered by the user 5610. The storage unit 345 may store the respective registered facial images 5710, 5720 and 5730 on a per emotion basis.

[0363] The controller 340 may compare the facial images on a per emotion basis stored in the storage unit 345 with a facial image 5740 detected from an image frame of a viewer which is captured while the viewer is viewing content and then, confirm one of the stored facial images that is most similar to the facial image 5740. The controller 340 may confirm the emotions of the confirmed facial image as the emotions of the viewer. Also, the controller 340 may store the facial image 5740 as a facial image having the confirmed emotions in the storage unit 345. In one example, if it is confirmed that the facial image 5740 is most similar to the facial image 5710, the controller 340 may add the facial image 5740 as an angry emotional facial image, similar to the facial image 5710, to the storage unit 345. With such addition of the facial image, the electronic device 300 can more accurately confirm the emotions of the viewer.

[0364] Figure 58 is a diagram explaining a method for detecting a user motion.

[0365] Referring to Figure 58, while a viewer 5801 is viewing content 5800, the image capture device 301 may capture an image of the viewer 5801.

[0366] The controller 340 detects a user motion 5810 from a captured image frame of the viewer 5801 output by the image capture device 301. Then, the controller 340 may produce motion data indicating the confirmed motion 5810 and then, control transmission of the produced motion data to the electronic device of the chat partner.

[0367] The image capture device 301 may capture the image of the viewer 5801 at a preset interval. The controller 340 may confirm the motion of the viewer 5301 at the preset interval and then, produce motion data if motion change occurs, thereby controlling transmission of the motion data to the electronic device of the chat partner.

[0368] The controller 340 may control display of a silhouette of the owner of the electronic device 300 such that the silhouette represents the confirmed motion 5810. Also, the controller 340 may control display of a silhouette of the chat partner such that the silhouette is converted to the contour of a silhouette representing a motion indicated by the motion data transmitted from the electronic device of the chat partner.

[0369] Figures 59A to 59D are diagrams explaining a method for reflecting a screen effect on content.

[0370] Referring to Figures 59A to 59D, a screen effect window 5910 may be displayed on a screen 5900. The screen effect window 5910 may include one or more screen effect selecting regions 5911, 5912 and 5913. The user may perform a user action for selecting one of the screen effect selecting regions 5911, 5912 and 5913, and the controller 340 may detect the user action as a user action for requesting a screen effect. The controller 340 may detect the user action for requesting a screen effect, produce screen effect data indicating the screen effect in response to the detected user action, and control transmission of the produced effect data to the electronic device of the chat partner. In one example, if the user performs a user action 5920 for selecting the screen effect selecting region 5911, the controller 340 may produce screen effect data indicating a screen effect of the screen effect selecting region 5911 and then, control transmission of the produced screen effect data to the electronic device of the chat partner.

[0371] In addition, if the user performs the user action 5920 for selecting the screen effect selecting region 5911, the controller 340 controls display of a mark 5930 indicating that the screen effect selecting region 5911 is selected and then, controls reflection of a screen effect 5940 of the screen effect selecting region 5911 on the displayed content 5900. Here, a position of the screen effect 5940 may be selected as the user clicks a corresponding region.

[0372] If the controller 340 receives the screen effect data from the electronic device of the chat partner, the controller 340 may control reflecting an effect indicated by the received screen effect data on the displayed content 5900.

[0373] The controller 340 may control the video decoder 330 to change pixel data of the image frame according to the screen effect. Additionally, the controller 340 may produce On Screen Display (OSD) according to the screen effect, thereby controlling display of the OSD on a content display region.

[0374] Figure 60 is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for remotely viewing content at the same time.

[0375] Referring to Figure 60, the controller 340 detects a user action for requesting display of content (S1200).

[0376] The controller 340 confirms whether or not a viewing mode is a simultaneous viewing mode in response to the

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detected user action (S1210). The simultaneous viewing mode may be setup by initial values, or may be setup by the user as necessary.

[0377] If the viewing mode is the simultaneous viewing mode, the controller 340 confirms the presence of a human channel owner who is viewing the requested content (S1220). Here, Step S1220 may include an implementation procedure of a method for confirming viewing of the same content that will be described hereinafter with reference to Figure 64 or 65.

[0378] The controller 340 controls display of content in the simultaneous viewing mode (S1230). The display 302 may display one of the screen 4900, the screen 5000 and the screen 5100. The screen 4900, the screen 5000 and the screen 5100 may represent the owner confirmed in Step S1220 as a chat partner. That is, the owner confirmed in Step S1220 becomes a chat partner.

[0379] If the viewing mode is not the simultaneous viewing mode, the controller 340 controls display of the requested content (S1240). The display 302 may display the screen 4800.

[0380] The method for remotely viewing content at the same time of Figure 60 may further include an implementation procedure of a method that will be described hereinafter with reference to Figures 67 to 70.

[0381] Figure 61 is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for remotely viewing content at the same time.

[0382] Referring to Figure 61, the display 302 displays content (S1300). The display 302 may display the screen 4800.

[0383] The controller 340 detects a user action for requesting a simultaneous viewing mode (S1310).

[0384] The controller 340 confirms the presence of a human channel owner who is viewing the displayed content in response to the detected user action (S1320). Here, Step S1320 may include the implementation procedure of the method for confirming viewing of the same content that will be described hereinafter with reference to Figure 64 or 65.

[0385] The controller 340 controls display of content in the simultaneous viewing mode (S1330). The display 302 may display one of the screen 4900, the screen 5000 and the screen 5100. The screen 4900, the screen 5000 and the screen 5100 may represent the owner confirmed in Step S1320 as a chat partner. That is, the owner confirmed in Step S1320 becomes a chat partner.

[0386] The method for remotely viewing content at the same time of Figure 61 may further include the implementation procedure of the method that will be described hereinafter with reference to Figures 67 to 70.

[0387] Figure 62 is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for remotely viewing content at the same time.

[0388] Referring to Figure 62, the display 302 displays content (S1400). The display 302 may display the screen 4800.

[0389] The controller 340 confirms the presence of a human channel owner who is viewing the displayed content (S1410). Here, Step S1410 may include the implementation procedure of the method for confirming viewing of the same content that will be described hereinafter with reference to Figure 64 or 65.

[0390] The controller 340 detects a user action for requesting a simultaneous viewing mode (S1420).

[0391] The controller 340 controls display of content in the simultaneous viewing mode in response to the detected user action (S1430). The display 302 may display one of the screen 4900, the screen 5000 and the screen 5100. The screen 4900, the screen 5000 and the screen 5100 may represent the owner confirmed in Step S1410 as a chat partner. That is, the owner confirmed in Step S1410 becomes a chat partner.

[0392] The method for remotely viewing content at the same time of Figure 62 may further include the implementation procedure of the method that will be illustrated hereinafter with reference to Figures 67 to 70.

[0393] Figure 63 is a flowchart illustrating an implementation procedure of a further exemplary embodiment in relation to a method for remotely viewing content at the same time.

[0394] Referring to Figure 63, the display 302 displays content (S1500). The display 302 may display the screen 1600, the screen 3500, or the screen 4800.

[0395] The controller 340 detects a user action for requesting invitation to view a channel (S1510). In one example, the user action may be an action for dragging a screen on which content is displayed and dropping the content to a human channel listed in a human channel map. More particularly, the controller 340 may detect the user action for requesting invitation to view a channel if the image 3630 illustrated in Figure 36 is dragged to and drops onto the human channel number '43'. In another example, the user action may be a combination of a user action for selecting a displayed broadcast program and a user action for selecting a human channel (or a channel number).

[0396] The controller 340 controls transmission of a channel viewing request signal in response to the detected user action (S1520). The channel viewing request signal may have the format 3800 illustrated in Figure 38.

[0397] In some embodiments, the controller 340 may control transmission of the channel viewing request signal to the electronic device which provides the human channel indicated by the channel number designated by the user action in Step S1510. An address of the electronic device may be acquired by the above described method of Figures 19 to 21.

[0398] In some embodiments, the controller 340 may control transmission of the channel viewing request signal to the server. The server may be the server 10 illustrated in Figure 1.

[0399] The network interface 320 receives a response signal with respect to the channel viewing request signal

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(S1530). The response signal may be one of a viewing acceptance signal, a viewing not possible signal and a viewing rejection signal.

[0400] If the response signal is a viewing acceptance signal, the controller 340 controls display of content in the simultaneous viewing mode (S1540). The display 302 may display one of the screen 4900, the screen 5000 and the screen 5100. Also, the screen 4900, the screen 5000 and the screen 5100 may represent an owner of a human channel associated with the electronic device which has transmitted the viewing acceptance signal. The owner becomes a chat partner.

[0401] The method for remotely viewing content at the same time of Figure 63 may further include the implementation procedure of the method that will be described hereinafter with reference to Figures 67 to 70.

[0402] Figure 64 is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for confirming viewing of the same content.

[0403] Referring to Figure 64, the controller 340 acquires an address of the electronic device based on a human channel map (S1600). The human channel map may be the human channel map 1210 of Figure 12, or may include the human channel map 1210, the first connection information map 1230, the second connection information map 1240, the third connection information map 1250, the fourth connection information map 1260 and the fifth connection information map 1270 as illustrated in Figure 12. The address of the electronic device may be acquired by the above described method of Figures 19 to 21. The electronic device may be limited to an online electronic device.

[0404] The controller 340 controls transmission of a viewing information request signal using the acquired address of the electronic device (S1610). The viewing information request signal may be the image frame request signal as described above in relation to Figure 52.

[0405] The network interface 320 receives a viewing information signal (S1620). In some embodiments, the viewing information signal may have the format 3800 illustrated in Figure 38. In some embodiments, the viewing information signal may be the image frame transmission signal as described above in relation to Figure 52.

[0406] The controller 340 confirms the presence of a human channel owner who is viewing the displayed content based on the received viewing information signal (S1630). In some embodiments, the controller 340 may confirm the owner by comparing the above described information of Figure 38. In some embodiments, the controller 340 may confirm the owner based on the above described comparison algorithm 5215 of Figure 52.

[0407] Figure 65 is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for confirming viewing of the same content.

[0408] Referring to Figure 65, the controller 340 controls transmission of an owner list request signal to the server (S1700). The transmitted owner list request signal may be a signal to request a list of owners who are viewing the displayed content. The server may be the server 10.

[0409] The network interface 320 receives an owner list from the server (S1710). The owner list includes owners who are viewing the displayed content. In some embodiments, the owner list may further include at least one of emotion data or motion data of owners included therein.

[0410] The controller 340 confirms the owners included in the received owner list as owners who are viewing the displayed content (S1720).

[0411] Figure 66 is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for providing a viewing list.

[0412] Referring to Figure 66, the server 10 receives a channel viewing signal including content viewing information from the electronic device (S1800). The received content viewing information may include the above described information of Figure 38. In some embodiments, the content viewing information may further include at least one of emotion data or motion data of the owner of the human channel associated with the electronic device.

[0413] The server 10 constructs a viewing map using the received content viewing information (S1810). The constructed viewing map may include at least one of identification information about content that every human channel owner is viewing, emotion data, motion data or group information. The group information indicates a group of owners who are viewing the same content.

[0414] The server 10 receives an owner list request signal from the electronic device (S1820). The owner list request signal corresponds to the above described owner list request signal of Figure 65.

[0415] The server 10 constructs an owner list using the constructed viewing map (S1830). The owner list corresponds to the above described owner list of Figure 65. The server 10 may add owners having the same group information to the owner list.

[0416] The server 10 transmits the constructed owner list to the electronic device that has transmitted the owner list request signal (S1840).

[0417] Figure 67 is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for displaying a silhouette.

[0418] Referring to Figure 67, the controller 340 detects a face zone of an owner from an image captured by the owner (S1900). The owner may be a human channel owner or a viewer who is viewing content. In one example, the owner

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may be the viewer 5301 of Figure 53. The image capture device 301 may capture an image of the owner at a preset interval, and the controller 340 may detect a face of the owner from the captured image at the preset interval.

[0419] The controller 340 confirms the emotions of the owner based on the detected face zone (S1910). The controller 340 may confirm the emotions of the owner by the above described method of Figures 56 and 57. Then, the controller 340 may produce emotion data indicating the confirmed emotions. In some embodiments, the controller 340 may produce emotion data if emotion change occurs.

[0420] The controller 340 controls transmission of the emotion data indicating the confirmed emotions (S1920). In some embodiments, the controller 340 may control transmission of the emotion data if emotion change occurs.

[0421] The controller 340 controls change of the contour of a silhouette according to the confirmed emotions (S1930). The controller 340 may change the contour of a silhouette using the above described method of Figure 55.

[0422] The network interface 320 receives emotion data (S1940). In some embodiments, the emotion data may be transmitted from the electronic device of the chat partner. In some embodiments, the emotion data may be transmitted from the server 10.

[0423] The controller 340 controls change of the contour of a silhouette of an owner who has transmitted the emotion data according to the received emotion data (S1950). The controller 340 may change the contour of a silhouette using the above described method of Figure 55.

[0424] Figure 68 is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for displaying a silhouette.

[0425] Referring to Figure 68, the controller 340 detects a motion of an owner (S2000). The owner may be an owner of a human channel and may be a viewer who is viewing content. In one example, the owner may be the viewer 5801 of Figure 58, and the controller 340 may detect a motion of the owner by the above described method of Figure 58.

[0426] In some embodiments, the image capture device 301 may capture an image of the owner, and the controller 340 may detect a motion of the owner from an image frame included in the captured image of the owner.

[0427] The controller 340 produces motion data indicating the detected motion (S2010). In some embodiments, the controller 340 may produce motion data if motion change occurs.

[0428] The controller 340 controls transmission of the produced motion data (S2020). In some embodiments, the controller 340 may control transmission of the motion data if motion change occurs.

[0429] The controller 340 controls change of the contour of a silhouette according to the detected motion (S2030). The controller 340 may change the contour of a silhouette using the above described method of Figure 58.

[0430] The network interface 320 receives motion data (S2040). In some embodiments, the motion data may be transmitted from the electronic device of the chat partner. In some embodiments, the motion data may be transmitted from the server 10.

[0431] The controller 340 controls change of the contour of a silhouette of an owner who has transmitted motion data according to the received motion data (S2050). The controller 340 may change the contour of a silhouette using the above described method of Figure 58.

[0432] Figure 69 is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for displaying a silhouette as a 3D image.

[0433] Referring to Figure 69, the controller 340 selects a silhouette image (S2100). The silhouette image may be selected by the above described method of Figure 67 or 68. More particularly, the silhouette image may be selected according to the detected emotions or emotions indicated by the received emotion data, or may be selected according to the detected motion or a motion indicated by the detected motion data.

[0434] The controller 340 produces a left view image and a right view image using the selected silhouette image (S2110). In one example, the produced left view image and the produced right view image may be utilized to display the silhouette 5110 of Figure 51.

[0435] The controller 340 controls mixing of each of the produced left view image and the produced right view image with an image frame of content to be displayed (S2120). The mixer 360 may mix the left view image with the image frame of the content to thereby produce a left view image frame, or may mix the right view image with the image frame of the content to thereby produce a right view image frame. In one example, the image frame may be the image frame displayed on the screen of Figure 51.

[0436] The formatter 370 may perform sampling of the left view image frame and the right view image frame output by the mixer 360 to obtain a 3D output format that can be displayed as a 3D image by the display 302.

[0437] The display 302 displays a mixed image frame (S2130). The mixed image frame may be an image frame having the 3D output format obtained by sampling the left view image frame and the right view image frame produced by the mixer 360 in Step S2120. In one example, the display 302 may display the screen 5100 in Step S2130.

[0438] Figure 70 is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for sharing a screen effect.

[0439] Referring to Figure 70, the controller 340 detects a user action for requesting a screen effect (S2200). The user action may be a user action for selecting one of the screen effect selecting regions 5911, 5912 and 5913 of Figures 59A

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to 59D.

[0440] The controller 340 produces screen effect data indicating the requested screen effect in response to the detected user action (S2210).

[0441] The controller 340 transmits the produced screen effect data to the electronic device of the chat partner or the server 10 (S2220).

[0442] The controller 340 controls reflection of the requested screen effect on the displayed content (S2230). The display 302 may display the screen 5900 of Figure 59D.

[0443] The network interface 320 receives screen effect data from the electronic device of the chat partner or the server 10 (S2240).

[0444] The controller 340 controls reflection of the screen effect indicated by the received screen effect data on the displayed content (S2250). The display 302 may display the screen 5900 of Figure 59D.

[0445] Figure 71 is a diagram illustrating a broadcast screen on which one exemplary embodiment of a channel map is displayed.

[0446] Referring to Figure 71, the display 302 may display a screen 7100. If the controller 340 detects a user action for requesting a channel map in a state in which a broadcast program 7110 is displayed on the screen 7100, the controller 340 controls displaying a broadcast channel map 7120 on the screen 7100 in response to the detected user action. In some embodiments, the user action for requesting the channel map may be an action in which the user presses a hot key for the channel map or a menu item for the channel map.

[0447] If the controller 340 detects a user action for requesting channel map switch in a state in which a human channel map 7220 illustrated in Figure 72 or an App channel map 7320 illustrated in Figure 73 is displayed, the controller 340 controls displaying the broadcast channel map 7120.

[0448] The broadcast channel map 7120 lists broadcast channels (e.g., CNN), today's broadcast content on broadcast channels (e.g., CNN News) and channel numbers associated with the broadcast channels (e.g., 39). With relation to the broadcast program 7110 being displayed, a corresponding broadcast channel 'NBC', broadcast program name or title 'Home' and channel number '37' are listed in a line indicated by an indicator. If the user performs a user action for selecting one of the broadcast channels listed in the broadcast channel map 7120, the controller 340 controls displaying a broadcast program of the selected broadcast channel.

[0449] Figure 72 is a diagram illustrating a broadcast screen on which another exemplary embodiment of a channel map is displayed.

[0450] Referring to Figure 72, the display 302 may display a screen 7200. If the controller 340 detects a user action for requesting channel map switch in a state in which the broadcast channel map 7120 illustrated in Figure 71 or the App channel map 7320 illustrated in Figure 73 is displayed, the controller 340 controls displaying the human channel map 7220. In some embodiments, the user action may be an action in which the user presses one of a left key and a right key of a remote controller.

[0451] During display of the human channel map 7220, the controller 340 may control displaying content of one human channel listed in the human channel map 7220. The content may be received according to Step S310 of Figure 18. The human channel map 7220 may be identical to the human channel map 1510 illustrated in Figure 15.

[0452] Figure 73 is a diagram illustrating a broadcast screen on which a further exemplary embodiment of a channel map is displayed.

[0453] Referring to Figure 73, the display 302 may display a screen 7300. If the controller 340 detects a user action for requesting channel map switch in a state in which the broadcast channel map 7120 illustrated in Figure 71 or the human channel map 7220 illustrated in Figure 72 is displayed, the controller 340 controls displaying the App channel map 7320. In some embodiments, the user action may be an action in which the user presses one of a left key and a right key of a remote controller.

[0454] The App channel map 7320 lists App channels (e.g., Netflix), App content and channel numbers associated with the App channels (e.g., 55). The controller 340 may control display of the App channel map 7320 in such a manner that a line, on which an App channel 'Google' which provides App content 'Google Earth', denoted by reference numeral 7310, displayed on the screen 7300, and a channel number '56' are listed, is indicated by an indicator. The controller 340 may control display of the App channel map 7320 in such a manner that App content of one App channel listed in the App channel map 7320 is displayed. If the user performs a user action for selecting one of the App channels listed in the App channel map 7320, the controller 340 may control displaying App content of the selected App channel.

[0455] Figure 74 is a diagram illustrating a screen on which one exemplary embodiment of a full channel map is displayed.

[0456] Referring to Figure 74, the display 302 may display a screen 7400. If the controller 340 detects a user action for requesting a full channel map, the controller 340 may control displaying a full channel map on the screen 7400 in response to the detected user action. The full channel map may be a channel map that is displayed in a full channel mode, for example, on the entire display area or a full screen image. In some embodiments, the user action may be an action in which the user presses a hot key for the full channel map or a menu item for the full channel map.

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[0457] The full channel map 7400 may display multiple channels maps corresponding to different types of content, for example, broadcast content, SNS content, and application content. The different types of content may be associated with different types of channels. The full channel map 7400 includes a line 7410 on which at least one broadcast channel is listed, a line 7420 on which at least one human channel is listed and a line 7430 on which at least one App channel is listed. These lines 7410, 7420 and 7430 are respectively provided at the first cell thereof with a mark 7411, 7421, 7431 indicating which one of the broadcast channel, human channel or App channel is listed. The mark 7411, 7421, 7431 may be an icon or a selectable link, and may include an image representative of the type of channel. In one embodiment, a selection of a mark may display a channel map of the corresponding type on the full screen. For example, if the mark 7411 for broadcast channel is selected, each of the three rows 7410, 7420, 7430 may broadcast channels.

[0458] In some embodiments, the full channel map may be organized in such a manner that at least one broadcast channel is listed on one line, at least one human channel is listed on another line and at least one App channel is listed on the other line.

[0459] In the full channel map 7400, movement between channels in the same line may depend upon input of a left key or a right key, and movement between different lines may depend upon input of an up key or a down key. If the user performs a user action for designating one of the channels listed in the full channel map 7400, the controller 340 may control displaying content of the designated channel. The content may be received according to Step S310 illustrated in Figure 18.

[0460] Figure 75 is a diagram illustrating a screen on which another exemplary embodiment of a full channel map is displayed.

[0461] Referring to Figure 75, the display 302 may display a screen 7500. If the controller 340 detects a user action for requesting a full channel map, the controller 340 may control displaying a full channel map on the screen 7500 in response to the detected user action. In some embodiments, the user action may be an action in which the user presses a hot key for the full channel map or a menu item for the pull channel map.

[0462] The full channel map 7500 lists broadcast channels 7510, human channels 7520 and 7530 and App channels 7540. The full channel map 7500 may list these channels in order of channel numbers. The full channel map 7500 may be sorted alphabetically, by user rating (e.g., favorites), based on type of channel, or the full channel map 7500 may be displayed in a custom order as set by a user. In the example as illustrated in Figure 75, in the full channel map 7500, a broadcast channel 'Star Plus' corresponding to a channel number '20' is located at an uppermost position, a radio channel 'MTV Radio' corresponding to a channel number '21' is located immediately below the broadcast channel 'Star Plus', and a human channel 'Brandon' corresponding to a channel number '22' is located immediately below the radio channel 'MTV Radio'. An App channel 'Picasa' corresponding to a channel number '26' is located at a lowermost position. Channels of different types may be assigned the same channel numbers (e.g., SNS channel 26 for Susan and App Channel 26 for Picasa). In this case, channels may be sorted based on type as predetermined or set by the user.

[0463] When the user inputs a particular number, channel numbers associated with the particular number may be listed in the full channel map 7500. A region 7505 of the full channel map 7500 shows a number input by the user. In the drawing, as the region 7505 shows "2-", channels, which have channel numbers in a range of 20 to 29 associated with "2-", are displayed on the full channel map 7500.

[0464] If the user performs a user action for designating one of the channels listed in the full channel map 7500, the controller 340 may control displaying content of the designated channel. The content may be received according to Step S310 illustrated in Figure 18.

[0465] Figure 76 is a diagram illustrating a screen on which another exemplary embodiment of a full channel map is displayed.

[0466] Referring to Figure 76, the display 302 may display a full channel map 7600. If the controller 340 detects a user action for requesting a full channel map, the controller 340 may control displaying a full channel map 7600 on a screen in response to the detected user action. In some embodiments, the user action may be an action in which the user presses a hot key for the full channel map or a menu item for the full channel map.

[0467] The full channel map 7600 includes a broadcast channel sheet (or page), a human channel sheet and an App channel sheet. The broadcast channel sheet, human channel sheet and App channel sheet may be selected respectively using a sheet tab 7601, a sheet tab 7602 and a sheet tab 7603. Specifically, if the user performs an action of pressing one of the sheet tabs 7601, 7602 and 7603, the controller 340 may control displaying a sheet associated with the pressed sheet tab.

[0468] During display of the full channel map 7600 on the screen, the controller 340 may control displaying one of the broadcast channel sheet, human channel sheet and App channel sheet. In Figure 76, a broadcast channel sheet 7610 is displayed. The broadcast channel sheet 7610 may include a mark 7612 indicating that the broadcast channel is a TV channel and a mark 7614 indicating that the broadcast channel is a radio channel. Each cell of the broadcast channel sheet 7610 includes a broadcast channel (e.g., Colors) and a channel number (e.g., T01) associated with the broadcast channel. If the user performs an action of pressing one of cells on the broadcast channel sheet 7610, the controller 340 controls displaying a broadcast program on the broadcast channel of the pressed cell.

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[0469] Figure 77 is a diagram illustrating a screen on which the human channel sheet of the full channel map of Figure 76 is displayed.

[0470] Referring to Figure 77, if the user performs a user action for selecting the sheet tab 7602, the controller 340 detects the user action and controls displaying a human channel sheet 7710 of the full channel map 7700 in response to the detected user action.

[0471] Each cell of the human channel sheet 7710 includes a human channel (e.g., Brandon) and a channel number (e.g., 22) associated with the human channel. If the user performs an action of pressing one of cells on the human channel sheet 7710, the controller 340 may control displaying content of the human channel of the pressed cell. The content may be received according to Step S310 illustrated in Figure 18.

[0472] Figure 78 is a diagram illustrating a screen on which the App channel sheet of the full channel map of Figure 76 is displayed.

[0473] Referring to Figure 78, if the user performs an action for selecting the sheet tab 7603, the controller 340 detects the user action and controls displaying an App channel sheet 4210 on the full channel map 7800 in response to the detected user action.

[0474] Each of the App channel sheet 7810 includes an App channel (e.g., NFS9) and a channel number (e.g., 01) associated with the App channel. If the user performs an action of pressing one of cells on the App channel sheet 7810, the controller 340 may control displaying content of the App channel of the pressed cell.

[0475] Figure 79 is a diagram illustrating a screen on which an exemplary embodiment of a recently viewed channel map is displayed.

[0476] Referring to Figure 79, the display 302 may display a recently viewed channel map 7900. If the controller 340 detects a user action for requesting a recently viewed channel map, the controller 340 may control displaying the recently viewed channel map 7900 on a screen in response to the detected user action. In some embodiments, the user action may be an action in which the user presses a hot key for the recently viewed channel map or a menu item for the recently viewed channel map.

[0477] The recently viewed channel map 7900 lists broadcast channels, human channels and App channels displayed within a preset period. The preset period may be 1 day, 7 days, 10 days, 15 days and 30 days. The preset period may be an initially set value, or may be set by the user.

[0478] The recently viewed channel map 7900 displays channels on a per line basis. The first cell of each line indicates that the channel corresponds to which one of the broadcast channel, human channel and App channel. For example, a mark 'TV' on the first cell indicates a broadcast channel, a mark 'Radio' indicates a radio channel, a mark 'SNS' indicates a human channel and a mark 'APP' indicates an App channel.

[0479] The recently viewed channel map 7900 may list the channels in reverse order of displayed time. For example, in the recently viewed channel map 7900, a broadcast channel 'Set Max', which was broadcast before a broadcast channel 'Star Plus', is located behind the broadcast channel 'Start Plus'.

[0480] If the user performs a user action of pressing one of the lines listed in the recently viewed channel map 7900, the controller 340 may control displaying content of the channel indicated by the pressed line. The content may be received according to Step S310 illustrated in Figure 18.

[0481] Figure 80 is a diagram illustrating a screen on which a further exemplary embodiment of a full channel map is displayed.

[0482] Referring to Figure 80, the display 302 may display a full channel map 8000. If the controller 340 detects a user action for requesting a full channel map, the controller 340 may control displaying the full channel map 8000 on a screen in response to the detected user action. The user action may be an action in which the user presses a hot key for the full channel map or a menu item for the full channel map.

[0483] The full channel map 8000 has the same configuration as the full channel map 7400 and further includes connection state marks 8050 and 8055 (also status indicator) for indicating the online state of an owner of a human channel. A first connection state mark 8050 indicates a first online state which represents whether or not the owner of the human channel is online via an electronic device. A second connection state mark 8055 indicates a second online state which represents whether or not the owner is logged in to a server. The server may be the server 10 or the server 20 illustrated in Figure 1, and the electronic device may be the first digital TV 100, the second digital TV 110, the personal computer system 120, the notebook computer 130 or the mobile terminal 140 illustrated in Figure 1. That the owner is online via the electronic device means that another electronic device is connectable to the electronic device through a human channel. That the owner is logged in to the server means that another owner may communicate with the owner through the network 1. For example, if the first connection state mark 8050 is inactive (off) and the second connection state mark 8055 is active (on), the owner is not connected through their digital TV but is connected through their SNS account.

[0484] Information about the online state of the owner may be received from the electronic device or the server. The electronic device may periodically receive information about the first online state or information about the second online state from the server.

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[0485] The electronic device may transmit information about the first online state to an electronic device or server associated with the human channel stored in the human channel map. In some embodiments, the electronic device may transmit information about the first online state to all electronic devices associated with the human channel. In some embodiments, the electronic device may transmit information about the first online state to an electronic device which is online, among the electronic devices associated with the human channel.

[0486] Figures 81A to 81D are diagrams illustrating the online state of the owner of the human channel.

[0487] The online state of the owner of the human channel may be illustrated as in Figures 81A to 81D. The human channel map 8000 may provide human channels listed therein with connection state marks as illustrated in Figures 81A to 81D.

[0488] In Figure 81A, a connection state mark 8111 indicates the first online state for representing that the owner of the human channel is not online, and a connection state mark 8115 indicates the second online state for representing that the owner is not logged in to the server.

[0489] In Figure 81B, a connection state mark 8121 indicates the first online state for representing that the owner of the human channel is online, and a connection state mark 8125 indicates the second online state for representing that the owner is not logged in to the server.

[0490] In Figure 81C, a connection state mark 8131 indicates the first online state for representing that the owner of the human channel is not online, and a connection state mark 8135 indicates the second online state for representing that the owner is logged in to the server.

[0491] In Figure 81D, a connection state mark 8141 indicates the first online state for representing that the owner of the human channel is online, and a connection state mark 8145 indicates the second online state for representing that the owner is logged in to the server.

[0492] Figure 82 is a flowchart illustrating an implement procedure of an exemplary embodiment for a method of providing a channel map service in accordance with the present disclosure.

[0493] Referring to Figure 82, the display 302 displays a broadcast channel map including at least one broadcast channel on a screen on which content is being displayed (S2300). The broadcast channel map may be the broadcast channel map 7120 illustrated in Figure 71.

[0494] The controller 340 detects a first user action for requesting channel map switch (S2305). In some embodiments, the first user action may be an action in which the user presses one of an up key, a down key, a left key and a right key of a remote controller.

[0495] The controller 340 switches the displayed broadcast channel map to a human channel map including at least one human channel in response to the detected first user action (S2310). The controller 340 may control displaying content of one of human channels included in the human channel map on the screen. The selected human channel may have a first channel number, a medium channel number or a last channel number, and may be a human channel more recently displayed than other human channels. The human channel map may be the human channel map 7220 illustrated in Figure 72.

[0496] The controller 340 detects a second user action for requesting channel switch (S2315). In some embodiments, the second user action may be an action in which the user presses one of an up key, a down key, a left key and a right key of a remote controller. In some embodiments, if the first user action for requesting channel map switch is an action of pressing the left key or right key of a remote controller, the second user action for requesting channel switch may be an action of pressing the up key or down key of the remote controller.

[0497] The controller 340 switches a selected human channel to another human channel in the human channel map in response to the detected second user action (S2320).

[0498] The controller 340 controls displaying content of the switched human channel (S2325). The content may be received according to Step S310 in Figure 18.

[0499] The controller 340 detects a third user action for requesting channel map switch (S2330).

[0500] The controller 340 switches the human channel map to an App channel map including at least one App channel in response to the detected third user action (S2335). The App channel map may be the App channel map 7320 illustrated in Figure 73.

[0501] The controller 340 detects a fourth user action for requesting a full channel map (S2340). In some embodiments, the fourth user action may be an action in which the user presses a hot key for the full channel map or a menu item for the full channel map.

[0502] The controller 340 controls displaying a full channel map including the at least one broadcast channel, the at least one human channel and the at least one App channel in response to the detected fourth user action (S2345). The full channel map may be one of the full channel map 7400 illustrated in Figure 74, the full channel map 7500 illustrated in Figure 75, the full channel map 7600 illustrated in Figure 76 and the full channel map 8000 illustrated in Figure 80.

[0503] The controller 340 detects a fifth user action for requesting a recently viewed channel map (S2350). In some embodiments, the fifth user action may be a user action of pressing a hot key for the recently viewed channel map or a menu item for the recently viewed channel map.

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[0504] The controller 340 controls displaying the recently viewed channel map including broadcast channels, human channels and App channels displayed within a preset period in response to the detected fifth user action (S2355). The recently viewed channel map may be the recently viewed channel map 7900 illustrated in Figure 79. The preset period may be 1 day, 7 days, 10 days, 15 days and 30 days. The preset period may be an initially set value, or may be set by the user.

[0505] Figure 83 is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a user registration method in accordance with the present disclosure.

[0506] Referring to Figure 83, the controller 340 controls display of a GUI for reception of user registration information (S2400). The GUI may be displayed upon initial execution (booting) of the electronic device 300 or upon receiving a user request. The user registration information may include at least one of a device serial number, a user name, a user ID, a password, connection information, gender information, the date of a birth, nation information or locale information. The connection information may include at least one of an e-mail address, an SIP address, an IP address, a port number, a MAC address, an SNS account or URL.

[0507] Figure 84 is a diagram illustrating an embodiment of a GUI for reception of user registration information.

[0508] Referring to Figure 84, the display 302 may display a GUI 8400 in Step S2400. The GUI 8400 serves to receive user registration information. The GUI 8400 includes input boxes to input a user ID, a password, a first name and a last name, check boxes to select gender information and list boxes to select the date of a birth. A 'Next' button serves to display a next screen, an 'Exit' button serves to end the user registration method. The controller 340 may control display of a screen of a next step in response to a detected user action pushing the 'Next' button, and may control end of the user registration method in response to a detected user action pushing the 'Exit' button.

[0509] The controller 340 controls display of a GUI for selection of an SNS site (S2410). If the controller 340 detects a user action for pushing the 'Next' button, the controller 340 may control display of the GUI in response to the detected user action. A list of SNS sites may be previously stored and the controller 340 may control display of the previously stored list on the GUI.

[0510] Figure 85 is a diagram illustrating an embodiment of a GUI for selection of an SNS site.

[0511] Referring to Figure 85, the display 302 may display a GUI 8500 in Step S2410. The GUI 8500 includes SNS sites 8511 to 8519, check boxes 8521 to 8529 to select the SNS sites 8511 to 8519 respectively, and a check box 8530 to select the SNS sites 8511 to 8519 in all. A list of the SNS sites 8511 to 8519 may be previously stored in the storage unit 345. Also, the list of the SNS sites 8511 to 8519 may be updated.

[0512] The controller 340 controls display of a GUI for reception of SNS site authentication information (S2420). If the controller 340 detects a user action for pushing the 'Next' button, the controller 340 may control display of the GUI in response to the detected user action. The authentication information may include a user ID and a password. The user ID may be an e-mail address registered in an SNS site.

[0513] The number of the GUI to be displayed may be equal to the number of SNS sites selected in Step S2410. That is, the GUI for reception of authentication information with respect to each selected SNS site may be displayed.

[0514] Figure 86 is a diagram illustrating an embodiment of a GUI for reception of authentication information for an SNS site.

[0515] Referring to Figure 86, the display 302 may display a GUI 8600 in Step S2420. The GUI 8600 includes an icon 8610, and input boxes to input an e-mail ID and a password for an SNS site indicated by the icon 8610.

[0516] The controller 340 controls display of a GUI for confirmation of channel scan execution (S2430). If the controller 340 detects a user action for pushing the 'Next' button, the controller 340 may control display of the GUI in response to the detected user action.

[0517] Figure 87 is a diagram illustrating an embodiment of a GUI for confirmation of channel scan execution.

[0518] Referring to Figure 87, the display 302 may display a GUI 8700 in Step S2430. The GUI 8700 includes a guidance phrase 8710 to ask whether or not to execute a channel scan, a 'Yes' button to select execution of a channel scan, and an 'Exit' button to prevent execution of the channel scan. The controller 340 may control the progress of a method for providing a channel scan interface of Figure 88 in response to a detected user action selecting the 'Yes' button.

[0519] The user registration information and the SNS site authentication information, which are input during implementation of the user registration method of Figure 83, may be transmitted to the server 10 in each input step and may be transmitted to the server 10 after completion of Step S2430.

[0520] Figure 88 is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for providing a channel scan interface in accordance with the present disclosure.

[0521] Referring to Figure 88, the controller 340 controls display of a GUI for selection of a scan method (S2500). The GUI may be displayed automatically or by a user request after implementation of a server registration method. Alternatively, the GUI may be displayed at an optional time by a user request, or may be displayed during update. The scan method may include at least one of auto scan or manual scan. The GUI may include a scan method option to select at least one scan method.

[0522] Figure 89 is a diagram illustrating an embodiment of a GUI for selection of a scan method.

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[0523] Referring to Figure 89, the display 302 may display a GUI 8900 in Step S2500. The GUI 8900 includes a scan method option 8910 to select auto scan and a scan method option 8920 to select manual scan.

[0524] The controller 340 confirms whether or not the scan method option is selected (S2510).

[0525] If the scan method option indicating auto scan is selected, the controller 340 controls display of a GUI for selection of a service type (S2520). The GUI may include a service type option to select at least one service type. The service type indicates one of a broadcast channel, an App channel or a human channel.

[0526] Figure 90 is a diagram illustrating an embodiment of a GUI for selection of a service type.

[0527] Referring to Figure 90, the display 302 may display a GUI 9000 in Step S2520. The GUI 9000 may include a service type option 9010 (TV) to select a channel scan of a broadcast channel, a service type option 9020 (APPS) to select a channel scan of an App channel, and a service type option 9030 (Human) to select a channel scan of a human channel.

[0528] The controller 340 confirms whether or not a particular service type option among the service type options provided by the GUI 9000 for selection of a service type option is selected (S2530).

[0529] If the particular service type option is selected, the controller 340 controls execution of a channel scan with respect to a channel associated with the selected service type option (S2540). In one example, if the service type option 9010 is selected, the controller 340 controls execution of a channel scan with respect to a broadcast channel. If the service type option 9030 is selected, the controller 340 controls execution of a channel scan with respect to a human channel.

[0530] Figure 91 is a diagram illustrating an embodiment of a screen, which displays the progress of a human channel scan.

[0531] Referring to Figure 91, the display 302 may display a screen 9100 in Step S2540. The screen 9100 displays a status bar 9110 representing the degree of progress of the human channel scan. The screen 9100 displays a list 9120 of SNS sites as an object of the human channel scan. The SNS sites included in the SNS site list 9120 may be SNS sites selected during implementation of the user registration method of Figure 83. The screen 9100 may further display a region 9130 to display the result of scan up to now. In the screen 9100, a 'Skip' button serves to stop a channel scan and select display of the result of scan up to that time, and an 'Exit' button serves to select end of a channel scan. The controller 340 may stop channel scan in response to a detected user action selecting the 'Skip' button and then, proceed to Step 2550. Also, the controller 340 controls end of a channel scan in response to a detected user action selecting the 'Exit' button.

[0532] The controller 340 controls display of the result of a channel scan (S2550). The controller 340 may control display of the result of a channel scan if channel scan is completed.

[0533] If the controller 340 detects a user action for selecting the 'Skip' button of the screen 9100, the controller 340 may control display of the result of a channel scan in response to the detected user action. The displayed result of a channel scan is the result of channel scan up to a time when the channel scan is stopped. In one embodiment, the 'Skip' button may be configured to skip current SNS service provider to scan the next SNS service provider, rather than skipping all remaining SNS service providers.

[0534] Figure 92 is a diagram illustrating an embodiment of a screen, which displays the result of a human channel scan.

[0535] Referring to Figure 92, the display 302 may display a screen 9200 in Step S2550. The screen 9200 displays the result of a human channel scan.

[0536] The screen 9200 displays an SNS account selecting region 9210, an update statistical information region 9220, a channel input box 9230, an SNS site selecting region 9250, an icon 9201 to display a selected SNS site, an 'Add' button, a 'Back' button and a 'Home' button. The SNS account selecting region 9210 includes a picture 9211 of a selected SNS account, a button 9213 to select a previous SNS account, a button 9215 to select a next SNS account, and a mark 9217 to display the total number of SNS accounts scanned in a selected SNS site and the order of a selected SNS account.

[0537] The update statistical information region 9220 displays update statistical information about the selected SNS account 9211. The update statistical information may include at least one of the number of updated videos, the number of updated pictures or the number of updated messages.

[0538] The channel input box 9230 displays a channel number assigned to the selected SNS account 9211. If a channel number is not assigned to the selected SNS account 9211, the channel input box 9230 may be a blank. The user may input a channel number to be assigned to the selected SNS account 9211 into the channel input box 9230. In one embodiment, a selection of channel input box 9230 may display a pop-up window to display available channel number from which to choose from to assign to the SNS account.

[0539] The SNS site selecting region 9250 displays icons of SNS sites or SNS providers. If the user selects any one of the icons displayed on the SNS site selecting region 9250, the controller 340 controls selection of SNS accounts, scanned in the SNS site indicated by the selected icon, from the SNS account selecting region 9210.

[0540] The icon 9201 displays a selected SNS site. The user may select an SNS account, scanned in the SNS site indicated by the icon 9201, from the SNS account selecting region 9210.

[0541] The 'Add' button serves to receive a request for construction of a channel map, the 'Back' button serves to

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receive a request for display of a previous screen, and the 'Home' button serves to receive a request for display of a home page.

[0542] Figure 93 is a diagram illustrating another embodiment of a screen which displays the result of a human channel scan.

[0543] Referring to Figure 93, the display 302 may display a screen 9300 in Step S2550. The screen 9300 is a screen to display the result of a human channel scan. The screen 9300 may include a friend list (or contact list) region 9310, a mutual friend list region 9320, a scan result statistical information region 9330 and an SNS site selecting region 9350.

[0544] The SNS site selecting region 9350 is a region corresponding to the SNS site selecting region 9250 of Figure 92 and thus, a detailed description thereof is substituted by the description of Figure 92. The friend list region 9310 displays a list of friends registered in an SNS site selected from the SNS site selecting region 9350. The user can select a particular friend (or contact) from the friend list region 9310. For example, a pointer 9360 may be used to select an icon 9317 for Iva's SNS account. The friend list region 9310 may display SNS accounts of the friends.

[0545] Connection state marks 9311 and 9315 serve to display whether or not a corresponding friend is connected. More particularly, the connection state mark 9311 may represent an online state displayed by one of the connection state marks 8111, 8121, 8131 and 8141 of Figure 81, and the connection state mark 9315 may represent an online state displayed by one of the connection state marks 8115, 8125, 8135 and 8145 of Figure 81.

[0546] The mutual friend list region 9320 displays a list of mutual friends of the friend selected from the friend list region 9310. The mutual friend list region 9320 may display SNS accounts of the mutual friends. For example, if icon 9317 for Iva's SNS account is selected, mutual friends of both Iva and John may be displayed in the mutal friend list region 9320.

[0547] In one embodiment, region 9320 may display a list of SNS accounts for friends of the friends for whom the information is requested. For example, referring to Figure 93, if icon 9317 is selected for Iva's SNS account (e.g., Hi5 account) region 9320 may display a list of potential or possible friends between John and Iva's friends, e.g., a list of friends of friends. The icons for these friends may also include connection state marks 9311, 9315 to indicate whether the users are online using their electronic device or logged in to their SNS account at a server. In one embodiment, the list of mutual friends and the list of friends of friends may list only those users who have registered to use their electronic device to access human channels, e.g., their SNS accounts through a channel on their multi-purpose display device, or the list may include only those users who are currently logged in. These preference settings for the user may store the configuration and other settings for the display regions.

[0548] The information region 9330 displays a message 9331 for representing whether or not a human channel of the friend selected from the friend list region 9310 is available, a message 9333 for representing a human channel number assigned to the selected friend, and a message 9335 for representing the number of mutual friends of the selected friend. For example, if the icon 9317 for Iva's SNS account is selected, the scan result statistical information region 9330 may display information related to Iva's account. In this Example, Iva has 12 friends in common with John's SNS account and Iva's SNS account is accessible on channel number 27 of the electronic device 100.

[0549] The user may select a particular SNS account from among SNS accounts displayed on the friend list region 9310 and the mutual friend list region 9320 and then, assign a channel number to the selected particular SNS account.

[0550] The controller 340 constructs a channel map (S2560). The controller 340 may proceed to Step S2560 if the controller 340 detects a user action for requesting assignment of a channel with respect to the particular SNS account from a screen on which the result of a channel scan is displayed. The user action may be a user action for selecting the 'Add' button of Figure 92.

[0551] If the controller 340 detects the user action for selecting the 'Add' button of Figure 92, the controller 340 assigns a channel number, which has input into the channel input box 9230, to the selected SNS account 9211 in response to the detected user action. The controller 340 may store the selected SNS account 9211, the channel number input into the channel input box 9230 and information associating the selected SNS account 9211 and the channel number input into the channel input box 9230 with each other. The human channel map may be a human channel map illustrated in Figure 12, or may be a human channel map illustrated in Figure 97 that will be described hereinafter.

[0552] Step S2560 may include the implementation procedure of the method for constructing a human channel map in relation to Figure 13 or the implementation procedure of the method for constructing a human channel map in relation to Figures 34A and 34B. The screen 9200 of Figure 92 and the screen 9300 of Figure 93 may be a first GUI for designation of the human address in Step S100. The SNS accounts displayed on the SNS account selecting region 9210, the friend list region 9320 and the mutual friend list region 9330 may be selectable human addresses listed in the first GUI.

[0553] Figure 94 is a flowchart illustrating an implementation procedure of an exemplary embodiment in relation to a method for scanning a human channel in accordance with the present disclosure.

[0554] Referring to Figure 94, an electronic device 9410 transmits a friend information request signal to request information about friends to a relay server 9420 (S2600). The information about friends may include, for example, a list of new or potential friends, mutual friends, or updates for existing friends such as status updates, newly uploaded content, whether they are using human channel services, or another appropriate type of information. The transmission of the

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friend information request signal may be performed in Step S2540 of Figure 88 to scan one or more SNS servers for friend information. Step S2540 may include the implementation procedure of the method for scanning a human channel in relation to Figure 94. The friend information request signal may include a user ID. The user ID may be an account of the relay server 9420, or may be information registered in the server 10 during implementation of the user registration method of Figure 83. In some embodiments, the friend information request signal may further include a single or a plurality of SNS accounts, passwords with respect to the included SNS accounts and site names of the SNS sites.

[0555] The relay server 9420 transmits the friend information request signal to request friend information to a first SNS server 9430 (S2610). The server 9420 may be the server 10, and the transmitted friend information request signal may include an account information for an account on the first SNS server 9430 and may further include a password for the account. The account information on the first SNS server 9430 and the password for the account may be previously stored in the relay server 9420, may have been transmitted to the server 10 during implementation of the user registration method of Figure 83, or may be included in the friend information request signal transmitted in Step S2600.

[0556] The relay server 9420 may associate a single or a plurality of SNS accounts with user IDs and store the associated information. If the relay server 9420 receives the friend information request signal from the electronic device 9410, the relay server 9240 may search for a user ID and an associated SNS account, and then, transmit the friend information request signal to an SNS server including the searched SNS account.

[0557] For example, the relay server 9420 may request information from multiple SNS servers if the request for friend information from the electronic device 9410 (or the user account associated with the user ID received from the electronic device 9410) includes SNS accounts served on multiple servers (e.g., facebook, twitter). the relay server 9420 transmits the friend information request signal to request friend information to the second SNS server 9440 (S2620). The transmitted friend information request signal may include account information for an account on the second SNS server 9440 and may further include a password for this account. The account information for the account on the second SNS server 9440 may be stored in the relay server 9420, received from another server, or included in the friend information request.

[0558] The first SNS server 9430 transmits a friend information signal including friend information to the relay server 9420 (S2630). The friend information may include SNS accounts with respect to friends included in the friend information request signal transmitted in Step S2610. The friend information may further include at least one of names of the friends, SNS site IP addresses, port numbers, SNS site names or update information about SNS accounts. The first SNS server 9430 may be the server 20, or may be one of SNS servers selected during implementation of the user registration method of Figure 83. Additionally, the first SNS server 9430 may have an SNS site name included in the friend information request signal transmitted in Step S2600.

[0559] The second SNS server 9440 transmits a friend information signal including friend information to the relay server 9420 (S2640). The friend information may include SNS accounts with respect to friends included in the friend information request signal transmitted in Step S2620. The friend information may further include at least one of names of the friends, SNS site IP addresses, port numbers, SNS site names or update information about SNS accounts. The second SNS server 9440 may be the server 20, or may be one of SNS servers selected during implementation of the user registration method of Figure 83. Additionally, the second SNS server 9440 may have an SNS site name included in the friend information request signal transmitted in Step S2600.

[0560] The relay server 9420 combines the received friend information (S2650). The relay server 9420 may combine the friend information transmitted from the first SNS server 9430 with the friend information transmitted from the second SNS server 9440. In addition, the relay server 9420 may combine previously stored information with the friend information transmitted from the first SNS server 9430 or the friend information transmitted from the second SNS server 9440. Here, the previously stored information may be the SNS site authentication information and the user registration information transmitted by the electronic device 300 during the user registration method of Figure 83. The relay server 9420 may combine the previously stored information and the received friend information with each other based on names or SNS accounts.

[0561] The relay server 9420 transmits the friend information signal including the friend information to the electronic device 9410 (S2660). The friend information may be information combined in Step 2650, or may be information selected from the combined information. In some embodiments, the friend information may include at least one of names of friends, SNS site names, SNS accounts or user IDs. In some embodiments, the friend information may include names of friends, connection information and user IDs. In some embodiments, the friend information may include names of friends, connection information, SNS site names, SNS accounts and user IDs.

[0562] The electronic device 9410 stores the received friend information (S2670). The electronic device 9410 may temporarily or permanently store the received friend information. The stored information may be displayed as the result of a channel scan in Step S2550 of Figure 88.

[0563] The electronic device 9410 may construct a human channel map using the received friend information. Information included in the connection information maps 1230, 1240, 1250, 1260 and 1270 of Figure 97 may be acquired from the received friend information.

[0564] In some embodiments, the relay server 9420 may perform Step S2650 and Step 2660 whenever the friend

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information is received. For example, the relay server 9420 may perform Step S2640 and Step S2660 using the friend information received in Step S2630, or may perform Step S2640 and Step S2660 using the friend information received in Step S2640. Steps S2640 and S2660 may be initiated based on friend information received within a predetermined period of time of each other, for example.

[0565] Figure 95 is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for constructing a channel map in accordance with the present disclosure.

[0566] Referring to Figure 95, the display 302 displays a GUI for designation of a human address (S2700). The GUI may be one of a Web page of Figure 4, the GUI 910 of Figure 9, the GUI 1010 of Figure 10, the GUI 1110 of Figure 11, the GUI 2700 of Figure 27, the GUI 2900 of Figure 29, the GUI 3100 of Figure 31, the screen 9200 of Figure 92 and the screen 9300 of Figure 93.

[0567] The controller 340 detects a first user action for designation of a human address (S2710) of a friend or contact.

[0568] The controller 340 confirms whether or not a channel number assigned to the friend who is associated with the designated human address is present, in response to the detected first user action (S2720).

[0569] If the channel number is present, the controller 340 displays the channel number (S2730). In one example, the channel number may be displayed on the input box 9230 of Figure 92, may be displayed on the input box 9333 of Figure 93, or may be displayed on a separately displayed message. The channel number may be highlighted among the channel numbers listed in the channel number region 2710 of the GUI 2700 of Figure 27 or among the channel numbers listed in the channel number region 2910 of the GUI 2900 of Figure 29, or may be displayed on the channel number region 3140 of the GUI 3100 of Figure 31.

[0570] The controller 340 detects a second user action for designation of a channel number (S2740). In the embodiment of the screen 9200 of Figure 92, the second user action may be a user action for pushing the 'Add' button. In the embodiment of the screen 9300 of Figure 93, the second user action may be a user action for pushing a button for completing input of a channel number into the input box 9333 (for example, an 'OK' button on a remote controller). In the embodiments of the GUI 2700 of Figure 27, the GUI 2900 of Figure 29 and the GUI 3100 of Figure 31, the second user action may be a user action including the second user action of Step S802 of Figures 34A and 34B and the third user action of Step S803. The channel number may be equal to the channel number searched in Step S2720.

[0571] The controller 340 stores the human address, the channel number and information associating the human address and the channel number with each other in a human channel map in response to the detected second user action (S2750). If the channel number is equal to the channel number searched in Step S2720, a plurality of human addresses of a single person is assigned to a single channel number.

[0572] The controller 340 confirms whether or not other human addresses of the friend who is associated with the designated human address are present (S2760). For example, the friend may have multiple SNS accounts such as a human address corresponding to a facebook account and another human address corresponding to an MSN account.

[0573] If other human addresses are present, the controller 340 controls display of the other human addresses (S2770).

[0574] Figure 96 is a diagram illustrating an embodiment of a GUI for display of other human addresses of a friend who has a human address associated with a channel number.

[0575] Referring to Figure 96, the display 302 may display a message 9600 in Step S2770. The message 9600 lists SNS accounts of the other human addresses. In this example, it may be assumed that the human address designated in Step S2710 is a human address of Lisa. The message 9600 may list SNS accounts 9601, 9603, 9605 and 9607 as the other human addresses of Lisa, and may include a button 9610 to add additional addresses and a button 9620 to cancel the process. In Step S2770, check boxes 9631, 9633, 9635 and 9637 need not be displayed.

[0576] The controller 340 displays a GUI for designation of a human address (S2780). The GUI may be displayed if the controller 340 detects a user action for pushing the button 9610 of Figure 96. The display 302 may display the message 9600 including the SNS accounts 9601, 9603, 9605 and 9607, the check boxes 9631, 9633, 9635 and 9637, the button 9610 and the button 9620.

[0577] In some embodiments, Step S2770 and Step S2780 may be combined into a single step for displaying a GUI for provision of other human addresses and designation of a particular human address among the other human addresses. The GUI may be the message 9600 including the SNS accounts 9601, 9603, 9605 and 9607, the check boxes 9631, 9633, 9635 and 9637, the button 9610 and the button 9620.

[0578] The controller 340 detects a third user action for designation of a human address (S2790). The third user action may be a user action for pushing the button 9610 of the message 9600 displayed in Step S2780.

[0579] The controller 340 stores the human address, the channel number and information associating the human address and the channel number with each other in the human channel map in response to the detected third user action (S2795). The human address may be a human address checked in the check boxes 9631, 9633, 9635 and 9637, and the channel number may be the channel number stored in Step S2750.

[0580] Figure 97 is a diagram illustrating another exemplary embodiment for a human channel map.

[0581] The human channel map 1210 of Figure 97 further includes a channel number '80' associated with a plurality of human addresses. The channel number '80' is associated with the friend 'Lisa', and the friend 'Lisa' has a plurality of

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human addresses (Lisa@TV.com, Lisa@SNS.com and Lisa@facebook.com). That is, the channel number '80' is assigned to each of Lisa@TV.com, Lisa@SNS.com and Lisa@facebook.com.

[0582] If a pointer indicates a particular table, the controller 340 can confirm that a corresponding channel number is associated with a plurality of human addresses. In one example, if a pointer 9701 of the channel number '80' indicates a table 9700, the controller 340 confirms that the channel number '80' is associated with a plurality of human addresses.

[0583] The table 9700 includes the human addresses, i.e. Lisa@TV.com, Lisa@SNS.com and Lisa@facebook.com, associated with the channel number '80', and pointers respectively corresponding to Lisa@TV.com, Lisa@SNS.com and Lisa@facebook.com. The pointers may indicate positions where information associated with the human addresses is stored.

[0584] The pointer 9711 indicates a position where information associated with Lisa@TV.com is stored. More particularly, the pointer 9711 indicates the third row of the third connection information map 1250. An IP address associated with Lisa@TV.com is 207.63.107.105, and a port number and an account associated with Lisa@TV.com are 80 and Lisa, respectively. Connection to a channel of Lisa@TV.com may be implemented by the access method denoted by type 3.

[0585] The pointer 9712 indicates a position where information associated with Lisa@facebook.com is stored. More particularly, the pointer 9712 indicates the fourth row of the third connection information map 1250. An IP address associated with Lisa@facebook.com is 204.62.101.95, and a port number and an account associated with Lisa@facebook.com are 80 and Lisa, respectively. Connection to a channel of Lisa@facebook.com may be implemented by the method denoted by type 3.

[0586] The pointer 9713 indicates a position where information associated with Lisa@SNS.com is stored. More particularly, the pointer 9713 indicates the fifth row of the third connection information map 1250. An IP address associated with Lisa@SNS.com is 205.52.108.96, and a port number and an account associated with Lisa@SNS.com are 80 and Lisa, respectively. Connection to a channel of Lisa@SNS.com may be implemented by the access method denoted by type 3.

[0587] In the present disclosure, the pointers 9711, 9712 and 9713 are not limited to the embodiments indicating the rows of the third connection information map 1250, and may indicate rows of different connection information maps. In one embodiment, channel 80 may be linked to human addresses for a plurality of different individuals. For example, the human address 'Lisa' may be replaced by human address "family' representing a group of individuals. The human addresses in table 9700 may be linked to an SNS account of each of the individual in the group, e.g., human addresses dad and me, in tables 1240 and 1230, respectively.

[0588] Figure 98 is a flowchart illustrating an implementation procedure of another exemplary embodiment in relation to a method for providing a human channel service in accordance with the present disclosure.

[0589] Referring to Figure 98, the controller 340 detects a user action for requesting conversion to a human channel mode (S2800) (or social network channel mode). In some embodiments, the user action may be a user action for pushing one of an up key, a down key, a right key or a left key of a remote controller, or may be a user action for pushing a mode conversion key (for example, a colored button) of the remote controller.

[0590] The controller 340 controls display of a human channel map in response to the detected user action (S2810). The display 302 may display the human channel map 7220 illustrated in Figure 72.

[0591] The controller 340 detects a user action for designation of a channel number (S2820).

[0592] The controller 340 confirms whether or not a plurality of human addresses is associated with the channel number in response to the detected user action (S2830). The controller 340 can confirm whether or not the plurality of human addresses is associated with the channel number by use of the human channel map. In one example, if a channel number '77' is designated in Step S2820, it can be confirmed from the human channel map of Figure 97 that the channel number '77' is associated with a single human address. If a channel number '80' is designated in Step S2820, it can be confirmed from the human channel map of Figure 97 that the channel number '80' is associated with the plurality of human addresses (i.e. Lisa@TV.com, Lisa@SNS.com and Lisa@facebook.com).

[0593] If the plurality of human addresses is present, the controller 340 controls display of a GUI for designation of a human address (S2840).

[0594] Figure 99 is a diagram illustrating an embodiment of a GUI for designation of a human address.

[0595] Referring to Figure 99, the display 302 may display a GUI 9900 as the GUI for designation of the human address if the user action for designating the channel number '80' is detected in Step S2820. The GUI 9900 lists the human addresses Lisa@TV.com, Lisa@SNS.com and Lisa@facebook.com associated with the channel number '80'.

[0596] The controller 340 detects a user action for designation of a human address (S2850). In one example, the user action may be a user action for pushing a particular key (for example, an 'OK' key) on a remote controller in a state in which an indicator 9901 of Figure 99 is located at a particular human address. The user action designates a human address where the indicator 9901 is located.

[0597] The controller 340 performs connection to the human address (S2860). If a plurality of human addresses is not associated with the channel number designated in Step S2820, the controller 340 performs connection to the human

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address associated with the channel number designated in Step S2820. Also, if a plurality of human addresses is associated with the channel number designated in Step S2820, the controller 340 performs connection to the human address designated in Step S2850.

[0598] The controller 340 may display at least one of a Web page associated with the SNS account of the SNS server, a screen captured by the electronic device, a broadcast channel that the user of the electronic device is viewing, content or content list stored in the electronic device, based on the result of connection. The Web page associated with the SNS account of the SNS server may be a home page.

[0599] Step S2860 may include at least one step included in the implementation procedure of the method for receiving content of a human channel in relation to Figures 19 to 21, and may include at least one step included in the implementation procedure of the method for setting connection between electronic devices of Figure 26.

[0600] Figure 100 is a diagram illustrating another embodiment of a screen on which a human channel map and content of a selected human channel are displayed.

[0601] Referring to Figure 100, the controller 340 may control display of a screen 10000 based on the result of connection of Step S2860. The screen 10000 is a screen on which a Web page received from the SNS server is displayed.

[0602] The screen 10000 may include a list region 10010, a user information region 10020, a statistical information region 10030, a friend list region 10040, a video link 10051, a picture link 10053 and a message link 10054. The list region 10010 displays a user question and answers of friends with respect to the question, the user information region 10020 displays brief introduction information with respect to the user, and the statistical information region 10030 displays statistical information. The friend list region 10040 displays a number of followers (other users who are registered to receive information about the user) and following (other users whom the user is registered to receive information about) , the video link 10051 is a connection link for a Web page on which unloaded video files can be seen, the picture link 10053 is a connection link for a Web page on which uploaded pictures can be seen, and the message link 10054 is a connection link for a Web page on which messages between the user and the friend(s) can be seen.

[0603] Figure 101 is a diagram illustrating an embodiment of a screen on which an Electronic Program Guide (EPG) for a human channel in accordance with the present disclosure is displayed.

[0604] Referring to Figure 101, the controller 304 may control display of an electronic program guide 10100 for a human channel. The electronic program guide 10100 may be displayed if a user action for requesting the EPG is detected during display of the human channel. If the user action for requesting the EPG is detected during display of a broadcast channel, the controller 340 may control display of an EPG for the broadcast channel.

[0605] The remote controller 304 may include a button for requesting the electronic program guide 10100 for the human channel. If the controller 340 detects a user action for pushing the button, the controller 340 may control display of the electronic program guide 10100 in response to the detected user action. In one embodiment, the button for requesting the EPG 10100 for the human channel may be a dedicated button. In this case, the EPG for the human channel may be displayed regardless of the type of content that is being displayed, e.g., broadcast, application, or human channel content. Alternatively, the button may be configured to display a particular type of EPG corresponding to the type of content being displayed, e.g., human channel type EPG.

[0606] The EPG 10100 may be configured as a grid or calendar. The EPG 10100 may include a human indicating cell 10111 at the first row of the first column and a human channel indicating cell 10112 at the first row of the second column, and the other columns of the first row may include date cells 10113 to 10118. The human indicating cell 10111 displays information indicating that human cells are listed in the first column, the human channel indicating cell 10112 displays information indicating that channel cells are listed in the second column, and the date cells 10113 to 10118 display dates.

[0607] In some embodiments, if there is no event associated with a particular date, a date cell displaying the particular date need not be displayed. In addition, date cells may be orderly displayed from the date cell 10113 representing a present date to the date cell 10114 representing a future date.

[0608] The electronic program guide 10100 includes human cells 10121, 10131 and 10141 in the other rows of the first column, channel cells 10122, 10132 and 10142 in the other rows of the second column and event cells 10123 and 10134 in the other rows of the other columns. The human cells 10121, 10131 and 10141 display information associated with owners of the respective human channels. Here, the human cells may display pictures of the owners of the human channels. The channel cells 10122, 10132 and 10142 display human channel numbers respectively (e.g., channel numbers 101, 110, and 116). The channel cells 10122, 10132 and 10142 may further display human addresses of the owners of the human channels (e.g., Mike, Miranda, and Sweety). In some embodiments, the human cells 10121, 10131 and 10141 need not be displayed.

[0609] The event cells are associated, according to positions thereof, with particular human cells, particular channel cells and particular date cells. More particularly, each event cell is associated with a human cell and a channel cell of the same row and is also associated with a date cell of the same column. The event cell is associated with an event, which is associated with a date displayed by the date cell of the same column, from among events associated with the human channel having the channel number displayed by the channel cell of the same row.

[0610] The event cell may display at least a part of event information, i.e. information about an associated event. The

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event information may include an SNS account associated with an event, information about an SNS site to which the event has been uploaded, information about the type of the event, the title of the event, the date of the event and detailed information about the event. The event may include at least one of a schedule, a function, a memorial day or holiday, content, or the like. The content may be a multimedia content such as a picture or video, or the content may be a message or note, for example.

[0611] The event cells may display at least one of event titles 10151, 10152 and 10153, event icons 10161 and 10162 or event source marks 10171, 10172 and 10173. The event cells may further display a reminder mark 10191 (or indicia). The reminder mark 10191 may be displayed in the case where a reminder for an event is set up. If the reminder is set up, an alarm for the event may be displayed as a message, for example, on the multi-functional display device or may be transmitted to a mobile appliance, an email address, or the like. The reminder may be set up according to a user request.

[0612] If one event cell is associated with a plurality of events, event information about the plurality of events may be displayed respectively. For example, an event cell 10134 displays a plurality of events 10172 and 10173.

[0613] Figure 102 is a diagram illustrating an embodiment of a screen in which detailed information of an event is displayed on an electronic program guide in accordance with the present disclosure.

[0614] Referring to Figure 102, the controller 340 may detect a user action for selecting a date cell of the electronic program guide 10200, for example, using a cursor or an arrow as illustrated. The controller 340 may control display of detailed information 10210 of an event associated with the date cell in response to the detected user action. In one example, if the controller 340 detects a user action for selecting a date cell 10243, the controller 340 controls display of the detailed information 10210 about a "Match" event associated with the date cell 10243 in response to the detected user action.

[0615] Figure 103 is a diagram illustrating an embodiment of a screen in which channel numbers are selected on an electronic program guide in accordance with the present disclosure.

[0616] Referring to Figure 103, the controller 340 may detect a user action for selecting a human cell of the electronic program guide 10300. The controller 340 may control display of content of a human channel of a person indicated by the human cell in response to the detected user action. In one example, if the controller 340 detects a user action for selecting a human cell 10341, the controller 340 controls display of content of a human channel of a person 'Sweety' indicated by the human cell 10341 in response to the detected user action.

[0617] Figure 104 is a diagram illustrating an embodiment of a screen on which content of a human channel is displayed.

[0618] Referring to Figure 104, if the controller 340 detects a user action for selecting the human cell 10341, the controller 340 may control display of content 10400 of a human channel of an owner 'Sweety' indicated by the human cell 10341 in response to the detected user action. The screen 10400 may further display a picture 10410 of the owner 'Sweety', a human address 10420 of the owner 'Sweety' and a channel number 10430 of the human channel of the owner 'Sweety'.

[0619] If the content 10400 is a video file, the controller 340 may further display a time guidance graph 10450 which represents a displayed time of the entire playing time of the video file. In the time guidance graph 10450, a region 10451 means a displayed amount, a region 10453 means an amount to be displayed, and a divider 10455 represents a position of an image being displayed.

[0620] Figures 105 to 107 are diagrams illustrating an embodiment in which an electronic program guide in accordance with the present disclosure is dragged.

[0621] Referring to Figures 105 to 107, in a state in which a pointer 10501 is located at the third row of the electronic program guide 10500, if the controller 340 detects a down event and subsequently, detects at least one drag event, the controller 340 moves the pointer 10501 to a position 10601 in response to the detected down event and the detected drag event. Then, the controller 340 controls display of a part of a date cell 10610 indicating a date after a certain time corresponding to a movement distance of the pointer 10501 has elapsed and at least a part of an event cell 10620 associated with an event of the date. The down event may be a user action for selecting a channel cell 10513, or may be a user action for selecting one of event cells 10523, 10533 and 10543.

[0622] If the controller 340 detects an up event after detection of the at least one drag event, the controller 340 controls display of an electronic program guide 10700 including an added column 10710. The added column 10710 includes a date cell 10713 representing a particular date after the certain time has elapsed and event cells 10723, 10724 and 10743 associated with the event of the particular date. The event cell 10723 displays content 10751 and 10752 uploaded at the corresponding date. The number of columns that are added (and the corresponding dates which are displayed) may correspond to an amount in which the cell is dragged in a prescribed direction. Additionally, the direction in which a cell is dragged may determine whether previous or later dates are added to the EPG. For example, dragging a cell to the right in the EPG may display columns for later dates.

[0623] In one embodiment, a date range for the dates included in the EPG may be entered to display events corresponding to the entered date range. A scroll bar may be provided to scroll the EPG to the desired date range. Moreover, a scroll bar may also be provided to scroll the EPG vertically to display additional channels assigned to different users and their respective SNS accounts. In one embodiment, each channel as well as a particular date (e.g., each row or

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column of the EPG) may be hidden based on a manual designation or based on user preferences or filters (e.g., friend lists). For example, the entire row for channel number 110 corresponding to Miranda may be hidden in the EPG.

[0624] Figure 108 is a diagram illustrating an embodiment of a screen in which a content list is displayed on an electronic program guide in accordance with the present disclosure.

[0625] Referring to Figure 108, the controller 340 may detect a user action for selecting an event cell 10823 of an electronic program guide 10800. The controller 340 may control display of a content list 10850 associated with the event cell 10823 in response to the detected user action. The content list 10850 may be a list of events associated with the event cell 10823, or may be a list of content uploaded to the server on a date associated with the event cell 10823. The server may be the server 10 or the server 20, and the content may be content uploaded to the server belonging to an account associated with a human channel having a channel number '101'. The account may be an SNS account.

[0626] Figure 109 is a diagram illustrating an embodiment of a screen on which a preview of content selected from among the content list of Figure 108 is displayed.

[0627] Referring to Figure 109, the controller 340 may detect a user action for selecting a particular item from among items 10911, 10913 and 10915 included in a content list 10910 displayed on the electronic program guide 10900. The controller 340 may control display of a preview 10950 of content indicated by the selected particular item. The preview may be prepared independently of the content, may be a part of the content, or may be the entire content.

[0628] In one example, if the controller 340 detects a user action for selecting an item 10914, the controller 340 controls display of a preview of content indicated by the item 10914 in the region 10950 in response to the detected user action. If the controller 340 detects a user action for selecting the region 10950 where the preview will be displayed, the controller 340 may control display of the content indicated by the item 10914 over the entire screen. In this case, the content may overlap over the electronic program guide 10900, or the electronic program guide 10900 may temporarily disappear from the screen during display of the content. In one embodiment, if the controller 340 detects a prescribed type of selection on an item 10911, 10913, 10914 (e.g., a double click or selection of a prescribed button on the remote controller), the content may be immediately displayed without displaying a preview of the item in region 10950.

[0629] Figure 110 is a diagram illustrating an embodiment of a screen on which a graphical user interface to produce an event is displayed.

[0630] Referring to Figure 110, the controller 340 may detect a user action for selecting a cell included in a row associated with a user human channel on an electronic program guide 11000. The controller 340 may control display of a graphical user interface 11010 to produce an event in response to the detected user action. In one example, an event cell 11024 is located on the same row as a channel cell 11022 indicating a channel number '0', a human channel having the channel number '0' means a human channel of the owner of the electronic device 300, and the channel cell 11022 further indicates a human address 'Mike' and therefore, the owner of the electronic device 300 is Mike. If the controller 340 detects a user action for selecting the event cell 11024, the controller 340 controls display of the graphical user interface 11010 in response to the user action.

[0631] The graphical user interface 11010 may include a first region 11011 used to input the title (or subject) of an event, a second region 11013 used to input the date of an event, and a third region 11015 used to input detailed information about an event.

[0632] Figure 111 is a diagram illustrating an embodiment of a screen on which an event input into the graphical user interface of Figure 110 is displayed.

[0633] Referring to Figure 111, a first region 11111 of the graphical user interface 11010 receives the title of an event "Match", a second region 11113 receives the date of the event "12 Mar' 11", and a third region 11115 receives detailed information about the event "I am going to watch the India-Aus Match from 3:00 PM. You guys are invited to my place. I have..."

[0634] Figures 112A and 112B are diagrams illustrating a screen on which an electronic program guide in accordance with the present disclosure, which reflects the event input in Figure 111, is displayed.

[0635] Referring to Figures 112A, if the input of the event illustrated in Figure 111 is completed, the controller 340 controls display of at least a part of the event information input in Figure 111 on an event cell 11224 associated with the date "12 Mar '11" of the electronic program guide 11200. The event cell 11224 is located on the row indicated by the human channel of the owner 'Mike' of the electronic device 300.

[0636] If the input of the event illustrated in Figure 111 is completed, the controller 340 may control transmission of the event information input in Figure 111 to the server 10, the server 20 and other electronic devices. The controller 340 may detect an SNS account associated with Mike from the human channel map and then, control upload of the event information to the detected SNS account. In addition, the controller 340 may acquire an address of the electronic device transmitted to each human channel of the human channel map and then, control transmission of the event information to the acquired address.

[0637] As shown in Figure 112B, an electronic program guide 11201 is displayed on the electronic device of Molly. The event information input in Figure 111 is displayed on an event cell 11234 associated with the date "12 Mar '11" at the row indicating the human channel of Mike. The electronic device of Molly may directly receive the event information

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from the electronic device of Mike, or may indirectly receive the event information through the server 10 or the server 20.

[0638] Figure 113 is a diagram illustrating an implementation procedure of an exemplary embodiment in relation to a method for providing service information in accordance with the present disclosure.

[0639] Referring to Figure 113, the controller 340 controls display of content of a human channel. The display 302 may display the screen 1500 of Figure 15, the screen 1600 of Figure 16, the screen 1700 of Figure 17, the screen 10000 of Figure 100 and the screen 10400 of Figure 104.

[0640] The controller 340 detects a user action for requesting service information (S2910).

[0641] The controller 340 constructs service information in response to the detected user action (S2920). The constructed service information may be event information and information associated with the event information and the human channel. The constructed service information may be stored in the storage unit 345.

[0642] In some embodiments, Step S2920 may include an implementation procedure of a method for constructing service information in relation to Figure 114.

[0643] The controller 340 controls display of the constructed service information (S2930). The display 302 may display the electronic program guide 10100 of Figure 101. The constructed service information may be displayed in the form of the electronic program guide 10100.

[0644] In some embodiments, Step S2930 may include an implementation procedure of a method for displaying service information in relation to Figure 115 as described hereinafter.

[0645] The controller 340 controls production of an event and transmission of the produced event (S2940).

[0646] In some embodiments, step S2940 may include an implementation procedure of a method for producing an event in relation to Figure 116 as described hereinafter.

[0647] In some embodiments, Step S2920 may be performed before Step S2910, the service information constructed in Step S2920 may be stored in the storage unit 345, and Step S2930 may be performed after Step S2910. In this case, the stored service information may be displayed in Step S2930.

[0648] Step S2920 may be initially performed, may be performed when an event is additionally produced or received, or may be executed at a predetermined interval. The service information stored in the storage unit 345 may be updated upon execution of Step S2920.

[0649] Figure 114 is a diagram illustrating an implementation procedure of an exemplary embodiment in relation to a method for constructing service information in accordance with the present disclosure.

[0650] Referring to Figure 114, the controller 340 controls transmission of an event information request signal to request event information (S3000). The controller 340 may request event information on a per human channel basis or on a per SNS account basis, or may request event information with respect to a human channel included in a human channel map using a single signal. The controller 340 may transmit the event information request signal to at least one of the server 10, the server 20 or the electronic device.

[0651] The network interface 320 receives an event signal including the event information in response to the event information request signal (S3010). The event signal may be received from at least one of the server 110, the server 20 or the electronic device.

[0652] The event information may include information about at least one event. For example, the event information may include the event 10152 and the event 10123 associated with the channel cell 10122 of Mike in Figure 101 and the event 10153 associated with the channel cell 10132 of Miranda.

[0653] The event information includes an SNS account associated with the event, and may further include at least one of information about the SNS site to which the event has been uploaded, information about the type of the event, the title of the event, the date of the event or detailed information about the event. The event may be an event uploaded to a site including the SNS account.

[0654] The controller 340 maps the event and the channel number to each other (S3020). By using a channel map including at least one channel number and at least one SNS account assigned to the at least one channel number and also, using an SNS account included in the received event information, the controller 340 may map one of the at least one event or one or more events to one of the at least one channel number. The channel map, which includes at least one channel number and at least one SNS account assigned to the at least one channel number, may be a human channel map, and the human channel map may be the human channel map illustrated in Figure 12 or the human channel map illustrated in Figure 97.

[0655] The controller 340 maps the event to the channel number if the SNS account of the event is equal to the SNS account assigned to the channel number. In one example, the event 10123 and the event 10152 assigned with the channel cell 10122 of Mike in Figure 101 may be mapped to the channel number '101', and the event 10153 associated with the channel cell 10132 of Miranda may be mapped to a channel number'110'.

[0656] The controller 340 constructs a guide screen to display the channel numbers and the events mapped to the channel numbers (S3030). The controller 340 may align the channel numbers and the mapped events in the order of dates of the events, or may align the events in the order of the channel numbers mapped to the events. The controller 340 may select and process event information to be displayed on event cells. The event information to be displayed on

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the event cells may be the titles of the events and may include at least one of icons indicating SNS sites to which the events have been uploaded or event icons.

[0657] Figure 115 is a diagram illustrating an implementation procedure of an exemplary embodiment in relation to a method for displaying service information in accordance with the present disclosure.

[0658] Referring to Figure 115, the controller 340 controls display of en electronic program guide (S3100). The display 302 may display the electronic program guide 10100 of Figure 101.

[0659] The controller 340 detects a user action for selecting en event cell (S3105).

[0660] The controller 340 displays detailed information about an event associated with the selected event cell in response to the detected user action (S3110). The display 302 may display the detailed information 10210 of Figure 102.

[0661] The controller 340 detects a user action for selecting a human cell or a channel cell (S3115).

[0662] The controller 340 controls display of content of the human channel indicated by the channel number associated with the selected human cell or the selected channel cell in response to the detected user action (S3120). The display 302 may display the - content 10400 of Figure 104.

[0663] The controller 340 detects a user action for selecting a date cell or an event cell (S3125). The user action for selecting the date cell or the event cell may be a down event.

[0664] The controller 340 detects a user action for dragging the cell selected in Step S3125 (S3130). The display 302 may display the electronic program guide 10600 of Figure 106.

[0665] The controller 340 detects a user action for dropping the dragged cell (S3135). The user action for dropping the dragged cell may be an up event.

[0666] The controller 340 displays the event cell and the date cell, associated with a particular date after a certain time has elapsed, on the electronic program guide in response to the detected user action (S3140). The display 302 may display the electronic program guide 10700 of Figure 107.

[0667] The controller 340 detects a user action for selecting the event cell associated with the particular date after a certain time has elapsed (S3145).

[0668] The controller 340 displays a list of content associated with the selected event cell in response to the detected user action (S3150). The display 302 may display the content list 10850 of Figure 108.

[0669] The controller 340 detects a user action for selecting one of items included in the content list (S3155).

[0670] The controller 340 controls display of content associated with the selected item (S3160). The controller 340 may display a preview of the content. The content may be displayed over the entire screen, or may be displayed on a certain region on the electronic program guide. In one example, the content may be displayed on the region 10950 of Figure 109.

[0671] Figure 116 is a diagram illustrating an implementation procedure of an exemplary embodiment in relation to a method for producing an event in accordance with the present disclosure.

[0672] Referring to Figure 116, the controller 340 detects a user action for selecting an event cell associated with a channel number indicating a user human channel (S3200). For example, the event cell associated with a channel number indicating a user human channel may be the event cell 11024 of Figure 110.

[0673] The controller 340 controls display of a graphical user interface to produce an event in response to the detected user action (S3210). The display 302 may display the graphical user interface 11010 of Figure 110.

[0674] The controller 340 maps the event indicated by the event information input via the graphical user interface to the channel number indicating the user human channel (S3220).

[0675] The controller 340 transmits the input event information and an SNS account assigned to the user human channel to the server (S3230). The server may be a server including the SNS account or may be the server 10. If the input event information and the SNS account are transmitted to the server 10, the server 10 transmits the event information and the SNS account assigned to the user human channel to the SNS site including the SNS account.

[0676] The controller 340 displays at least a part of the input event information on an event cell that is associated with the mapped channel number and a date included in the input event information (S3230). The display 302 may display the electronic program guide 11200 of Figures 112A and 112B.

[0677] Configurations of the electronic device and operating methods thereof in accordance with the present disclosure are not limited to the above described embodiments, and all or a part of the embodiments may be selectively combined to realize various modifications thereof.

[0678] The present disclosure may be implemented as code that can be written on a computer-readable recording medium and can thus be read by a computer. The computer-readable recording medium includes all types of recording devices in which data is stored in a computer-readable manner. Examples of the computer-readable recording medium include a ROM, a RAM, a CD-ROM, a magnetic tape, a floppy disc, an optical data storage, and a carrier wave (e.g., data transmission through the Internet). The computer-readable recording medium can be distributed over a plurality of computer devices connected through a network so that computer-readable code is written thereto and executed therefrom in a decentralized manner.

[0679] As is apparent from the above description, with an electronic device, a method of providing a human channel

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service, a method of constructing a human channel map and a method of relaying a human channel in accordance with the present disclosure, on-line networks between designated individuals can be accomplished using channel numbers. A user can communicate with a designated person by selecting a channel number assigned to the designated person, which assures convenient and easy utilization of a social network service. Further, according to the present disclosure, by allowing the user to acquire an address of an electronic device using a human address independent of an IP address as well as the IP address, the user can utilize the electronic device for a social network service even when the electronic device has a dynamic IP address or a private IP address. Furthermore, according to the present disclosure, the user can conveniently and easily access a social network service anytime and anywhere. Moreover, according to the present disclosure, by allowing a user to access an acquaintance connected to a social network through a human channel, the user and the acquaintance can easily view the same broadcast channel through human channels thereof.

[0680] The present disclosure provides a chat screen for allowing the user to confirm a friend who is viewing the same content as the user using a human channel map and to chat with the confirmed friend, whereby the user can view a broadcast while chatting with the friend who is viewing the same content.

[0681] Moreover, according to the present disclosure, as a result of providing a variety of kinds of channel maps and a user interface for assisting channel map switch, the user can easily select a variety of kinds of channel maps. Further, allowing the user to select a variety of kinds of channels listed in a channel map can further facilitate easy user selection of a variety of kinds of channels.

[0682] The present disclosure provides a menu for the scan of an App service and an SNS service, similar to a broadcast channel scan menu, which can allow the user not only to easily operate a scan menu, but also to easily set an App channel and a human channel based on the result of scan.

[0683] In addition, the present disclosure provides event information about friends in the form of an Electronic Program Guide (EPG), which can allow the user to easily acquire and manage information about friends, to easily produce a user event and to easily share the produced event with friends.

[0684] As embodied and broadly described herein, the present disclosure is directed to an electronic device, a method of providing a human channel service, a method of constructing a human channel map and a method of relaying a human channel, a method for inviting to view channel, a method for remotely viewing content at the same time, a method for providing channel map service, a method for providing a channel scan interface and a method for providing service information that substantially obviate one or more problems due to limitations and disadvantages of the related art.

[0685] One object of the present disclosure is to provide an electronic device, a method of providing a human channel service, a method of constructing a human channel map and a method of relaying a human channel, which enable a user to more conveniently and easily use a social network service.

[0686] Another object of the present disclosure is to provide an electronic device, a method of providing a human channel service, a method of constructing a human channel map and a method of relaying a human channel, which enable a user to use a social network service anywhere and anytime.

[0687] Another object of the present disclosure is to provide an electronic device, a method of providing a human channel service, a method of constructing a human channel map and a method of relaying a human channel, which enable a social network service between electronic devices even when the electronic devices have dynamic Internet Protocol (IP) addresses.

[0688] Another object of the present disclosure is to provide an electronic device, a method of providing a human channel service, a method of constructing a human channel map and a method of relaying a human channel, which enable a social network service between electronic devices even when the electronic devices have private IP addresses.

[0689] A further object of the present disclosure is to provide an electronic device and a method of making invitation to view a channel, which enable a user to invite an acquaintance connected to a social network to view a broadcast channel that the user is viewing.

[0690] Another object of the present disclosure is to provide an electronic device, which enables a user to view a broadcast while chatting with a friend who views the same content, and a method for remotely viewing content at the same time.

[0691] Another object of the present disclosure is to provide an electronic device and a method of providing a channel map service, which provide a variety of kinds of channel maps and enable a user to easily select a variety of kinds of channel maps.

[0692] A further object of the present disclosure is to provide an electronic device and a method of providing a channel map service, which provide a variety of kinds of channels and enable a user to easily select a variety of kinds of channels.

[0693] Another object of the present disclosure is to provide an electronic device, which can easily perform a channel scan with respect to various kinds of services and can provide a menu to perform a channel scan with respect to various kinds of services, similar to a conventional broadcast channel scan menu, and a method for providing a channel scan interface.

[0694] A further object of the present disclosure is to provide an electronic device, which provides information about friends in a social network, and a method for providing service information.

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[0695] To achieve these objects and other advantages and in accordance with the purpose of the invention, as embodied and broadly described herein, a method of providing a human channel service may include detecting a user action for designating a channel number, reading a human address associated with the designated channel number from a human channel map in response to the detected user action, acquiring an address of an electronic device to access based on the read human address, receiving content from the electronic device using the acquired address, and displaying the received content. The human address may include at least one of an e-mail address, an account name, a family name (or surname), a Session Initiation Protocol-Uniform Resource Locator (SIP-URL), or another appropriate type of identifier or address.

[0696] The address of the electronic device may include at least one of a Media Access Control (MAC) address, an Internet Protocol (IP) address, a port number, a Domain Name System (DNS) name or a Uniform Resource Locator (URL).

[0697] The acquiring the address of the electronic device may include reading the address of the electronic device based on the human address from a storage unit.

[0698] The acquiring the address of the electronic device may include transmitting a connection request signal including the human address to a server, and receiving the address of the electronic device from the server.

[0699] The human channel map may include a channel number, a human address and information associating the channel number and the human address with each other.

[0700] In one embodiment, a method of constructing a human channel map may include displaying a first Graphical User Interface (GUI) for designation of a human address, detecting a first user action for designating a human address, displaying a second GUI for designation of a channel number in response to the detected first user action, detecting a second user action for designating a channel number, and storing the channel number, the human address and information associating the channel number and the human address with each other in the human channel map in response to the detected second user action. The displayed first GUI may list at least one selectable human address. The displayed second GUI may list a plurality of selectable channel numbers.

[0701] In this embodiment, the human channel map constructing method may further include receiving the at least one human address from a server.

[0702] The human channel map constructing may further include displaying a Web page of a Social Network Service (SNS) server, the displayed Web page listing at least one human address, detecting a third user action for selecting one of the listed at least one human address, and displaying the first GUI in response to the detected third user action.

[0703] In one embodiment, a method of relaying a human channel may include receiving a first registration request signal, including a first human address and an address of a first electronic device, from the first electronic device, storing the first human address and the address of the first electronic device in response to the received first registration request signal, receiving a second registration request signal, including a second human address and an address of a second electronic device, from the second electronic device, storing the second human address and the address of the second electronic device in response to the received second registration request signal, receiving a connection request signal including the second human address from the first electronic device, and transmitting a response signal including the address of the second electronic device to the first electronic device in response to the received connection request signal, and transmitting a response signal including the address of the first electronic device to the second electronic device.

[0704] In one embodiment, an electronic device may include a controller configured to detect a user action for designating a channel number, read a human address associated with the designated channel number from a human channel map in response to the detected user action, and control acquisition of an address of an electronic device to access, based on the read human address, and a network interface configured to receive content from the electronic device using the acquired address.

[0705] The electronic device may further include a display configured to display the received content. Moreover, the controller may be configured to control transmitting a connection request signal including the human address to a server, and control receiving the address of the electronic device from the server.

[0706] In one embodiment, an electronic device may include an interface configured to receive a user action, a controller configured to detect a first user action for designating a human address, control displaying a second GUI for designation of a channel number in response to the detected first user action, detect a second user action for designating a channel number, and control storing the human address, the channel number, and information associating the human address and the channel number with each other in a human channel map in response to the detected second user action, and a storage device configured to store the human channel map.

[0707] The interface may include at least one of an image capture device, a touch screen, a touch pad, or a remote controller receiver.

[0708] In one embodiment, a method of constructing a human channel map may include displaying a GUI for setting up a channel, the displayed GUI including a human channel region listing at least one human address and a channel region listing at least one channel number, detecting a first user action for selecting one of the at least one human address, detecting a second user action for dragging the selected human address, detecting a third user action for

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selecting one of the at least one channel number, and storing the selected human address, the selected channel number, and information associating the channel number and the human address with each other in the human channel map in response to the detected third user action. The displayed GUI may further include a broadcast channel region including at least one broadcast channel and an App channel region including at least one App channel.

[0709] In this embodiment, the human channel map constructing method may further include confirming whether or not a human address associated with the selected channel number is present in the human channel map, in response to the detected third user action, and deleting the associated human address, the selected channel number and information associating the associated human address and the selected channel number with each other from the human channel map if the associated human address is present.

[0710] In accordance with another aspect of the present disclosure, a method of making invitation to view a channel includes detecting a first user action for selecting a displayed broadcast program, detecting a second user action for selecting one of at least one channel number included in a displayed human channel map, and transmitting a channel viewing request signal for requesting viewing of the selected broadcast program to an electronic device or a server associated with the selected channel number, in response to the second user action, and the transmitted channel viewing request signal includes at least one of detailed user information, detailed information about a physical channel for transmitting the broadcast program, a service name of the broadcast program, a service Identifier (ID) of the broadcast program, a channel number of the broadcast program, an event name of the broadcast program, a transport stream ID of the broadcast program, a network ID of the broadcast program, information about a service provider providing the broadcast program, information about a transmission medium for transmitting the broadcast program or information about a nation or an area where the service provider is located. The displayed human channel map may further include at least one of a channel name, event name or residual broadcast time of the broadcast program displayed by the electronic device associated with the channel number.

[0711] The method may further include transmitting a channel guiding signal, including at least one of the channel name, event name or residual broadcast time of the broadcast program, to the electronic device or the server according to an access method associated with the channel number included in the human channel map.

[0712] The method may further include receiving a channel viewing request signal from the electronic device, and confirming whether or not a broadcast service is receivable from a service provider indicated by information included in the received channel viewing request signal.

[0713] The method may further include searching for a channel, which broadcasts the broadcast program indicated by information included in the received channel viewing request signal, from stored Electronic Program Guide (EPG) data based on information included in the channel viewing request signal, if reception of the broadcast service from the service provider is not possible.

[0714] The method may further include receiving a channel viewing request signal from a server, receiving a broadcast program of a channel indicated by information included in the received channel viewing request signal, and displaying the received broadcast program. Information included in the channel viewing request signal may be information obtained as the server amends information included in the channel viewing request signal received from the electronic device according to a difference of at least one of the service provider providing the broadcast service, transmission medium or area.

[0715] The transmitting the signal to the electronic device may include reading a human address associated with the channel number from a stored human channel map, acquiring an address of the electronic device based on the read human address, and transmitting the channel viewing request signal using the acquired address. The human address may include at least one of an e-mail address, an account name, a family or and a Session Initiation Protocol-Uniform Resource Locator (SIP-URL). The address of the electronic device may include at least one of a Media Access Control (MAC) address, an Internet Protocol (IP) address, a port number, a Domain Name System (DNS) name or a Uniform Resource Locator (URL).

[0716] In accordance with a further aspect of the present disclosure, an electronic device includes an interface configured to receive a user action, a controller configured to control displaying a broadcast program and a human channel map including at least one channel number, detect a first user action for selecting the broadcast program, detect a second user action for selecting one of the at least one channel number, and control transmitting a channel viewing request signal for requesting viewing of the selected broadcast program to an electronic device or a server associated with the selected channel number in response to the detected second user action, and a network interface configured to output the channel viewing request signal, and the transmitted channel viewing request signal includes at least one of detailed user information, detailed information about a physical channel for transmitting the broadcast program, a service name of the broadcast program, a service Identifier (ID) of the broadcast program, a channel number of the broadcast program, an event name of the broadcast program, a transport stream ID of the broadcast program, a network ID of the broadcast program, information about a service provider providing the broadcast program, information about a transmission medium for transmitting the broadcast program or information about a nation or an area where the service provider is located. The human channel map may further include at least one of a channel name, event name or residual

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broadcast time of the broadcast program displayed by the electronic device associated with the channel number.

[0717] The controller may be configured to control transmitting a channel guiding signal, including at least one of the channel name, event name or residual broadcast time of the broadcast program, to the electronic device or the server according to an access method associated with the channel number included in the human channel map.

[0718] The network interface may be configured to receive a channel viewing request signal from an electronic device, and the controller is configured to confirm whether or not a broadcast service is receivable from a service provider indicated by information included in the received channel viewing request signal.

[0719] The controller may be configured to search for a channel, which broadcasts the broadcast program indicated by information included in the received channel viewing request signal, from stored Electronic Program Guide (EPG) data based on information included in the channel viewing request signal, if reception of the broadcast service from the service provider is not possible.

[0720] The network interface may be configured to receive a channel viewing request signal from a server, and the controller may be configured to control receiving a broadcast program of a channel indicated by information included in the received channel viewing request signal. Information included in the channel viewing request signal may be information obtained as the server amends information included in the channel viewing request signal received from the electronic device according to a difference of at least one of the service provider providing the broadcast service, transmission medium or area.

[0721] The controller may be configured to read a human address associated with the channel number from a stored human channel map, acquire an address of the electronic device based on the read human address, and control transmitting the channel viewing request signal using the acquired address. The human address may include at least one of an e-mail address, an account name, a family name or a Session Initiation Protocol-Uniform Resource Locator (SIP-URL). The address of the electronic device may include at least one of a Media Access Control (MAC) address, an Internet Protocol (IP) address, a port number, a Domain Name System (DNS) name or a Uniform Resource Locator (URL).

[0722] In accordance with another aspect of the present disclosure, a method for remotely viewing content at the same time includes displaying content, detecting a user action for requesting a simultaneous viewing mode, confirming the presence of an owner who is viewing the displayed content from among owners of human channels included in a human channel map in response to the detected user action, and displaying a silhouette of the confirmed owner. The displayed silhouette may be changed and displayed according to the emotions of the owner. The displayed silhouette may be changed and displayed according to a motion of the owner. The silhouette may be displayed as a 3D image. A chat phrase of the owner may be displayed at a location associated with the silhouette.

[0723] The method for remotely viewing content at the same time may further include reflecting a screen effect requested by the owner on the displayed content.

[0724] The confirming the presence of the owner may include transmitting an image frame request signal to request an image frame at a particular time, acquiring the image frame at the particular time from among image frames of the displayed content, receiving an image frame transmission signal including the image frame at the particular time, and comparing the acquired image frame with the image frame included in the received image frame transmission signal so as to confirm the presence of the owner.

[0725] The confirming the presence of the owner may include transmitting an owner list request signal including information about the content to a server, receiving an owner list from the server, and confirming an owner included in the owner list as the owner who is viewing the displayed content. The information about the content may include at least one of detailed user information, detailed information about a physical channel that transmits the content, a service name of the content, a service ID of the content, a channel number of the content, an event name of the content, a transport stream ID of the content, a network ID of the content, information about a service provider to provide the content, information about transmission media to transmit the content or information about a nation or locale where the service provider is located.

[0726] The human channel map may include a channel number, a human address and information associating the channel number and the human address with each other. The human address may be an identification mark given to the owner.

[0727] In accordance with another aspect of the present disclosure, an electronic device includes an interface configured to receive a user action for requesting a simultaneous viewing mode, and a controller configured to confirm the presence of an owner who is viewing content from among owners of human channels included in a human channel map in response to the user action if the user action is detected during display of the content and to control display of a silhouette of the confirmed owner.

[0728] The controller may control change of the displayed silhouette according to the emotions of the owner and display of the changed silhouette.

[0729] The controller may control change of the displayed silhouette according to a motion of the owner and display of the changed silhouette.

[0730] The controller may control display of a chat phrase of the owner at a location associated with the silhouette.

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[0731] The controller may control reflection of a screen effect requested by the owner on the displayed content.

[0732] The controller may control display of the silhouette as a 3D image.

[0733] The controller may control transmission of an image frame request signal for requesting an image frame at a particular time, acquiring the image frame at the particular time from among image frames of the displayed content, and if an image frame transmission signal including the image frame at the particular time is received, comparing the acquired image frame with the image frame included in the received image frame transmission signal so as to confirm the presence of the owner.

[0734] The controller may control transmission of an owner list request signal including information about the content to a server, and if an owner list is received from the server, confirming an owner included in the owner list as the owner who is viewing the displayed content.

[0735] The information about the content may include at least one of detailed user information, detailed information about a physical channel to transmit the content, a service name of the content, a service ID of the content, a channel number of the content, an event name of the content, a transport stream ID of the content, a network ID of the content, information about a service provider to provide the content, information about a transmission media to transmit the content or information about a nation or locale where the service provider is located.

[0736] The human channel map may include a channel number, a human address and information associating the channel number and the human address with each other. The human address may be an identification mark given to the owner.

[0737] In accordance with another aspect of the present disclosure, a method of providing a channel map service includes displaying a first channel map on a screen on which content is being displayed, detecting a first user action for requesting channel map switch, and switching the displayed first channel map to a second channel map, in response to the detected first user action. One of the first channel map and the second channel map is a human channel map including at least one human channel. The first user action may be an action in which a user presses one of directional keys of a remote controller.

[0738] The switching to the human channel map may include displaying content of one of human channels included in the human channel map.

[0739] The channel map service providing method may further include detecting a third user action for requesting channel switch in a state in which the human channel map is displayed, switching a selected human channel to another human channel in the human channel map in response to the detected third user action, and displaying content of the switched human channel.

[0740] The displaying may include reading a human address associated with a channel number of the human channel, acquiring an address of an electronic device to access, based on the read human address, receiving the content from the electronic device using the acquired address, and displaying the received content.

[0741] The channel map service providing method may further include detecting a second user action for requesting channel map switch, and switching the displayed second channel map to a third channel map in response to the detected second user action.

[0742] The channel map service providing method may further include detecting a third user action for requesting a full channel map, and displaying a full channel map including the at least one human channel, in response to the detected third user action.

[0743] The displayed full channel map may further include at least one broadcast channel and at least one App channel.

[0744] The displayed full channel map may include a sheet on which the at least one human channel is marked, and the sheet is selected by a sheet tab.

[0745] The full channel map may include sheets on which the at least one broadcast channel and the at least one App channel are marked respectively.

[0746] The channel map service providing method may further include detecting a third user action for requesting a recently viewed channel map, and displaying a recently viewed channel map including a broadcast channel, a human channel and an App channel displayed within a preset period, in response to the detected third user action.

[0747] In accordance with another aspect of the present disclosure, a method of providing a channel map service includes detecting a first user action for requesting a channel map, and displaying a channel map including at least one human channel in response to the detected first user action. The channel map may include a connection state mark indicating an online state of an owner of the at least one human channel. The channel map may further include at least one broadcast channel and at least one App channel.

[0748] The connection state mark may include a first connection state mark indicating a first online state for representing whether or not the owner is online via an electronic device, and a second connection state mark indicating a second online state for representing whether or not the owner is logged in to a server. Information about the first online state may be received from the electronic device or the server.

[0749] The channel map service providing method may further include transmitting information, indicating that the owner of the human channel is online via the electronic device, to at least one electronic device associated with the at

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least one human channel or to the server.

[0750] The transmitting to the electronic device may include reading a human address associated with a channel number from a stored human channel map, acquiring an address of the electronic device based on the read human address, and transmitting information, indicating that the owner is online, using the acquired address. The human address may include at least one of an e-mail address, an account name, a family name or a Session Initiation Protocol-Uniform Resource Locator (SIP-URL). The address of the electronic device may include at least one of a Media Access Control (MAC) address, an Internet Protocol (IP) address, a port number, a Domain Name System (DNS) name or a Uniform Resource Locator (URL).

[0751] In accordance with a further aspect of the present disclosure, an electronic device includes an interface configured to detect a user action, and a controller configured to control displaying a first channel map on a screen on which content is being displayed, detect a first user action for requesting channel map switch, and switch the displayed first channel map to a second channel map in response to the detected first user action, and one of the first channel map and the second channel map is a human channel map including at least one human channel.

[0752] In accordance with another aspect of the present disclosure, a method for providing a channel scan interface includes displaying a plurality of menu items to select service types, detecting a user action for selecting one of the plurality of displayed menu items, scanning information to construct a channel of the service type indicated by the selected menu item in response to the detected user action, and displaying the result of scan. One of the service types may be a human channel. The service types may further include at least one of a broadcast channel or an App channel.

[0753] The scanning may include transmitting a signal to request information about a friend to a server and receiving the information about the friend from the server. The information about the friend may include a single SNS account, or may include one or more SNS accounts.

[0754] The displaying the result of scan may include displaying the single SNS account, or displaying at least one of the one or more SNS accounts.

[0755] The method for providing the channel scan interface may further include assigning a first channel number to the single SNS account or to one of the one or more SNS accounts.

[0756] The method for providing the channel scan interface may further include assigning the first channel number to at least one SNS account among other SNS accounts of a friend associated with the SNS account to which the first channel number has been assigned.

[0757] The first channel number may be equal to a channel number assigned to another SNS account of the friend associated with the single SNS account. The first channel number may be a channel number assigned to a broadcast channel or an App channel.

[0758] In accordance with another aspect of the present disclosure, an electronic device includes a controller configured to control display of a plurality of menu items for selecting service types, detect a user action for selecting one of the plurality of displayed menu items, control scan of information to construct a channel of the service type indicated by the selected menu item in response to the detected user action, and a display to display the result of scan. One of the service types may be a human channel.

[0759] In accordance with another aspect of the present disclosure, a method for providing service information, includes receiving event information including information about at least one event, mapping one of the at least one events or one or more events to one of at least one channel numbers by use of a channel map including the at least one channel number and at least one Social Network Service (SNS) account assigned to the at least one channel number and an SNS account included in the received event information, and displaying one of the at least one channel numbers or one or more channel numbers and at least a part of information about the event mapped to one of the at least one channel numbers or the one or more channel numbers. The event may be uploaded to an SNS site including the SNS account. The event may include at least one of a schedule, a function, a memorial day or content. The event information may include an SNS account associated with the event, and further includes at least one of information about an SNS site to which the event has been uploaded, information about the type of the event, the title of the event, the date of the event or detailed information about the event. The channel map may be a human channel map. At least a part of the displayed information may be the title of the event. The method may further include displaying at least one of an icon indicating an SNS site to which the mapped event has been uploaded or an icon of the mapped event.

[0760] A broadcast channel may be further assigned to one of the at least one channel numbers or the one or more channel numbers. A plurality of SNS accounts may be assigned to one of the at least one channel numbers or the one or more channel numbers.

[0761] One of the at least one events or one or more events may be mapped to a channel number, to which an SNS account associated with the event is assigned.

[0762] One of the at least one channel numbers or the one or more channel numbers and at least a part of the displayed information may be displayed in a calendar form.

[0763] The calendar form may be configured such that the displayed one channel number or one or more channel numbers are listed in columns, dates are listed in rows, and at least a part of the displayed information is displayed on

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a corresponding region on the basis of the channel number columns and the date rows. At least a part of information about a plurality of events may be separately displayed on the region. A reminder mark may be further displayed on the region.

[0764] The method for providing service information may further include detecting a first user action for selecting the region or a region on which the date is displayed, detecting a second user action for dragging the selected region, detecting a third user action for dropping the dragged region, and displaying a particular date after a certain time has elapsed in response to the detected third user action and at least a part of information about an event of the date.

[0765] The method for providing service information may further include detecting a user action for selecting a region located at a row, containing a region on which a user channel number is displayed, from among a region on which one of the at least one channel numbers or the one or more channel numbers are displayed, and displaying a graphical user interface to produce an event in response to the detected user action.

[0766] The method for providing service information may further include detecting a user action for selecting a region on which at least a part of information about the mapped event is displayed, and displaying detailed information about the event in response to the detected user action.

[0767] The method for providing service information may further include detecting a user action for selecting a region on which one of the at least one channel numbers or the one or more channel numbers are displayed, and displaying content of a human channel indicated by the channel number in response to the detected user action.

[0768] The method for providing service information may further include detecting a user action for selecting a region on which at least a part of information about the mapped event is displayed, and displaying a list of at least one piece of content associated with the event in response to the detected user action.

[0769] In accordance with a further aspect of the present disclosure, an electronic device includes a network interface configured to receive event information including information about at least one event, a storage unit configured to store at least one channel number and at least one SNS account assigned to the at least one channel number, and a controller configured to map one of the at least one events or one or more events to one of the at least one channel numbers by use of the stored SNS account and an SNS account included in the received event information and to construct a guide screen for displaying one of the at least one channel numbers or the one or more channel numbers and at least a part of information about the event mapped to one of the at least one channel numbers or the one or more channel numbers.

[0770] Any reference in this specification to "one embodiment," "an embodiment," "example embodiment," etc., means that a particular feature, structure, or characteristic described in connection with the embodiment is included in at least one embodiment of the invention. The appearances of such phrases in various places in the specification are not necessarily all referring to the same embodiment. Further, when a particular feature, structure, or characteristic is described in connection with any embodiment, it is submitted that it is within the purview of one skilled in the art to effect such feature, structure, or characteristic in connection with other ones of the embodiments.

[0771] Although embodiments have been described with reference to a number of illustrative embodiments thereof, it should be understood that numerous other modifications and embodiments can be devised by those skilled in the art that will fall within the spirit and scope of the principles of this disclosure. More particularly, various variations and modifications are possible in the component parts and/or arrangements of the subject combination arrangement within the scope of the disclosure, the drawings and the appended claims. In addition to variations and modifications in the component parts and/or arrangements, alternative uses will also be apparent to those skilled in the art.

Claims

1. A method for displaying event information in a multi-functional display device, the method comprising:

receiving information related to at least one event;
mapping the at least one event to a channel number using a channel map; and
displaying at least a portion of the event information and the corresponding channel number on a display,
wherein the channel map includes a first channel number for displaying broadcast programs and a second channel number for displaying content associated with a Social Network Service (SNS) account, and
wherein the event information is mapped to the second channel number and the SNS account associated with the second channel number.

2. The method of claim 1, further comprising:

detecting a selection of the displayed event information associated with the SNS account;
tuning the multi-functional display device to the second channel; and displaying the event information on the display.

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3. The method of claim 1, wherein the event is received from an SNS server or a associated with the SNS account.

4. The method of claim 1, wherein the event includes at least one of a schedule, a function, a holiday, or multimedia content.

5. The method of claim 1, wherein the event information includes account information for the SNS account associated with the event, and at least one of an SNS server address, an event type information, a title of the event, a date of the event, or a description about the event.

6. The method of claim 1, wherein the first channel number and the second channel number are the same channel number.

7. The method of claim 1, wherein a plurality of SNS accounts are assigned to the second channel number.

8. The method of claim 1, wherein the portion of the information related to the at least one event is a title of the event.

9. The method of claim 1, wherein the mapped event information and the corresponding channel number are displayed in a calendar.

10. The method of claim 1, wherein the mapped event information and the corresponding channel number are displayed in an electronic programming guide (EPG).

11. The method of claim 1, wherein the mapped event information and the corresponding channel number are displayed in a grid, and wherein the channel numbers are listed in a first column of the grid, dates are listed in a first row of the grid, and the event information is displayed in a region of the grid that corresponds to the channel number and date associated with the event.

12. The method of claim 11, further comprising:

detecting an input on the grid to select and drag the grid in a prescribed direction; and
displaying one or more columns corresponding to one or more additional dates based on the selection.

13. The method of claim 11, further comprising:

detecting a selection of a second region on the grid;
displaying a graphical user interface (GUI) to create an event based on the selection;
associating the new event to a channel number and date; and
transmitting information associated with the new event to an SNS server associated with the new event.

14. The method according to claim 11, further comprising:

detecting a selection of the displayed event information on the grid; and
displaying additional information related to the selected event in response to the detected selection.

15. A multi-functional display device comprising:

a display for displaying broadcast programs or data;
a network interface configured to receive event information associated with a social network service (SNS) account for an individual or entity;
a storage device configured to store at least one channel number and at least one SNS account information assigned to the at least one channel number; and
a controller configured to map the event information to one of the at least one channel numbers and to construct an electronic programming guide (EPG) that includes the mapped event information and the corresponding channel number for display on the display.

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FIG. 1

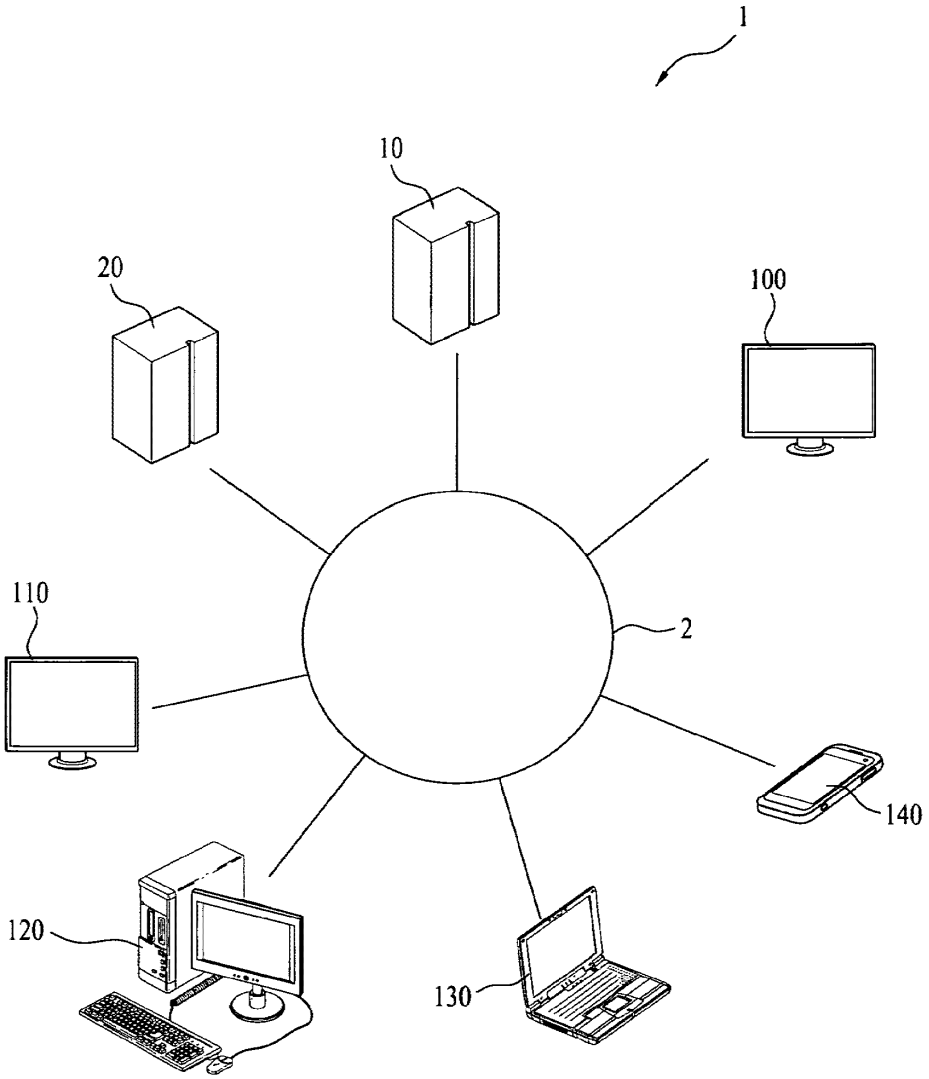


FIG. 2

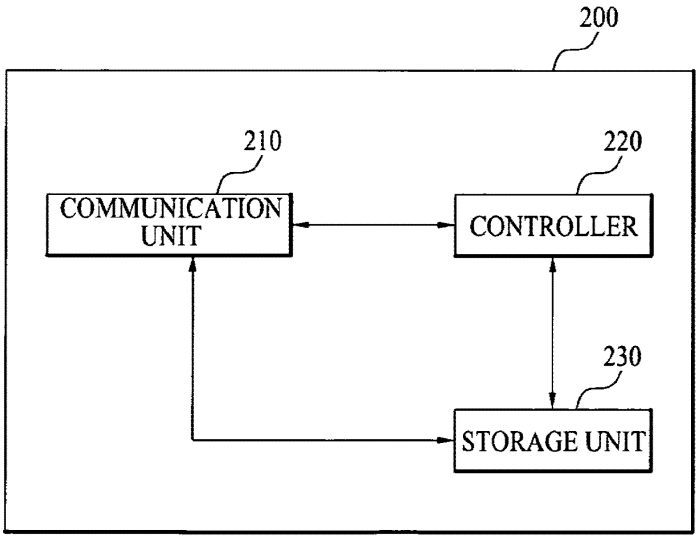

200
210
COMMUNICATION UNIT
220
CONTROLLER
230
STORAGE UNIT

FIG. 3

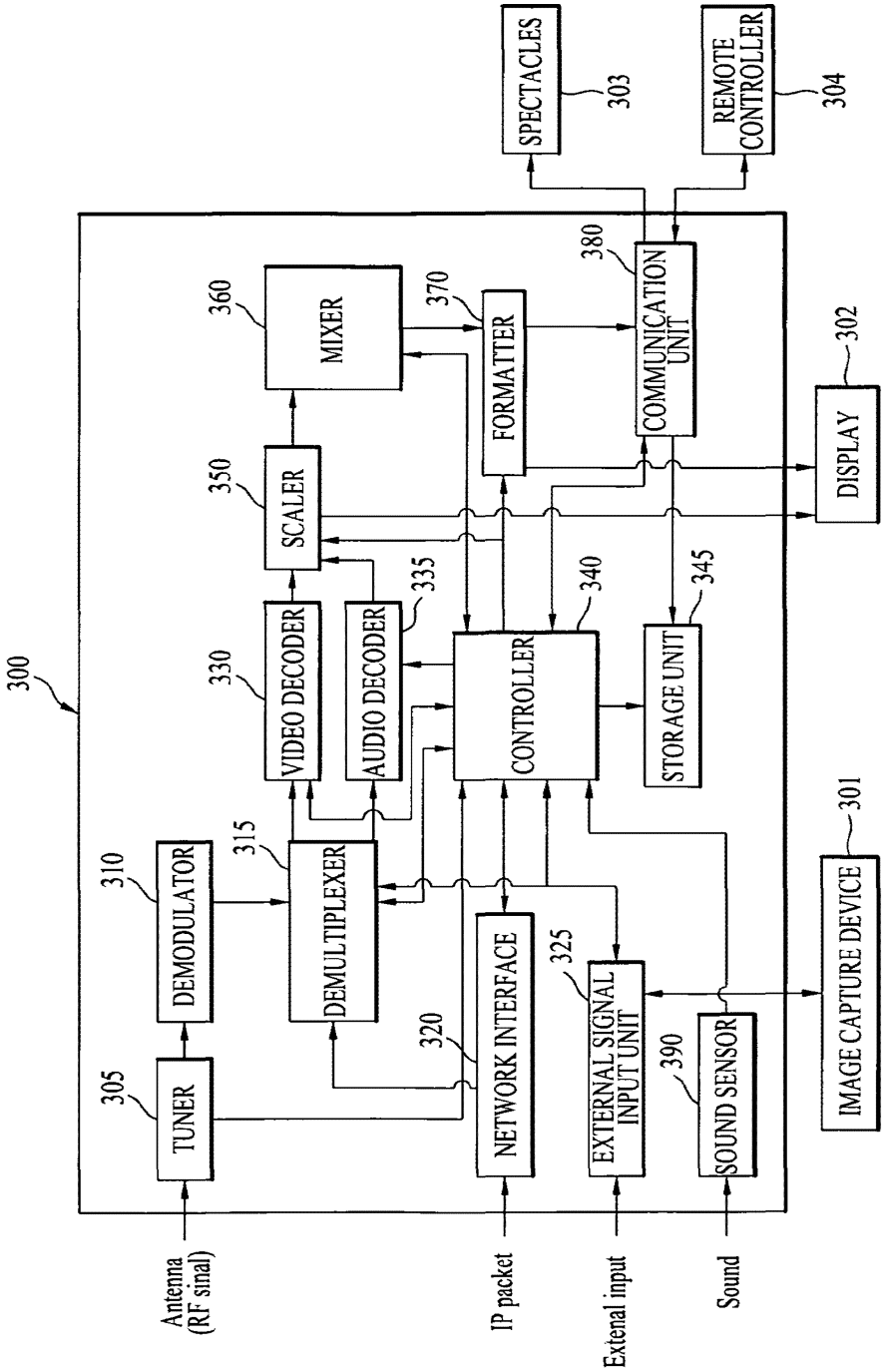

300
SPECTACLES
303
REMOTE CONTROLLER
304
380
COMMUNICATION UNIT
360
MIXER
370
FORMATTER
302
DISPLAY
350
SCALER
330
VIDEO DECODER
335
AUDIO DECODER
340
CONTROLLER
345
STORAGE UNIT
310
DEMODULATOR
315
DEMULTIPLEXER
301
IMAGE CAPTURE DEVICE
305
TUNER
320
NETWORK INTERFACE
325
EXTERNAL SIGNAL INPUT UNIT
390
SOUND SENSOR
Antenna (RF sinal)
IP packet
Extenal input
Sound

FIG. 4

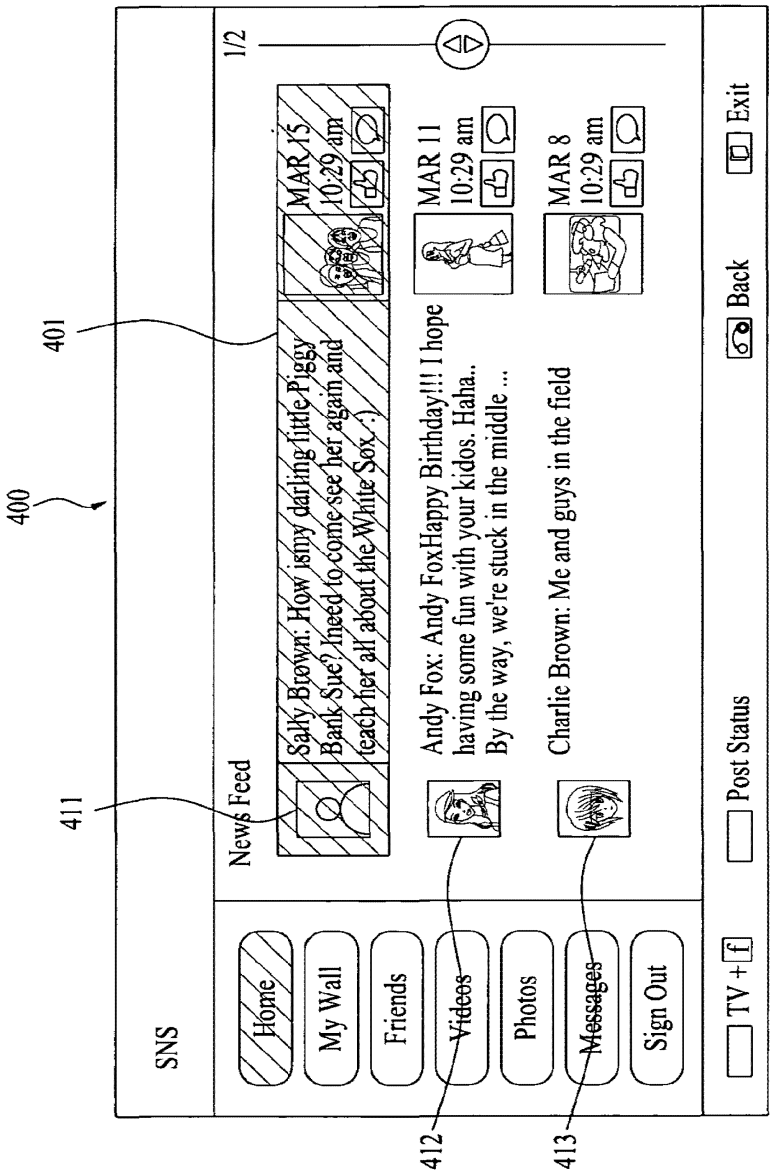

400
401
411
412
413
SNS
Home
My Wall
Friends
Videos
Photos
Messages
Sign Out
News Feed
1/2
Sally Brown: How is my darling little Piggy Bank Sue? I need to come see her again and teach her all about the White Sox. :)
MAR 15
10:29 am
Andy Fox: Andy FoxHappy Birthday!!! I hope having some fun with your kidos. Haha.. By the way, we're stuck in the middle ...
MAR 11
10:29 am
Charlie Brown: Me and guys in the field
MAR 8
10:29 am
TV + f
Post Status
Back
Exit

FIG. 5

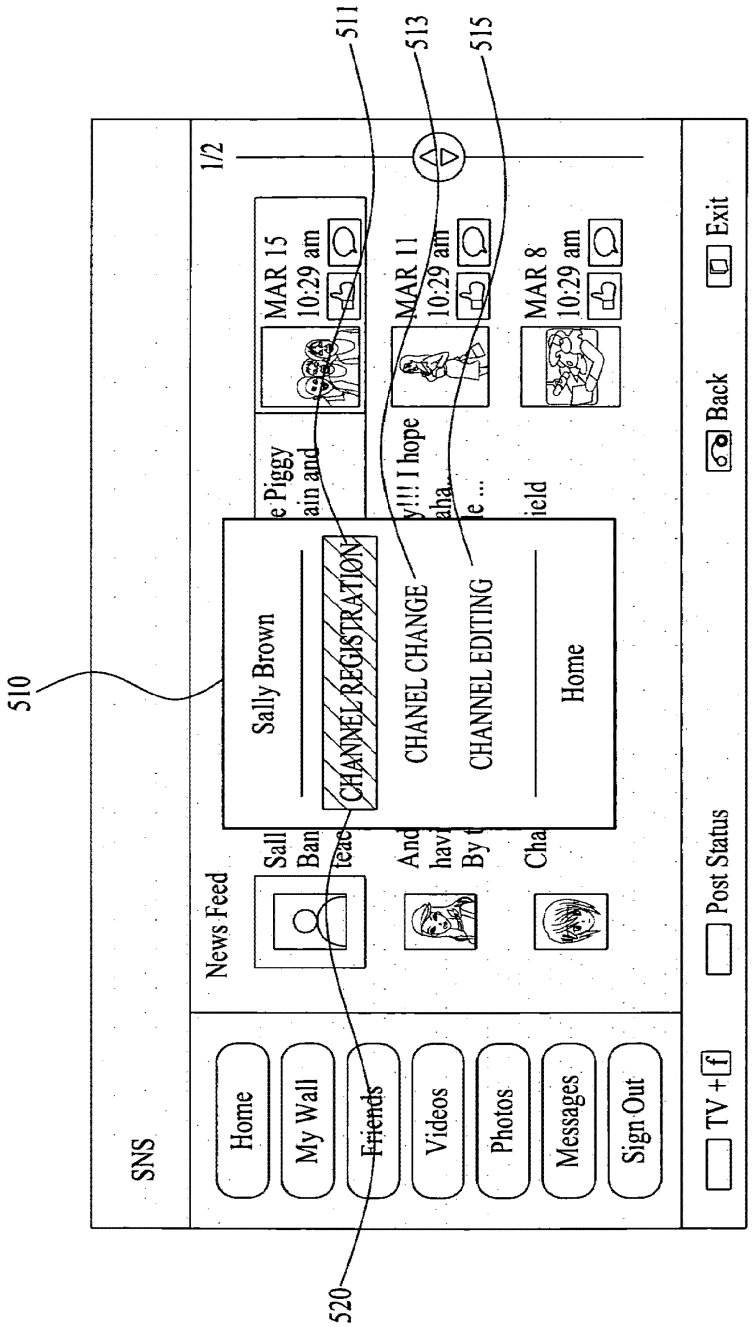

510
511
513
515
520
SNS
Home
My Wall
Friends
Videos
Photos
Messages
Sign Out
News Feed
1/2
Sally Brown
CHANNEL REGISTRATION
CHANEL CHANGE
CHANNEL EDITING
Home
MAR 15
10:29 am
MAR 11
10:29 am
MAR 8
10:29 am
TV + f
Post Status
Back
Exit

FIG. 6

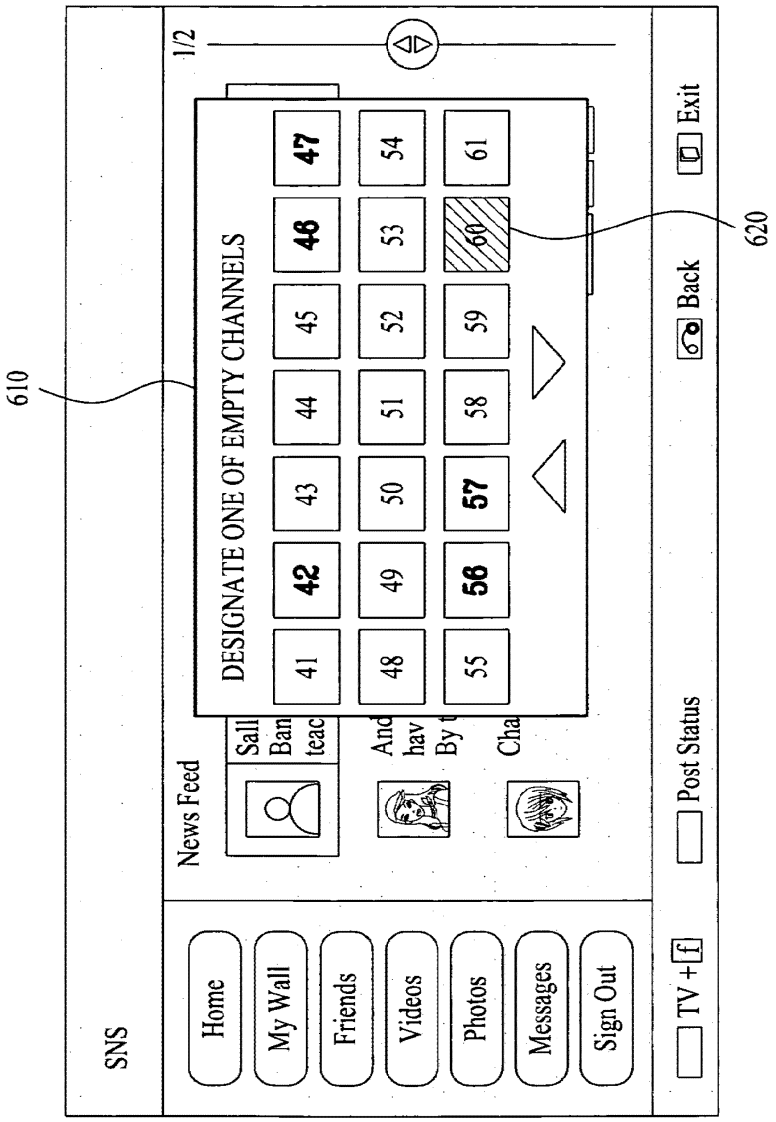
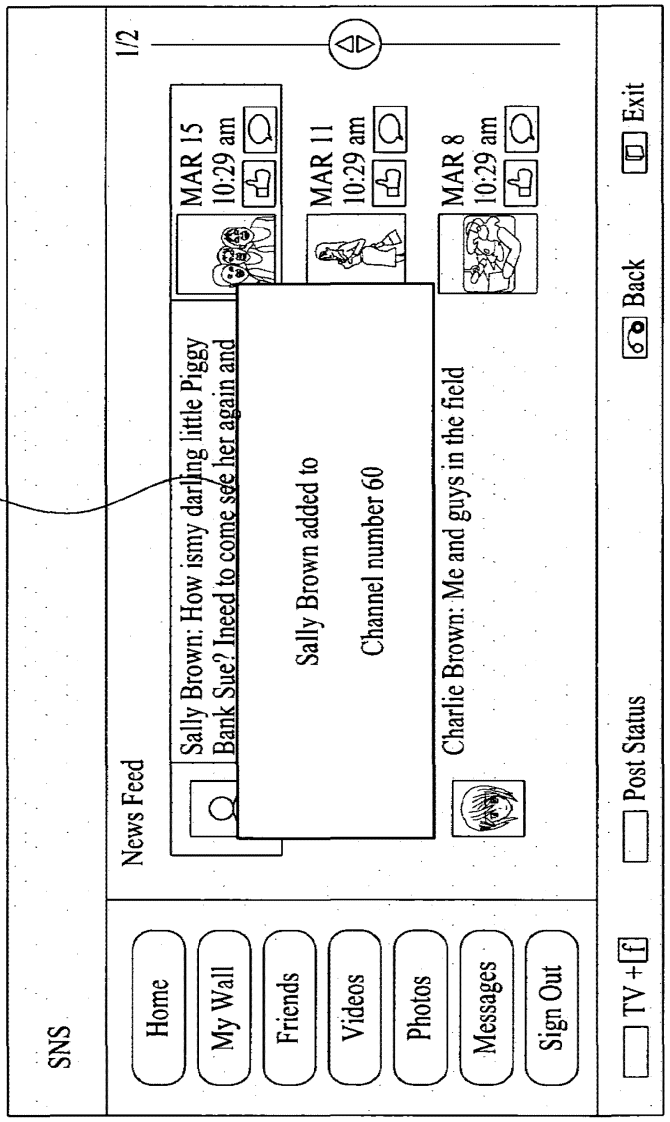

610
620
SNS
Home
My Wall
Friends
Videos
Photos
Messages
Sign Out
News Feed
1/2
DESIGNATE ONE OF EMPTY CHANNELS
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
TV + f
Post Status
Back
Exit

FIG. 7



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FIG. 8

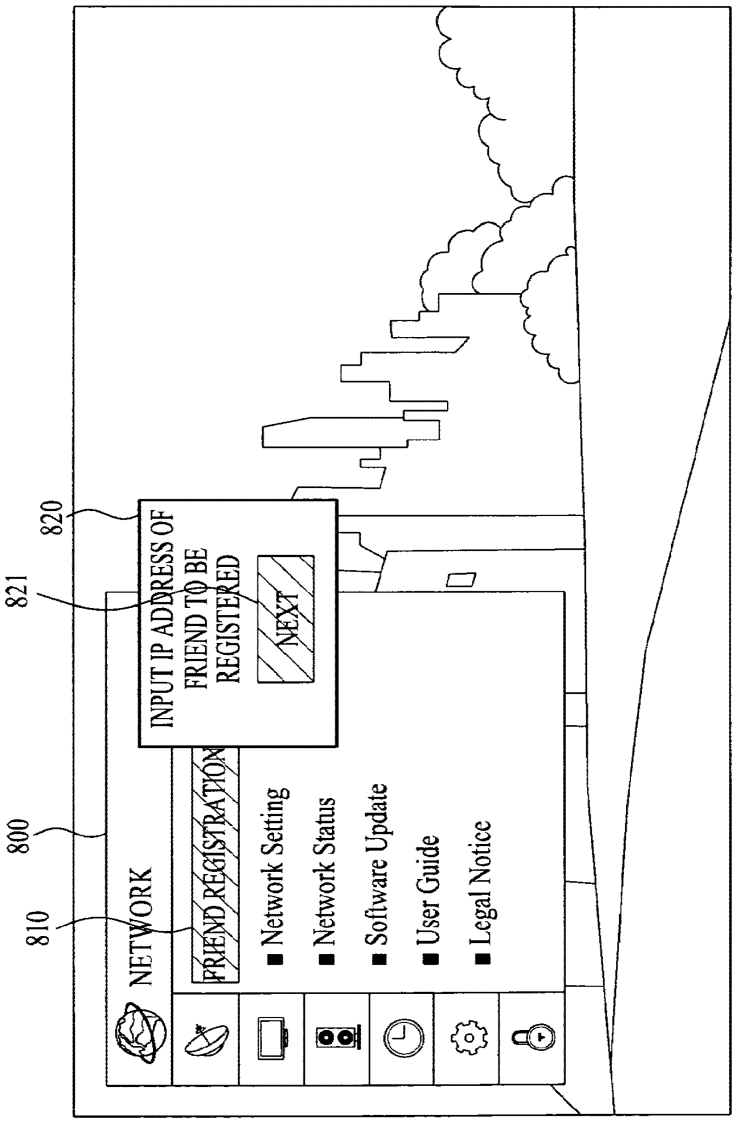

820
821
800
810
INPUT IP ADDRESS OF FRIEND TO BE REGISTERED
NEXT
NETWORK
FRIEND REGISTRATION
■ Network Setting
■ Network Status
■ Software Update
■ User Guide
■ Legal Notice

FIG. 9

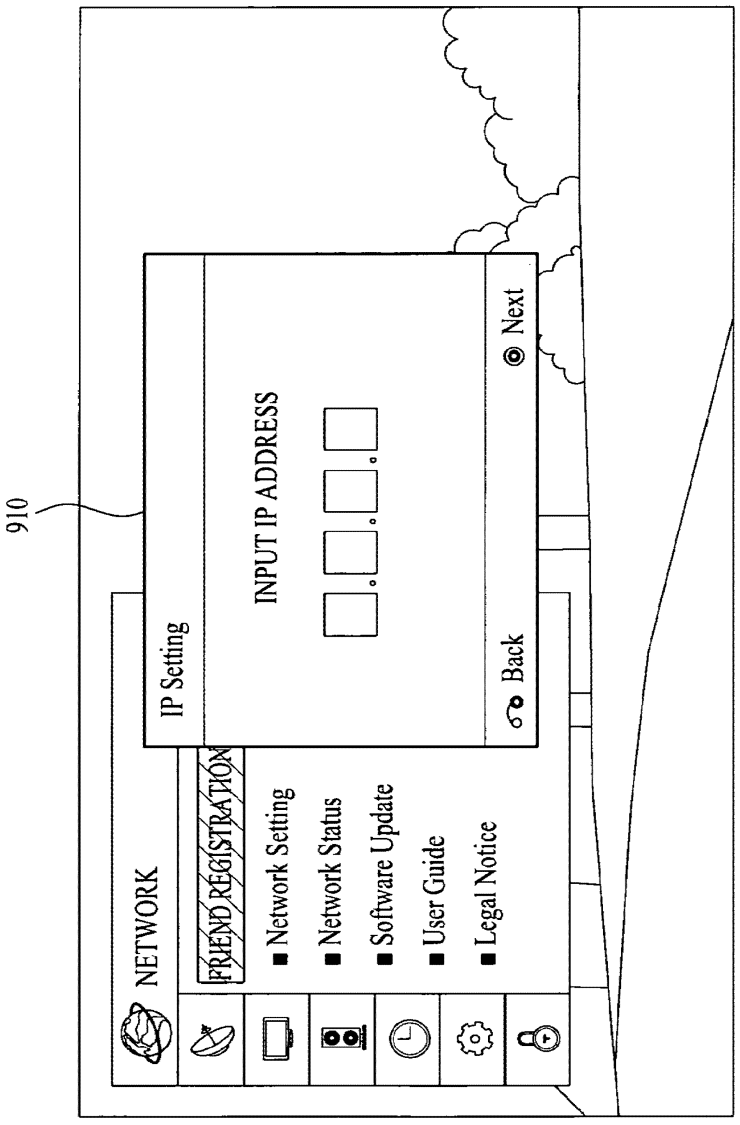

910
NETWORK
IP Setting
INPUT IP ADDRESS
Next
Back
FRIEND REGISTRATION
■ Network Setting
■ Network Status
■ Software Update
■ User Guide
■ Legal Notice

FIG. 10

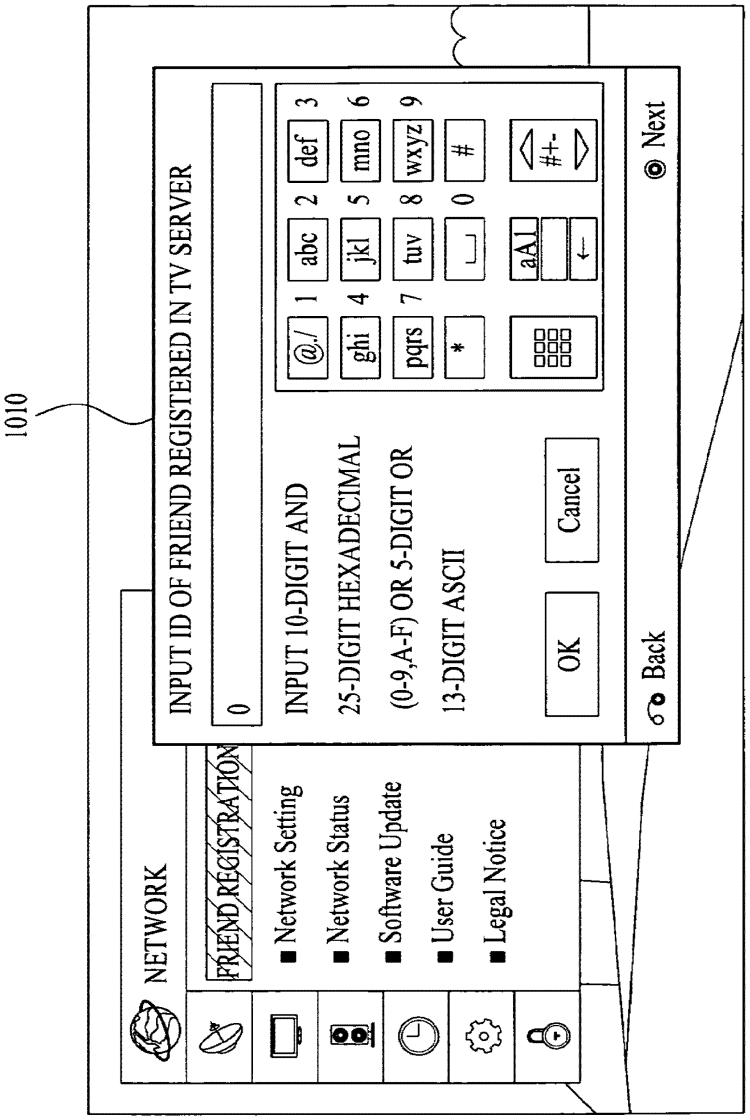

1010
NETWORK
FRIEND REGISTRATION
■ Network Setting
■ Network Status
■ Software Update
■ User Guide
■ Legal Notice
INPUT ID OF FRIEND REGISTERED IN TV SERVER
0
INPUT 10-DIGIT AND
25-DIGIT HEXADECIMAL
(0-9,A-F) OR 5-DIGIT OR
13-DIGIT ASCII
OK
Cancel
@./ 1
abc 2
def 3
ghi 4
jkl 5
mno 6
pqrs 7
tuv 8
wxyz 9
* 0 #
aA1
#+-
Back
Next

FIG. 11

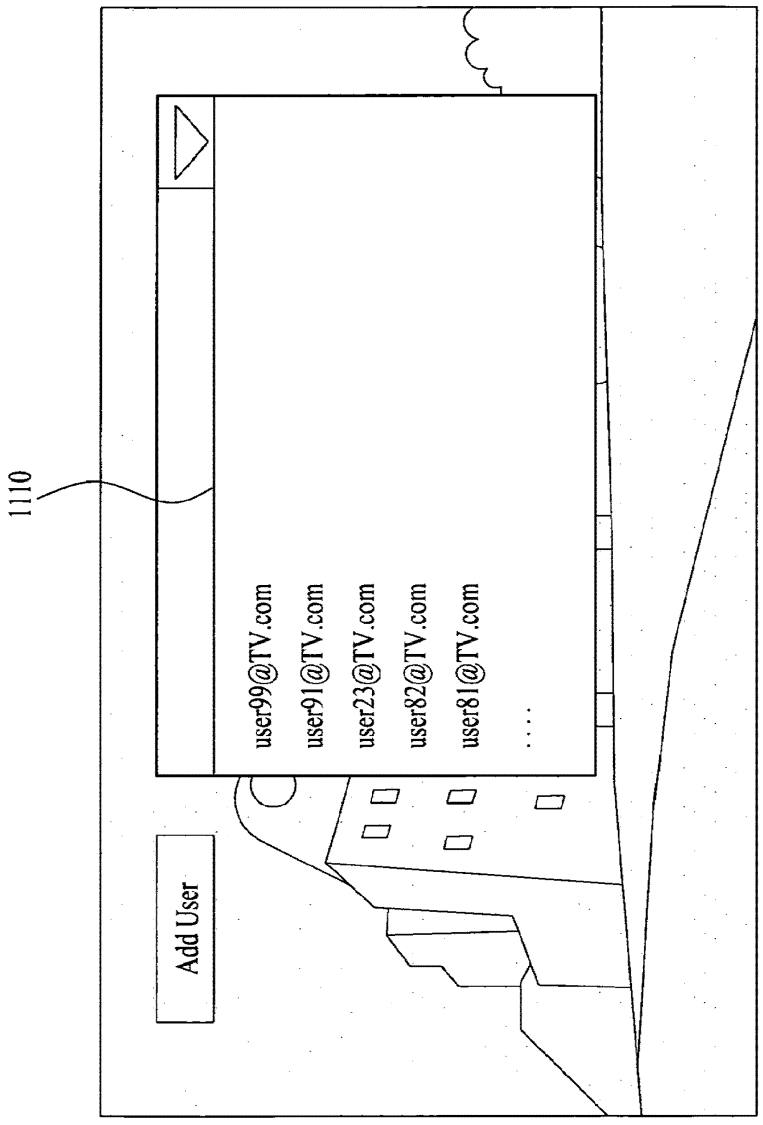

1110
user99@TV.com
user91@TV.com
user23@TV.com
user82@TV.com
user81@TV.com
.....
Add User

FIG. 12

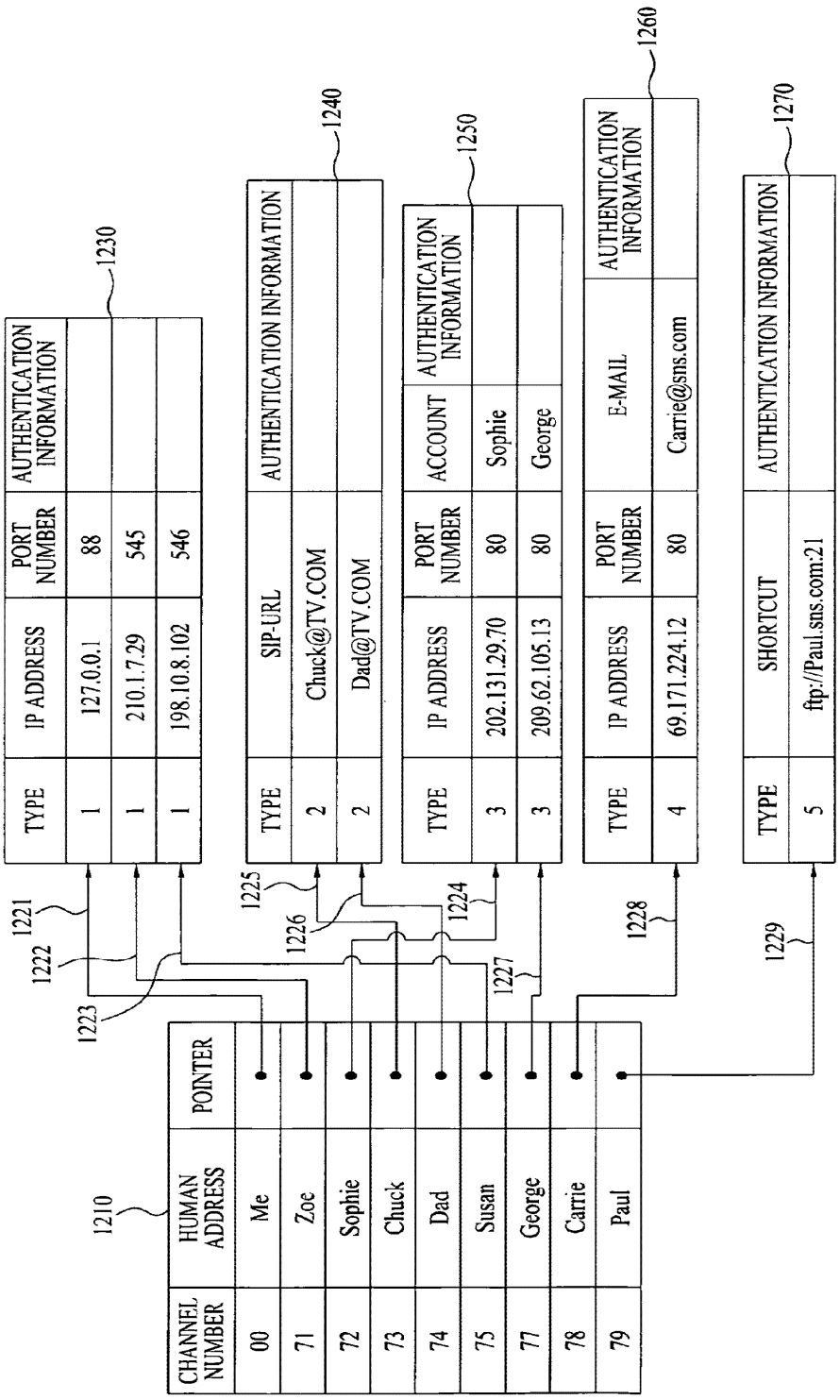

1210
CHANNEL NUMBER
HUMAN ADDRESS
POINTER
00 Me
71 Zoe
72 Sophie
73 Chuck
74 Dad
75 Susan
77 George
78 Carrie
79 Paul
1221
1222
1223
1230
TYPE
IP ADDRESS
PORT NUMBER
AUTHENTICATION INFORMATION
1 127.0.0.1 88
1 210.1.7.29 545
1 198.10.8.102 546
1225
1226
1240
TYPE
SIP-URL
AUTHENTICATION INFORMATION
2 Chuck@TV.COM
2 Dad@TV.COM
1224
1227
1250
TYPE
IP ADDRESS
PORT NUMBER
ACCOUNT
AUTHENTICATION INFORMATION
3 202.131.29.70 80 Sophie
3 209.62.105.13 80 George
1228
1260
TYPE
IP ADDRESS
PORT NUMBER
E-MAIL
AUTHENTICATION INFORMATION
4 69.171.224.12 80 Carrie@sns.com
1229
1270
TYPE
SHORTCUT
AUTHENTICATION INFORMATION
5 ftp://Paul.sns.com:21

FIG. 13

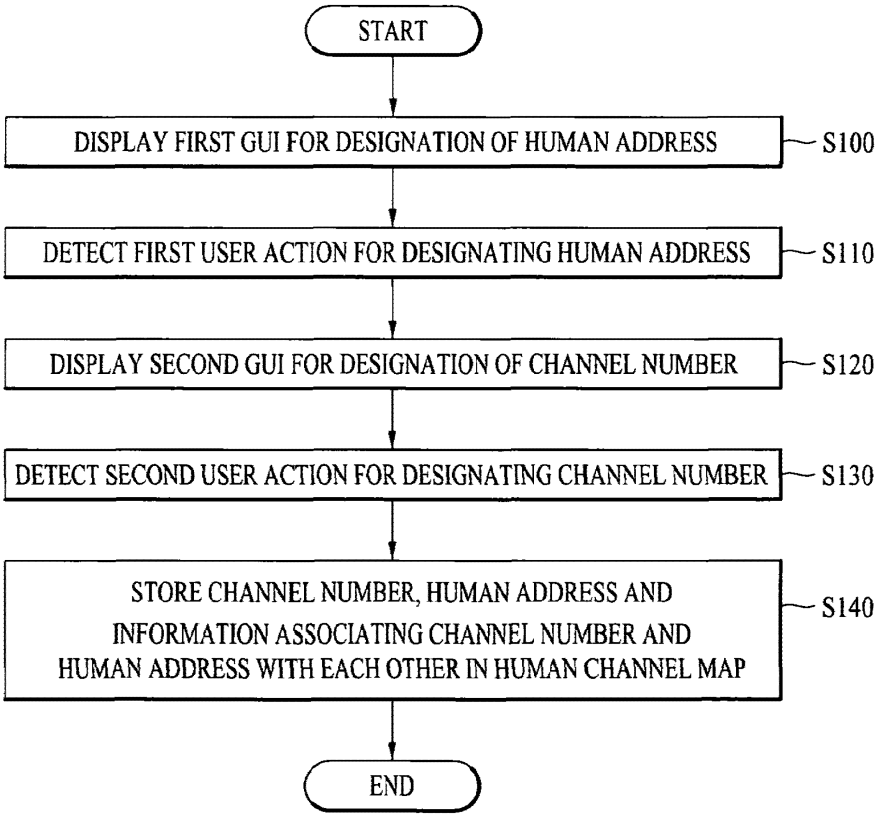

START
DISPLAY FIRST GUI FOR DESIGNATION OF HUMAN ADDRESS
S100
DETECT FIRST USER ACTION FOR DESIGNATING HUMAN ADDRESS
S110
DISPLAY SECOND GUI FOR DESIGNATION OF CHANNEL NUMBER
S120
DETECT SECOND USER ACTION FOR DESIGNATING CHANNEL NUMBER
S130
STORE CHANNEL NUMBER, HUMAN ADDRESS AND INFORMATION ASSOCIATING CHANNEL NUMBER AND HUMAN ADDRESS WITH EACH OTHER IN HUMAN CHANNEL MAP
S140
END

FIG. 14

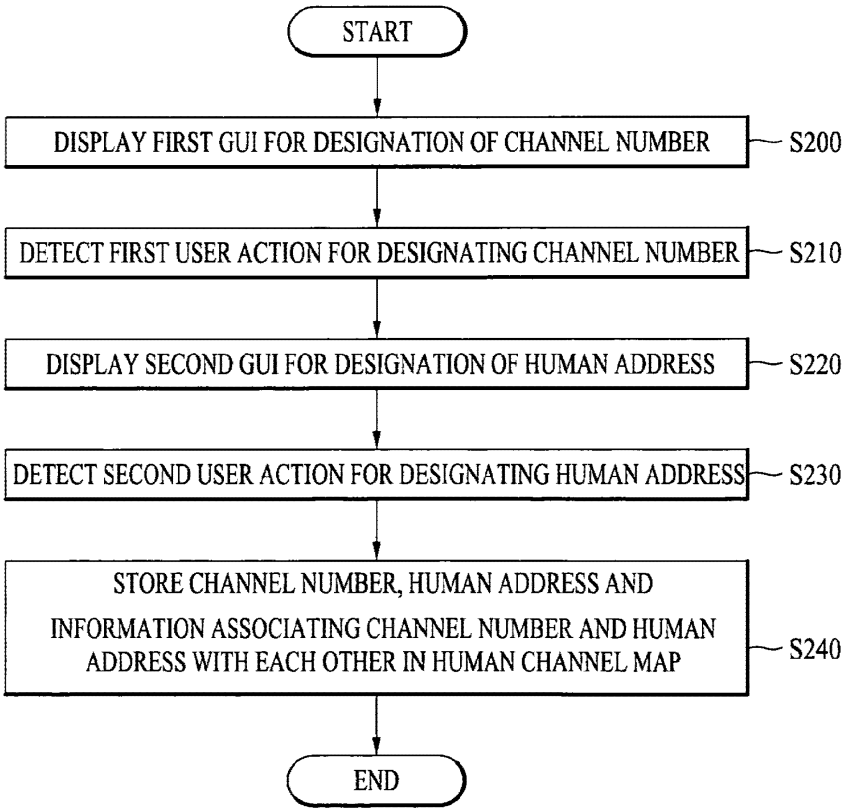

START
DISPLAY FIRST GUI FOR DESIGNATION OF CHANNEL NUMBER
S200
DETECT FIRST USER ACTION FOR DESIGNATING CHANNEL NUMBER
S210
DISPLAY SECOND GUI FOR DESIGNATION OF HUMAN ADDRESS
S220
DETECT SECOND USER ACTION FOR DESIGNATING HUMAN ADDRESS
S230
STORE CHANNEL NUMBER, HUMAN ADDRESS AND INFORMATION ASSOCIATING CHANNEL NUMBER AND HUMAN ADDRESS WITH EACH OTHER IN HUMAN CHANNEL MAP
S240
END

FIG. 15

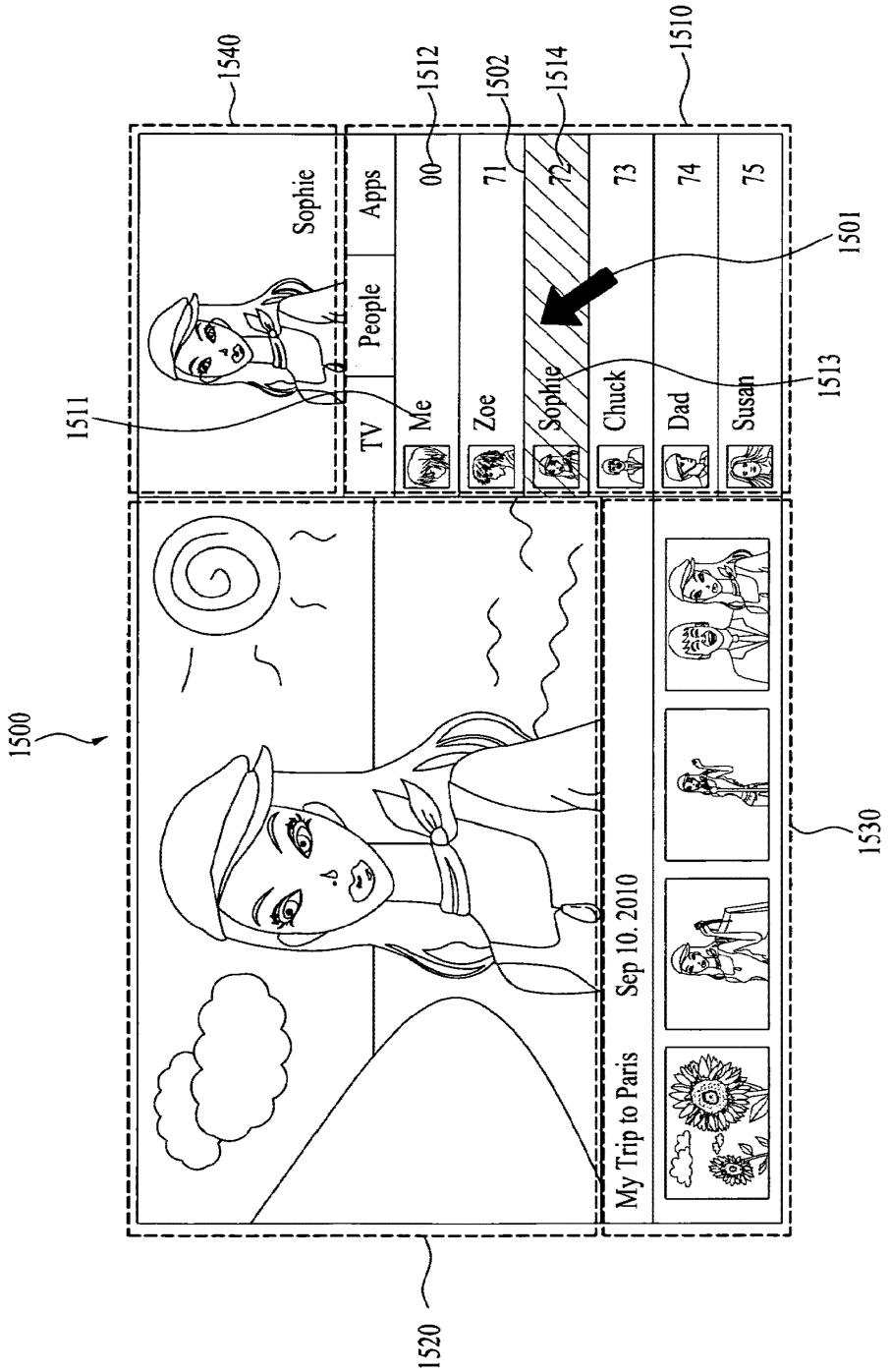

1500
1501
1510
1511
1512
1513
1514
1520
1530
1540
1502
Sophie
TV
People
Apps
Me
Zoe
Sophie
Chuck
Dad
Susan
00
71
72
73
74
75
My Trip to Paris
Sep 10. 2010

FIG. 16

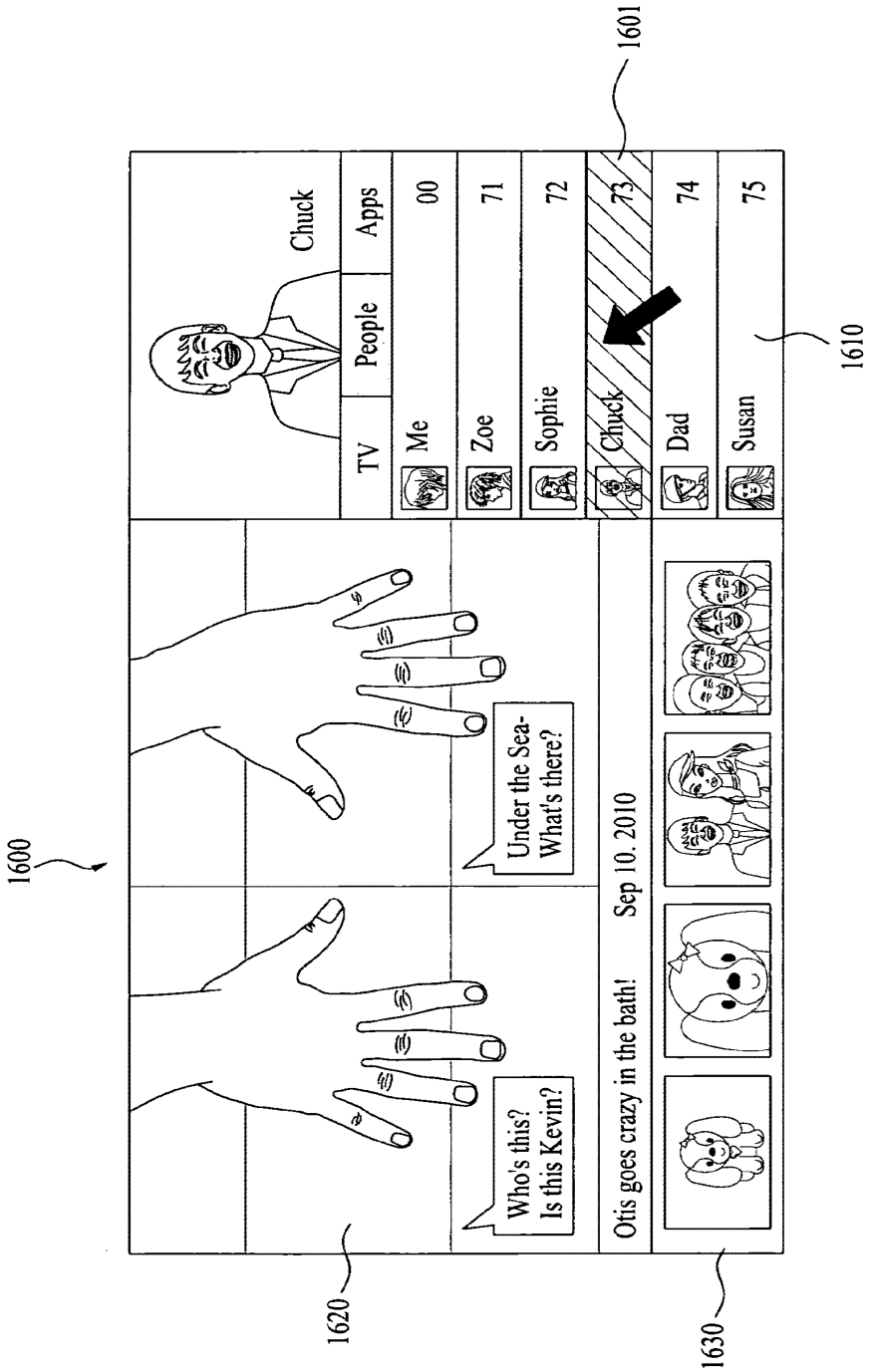

1600
1601
1610
1620
1630
Chuck
TV
People
Apps
Me
00
Zoe
71
Sophie
72
Chuck
73
Dad
74
Susan
75
Who's this?
Is this Kevin?
Under the Sea-
What's there?
Otis goes crazy in the bath!
Sep 10. 2010

FIG. 17

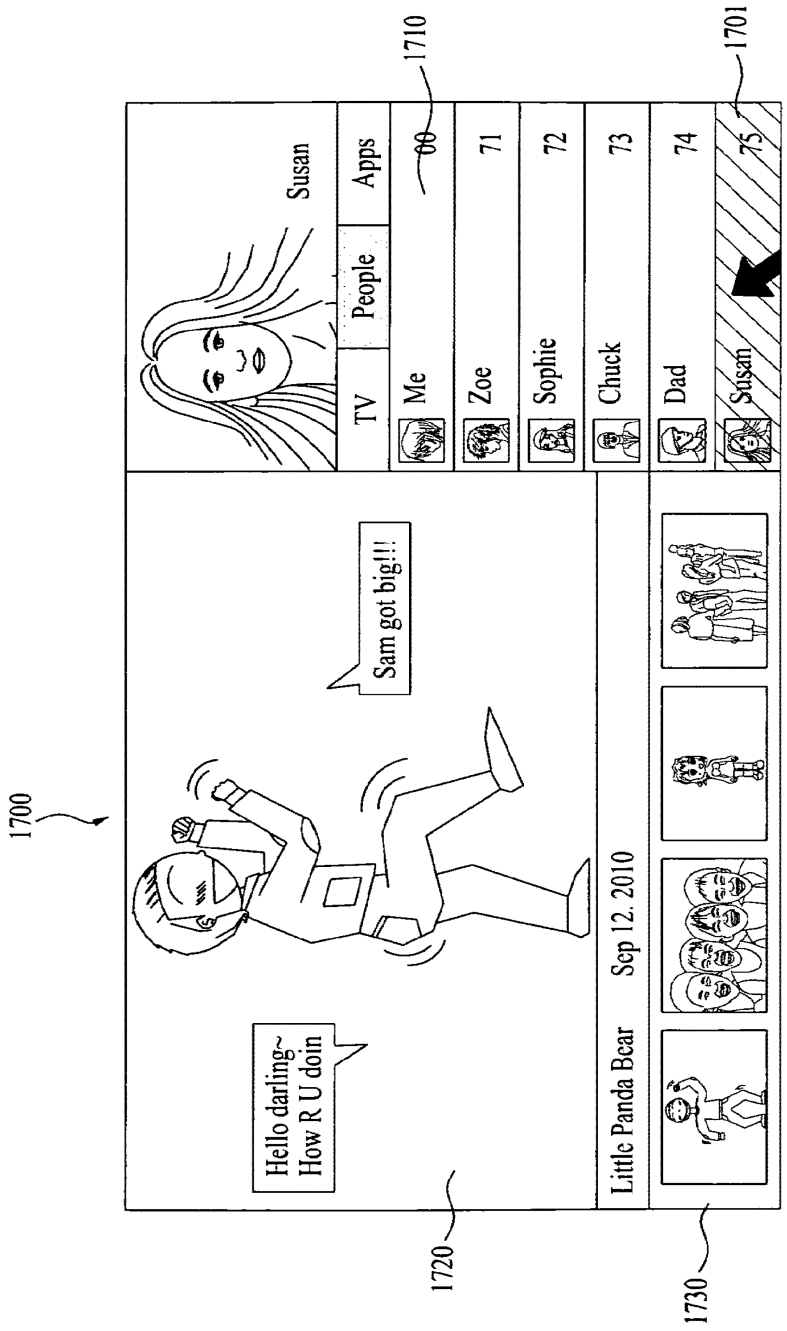

1700
Hello darling~
How R U doin
Sam got big!!!
Little Panda Bear
Sep 12. 2010
1720
1730
1710
1701
Susan
TV
People
Apps
Me
Zoe
Sophie
Chuck
Dad
Susan
00
71
72
73
74
75

FIG. 18

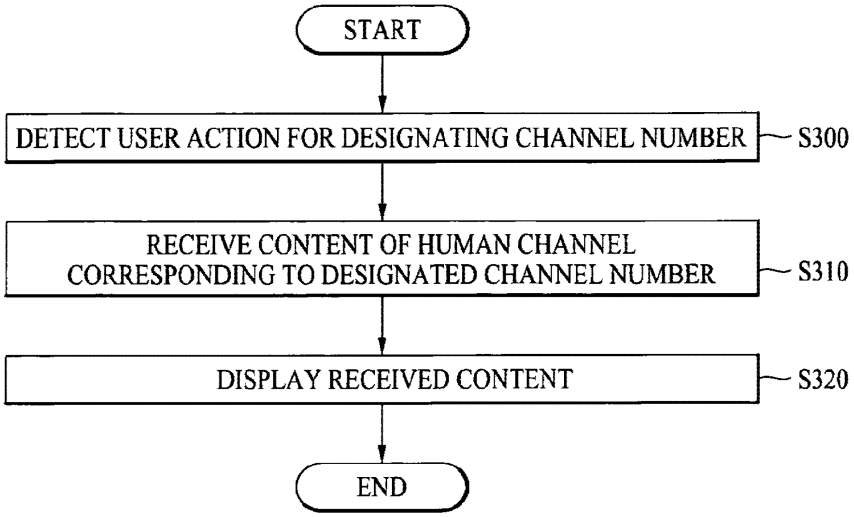

START
DETECT USER ACTION FOR DESIGNATING CHANNEL NUMBER
S300
RECEIVE CONTENT OF HUMAN CHANNEL CORRESPONDING TO DESIGNATED CHANNEL NUMBER
S310
DISPLAY RECEIVED CONTENT
S320
END

FIG. 19

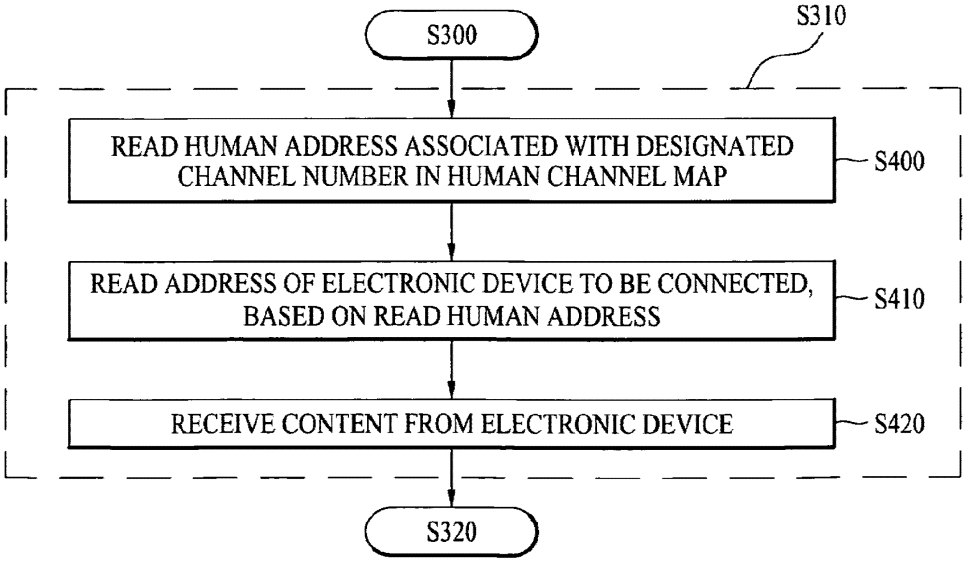

S300
S310
READ HUMAN ADDRESS ASSOCIATED WITH DESIGNATED CHANNEL NUMBER IN HUMAN CHANNEL MAP
S400
READ ADDRESS OF ELECTRONIC DEVICE TO BE CONNECTED, BASED ON READ HUMAN ADDRESS
S410
RECEIVE CONTENT FROM ELECTRONIC DEVICE
S420
S320

FIG. 20

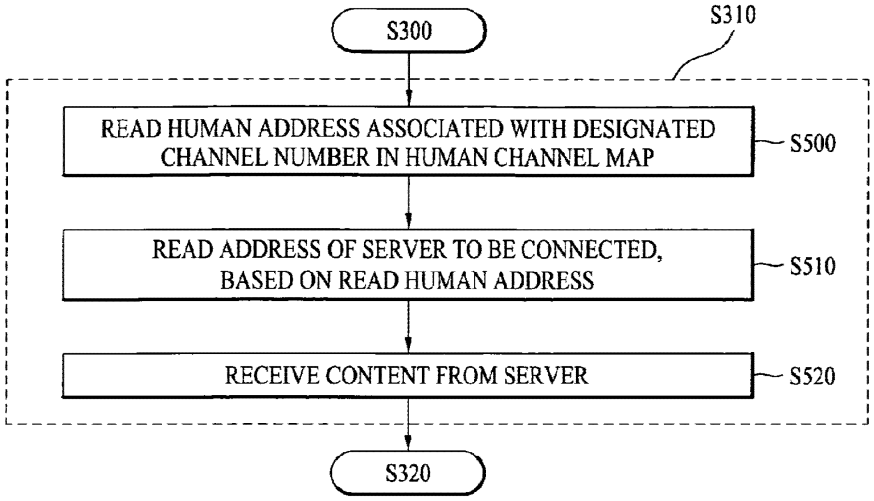

S300
S310
READ HUMAN ADDRESS ASSOCIATED WITH DESIGNATED CHANNEL NUMBER IN HUMAN CHANNEL MAP
S500
READ ADDRESS OF SERVER TO BE CONNECTED, BASED ON READ HUMAN ADDRESS
S510
RECEIVE CONTENT FROM SERVER
S520
S320

FIG. 21

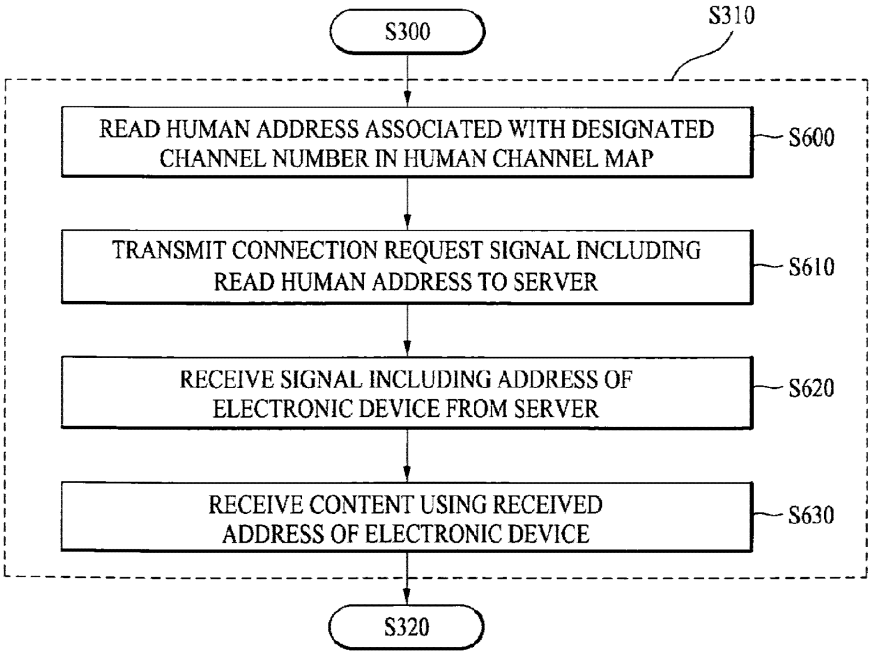

S300
S310
READ HUMAN ADDRESS ASSOCIATED WITH DESIGNATED CHANNEL NUMBER IN HUMAN CHANNEL MAP
S600
TRANSMIT CONNECTION REQUEST SIGNAL INCLUDING READ HUMAN ADDRESS TO SERVER
S610
RECEIVE SIGNAL INCLUDING ADDRESS OF ELECTRONIC DEVICE FROM SERVER
S620
RECEIVE CONTENT USING RECEIVED ADDRESS OF ELECTRONIC DEVICE
S630
S320

FIG. 22

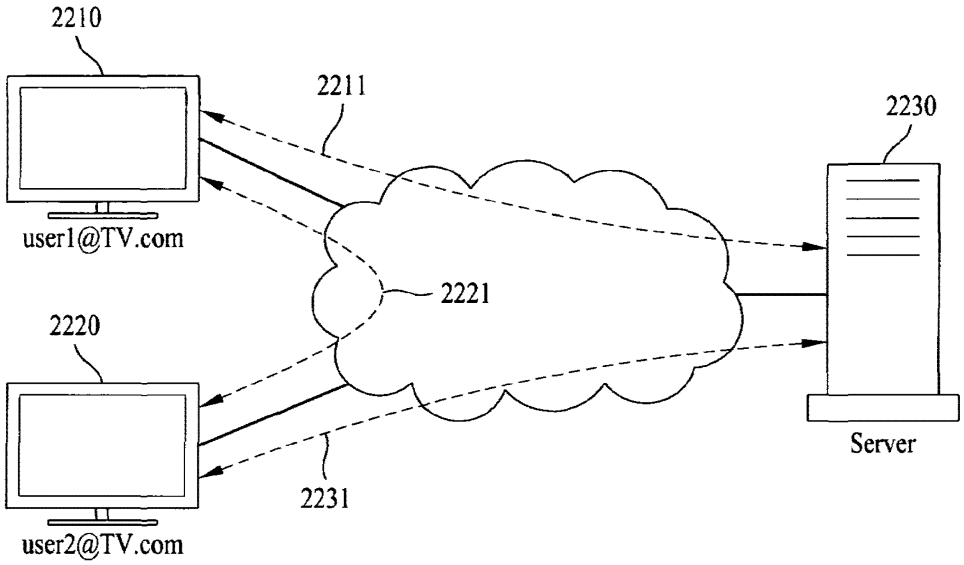

2210
2211
2230
user1@TV.com
2221
2220
Server
2231
user2@TV.com

FIG. 23

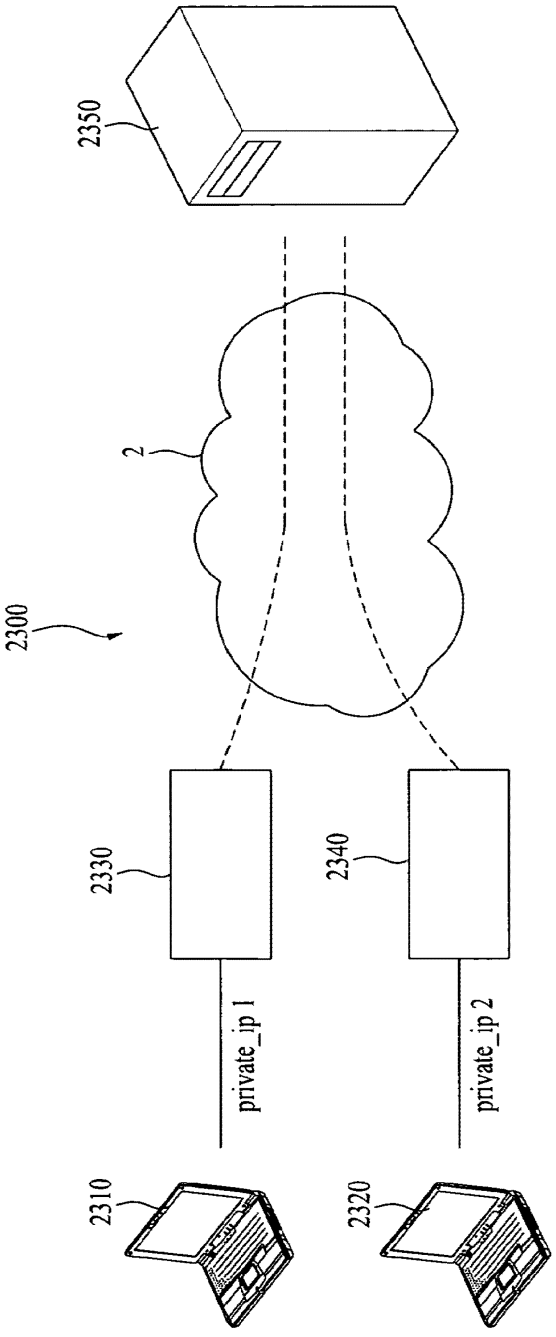


FIG. 24

2400

FIRST ELECTRONIC DEVICE	private_ip 1	public_ip 1
SECOND ELECTRONIC DEVICE	private_ip 2	public_ip 2

FIG. 25

2500

HUMAN ADDRESS 1	public_ip 1
HUMAN ADDRESS 2	public_ip 2

FIG. 26

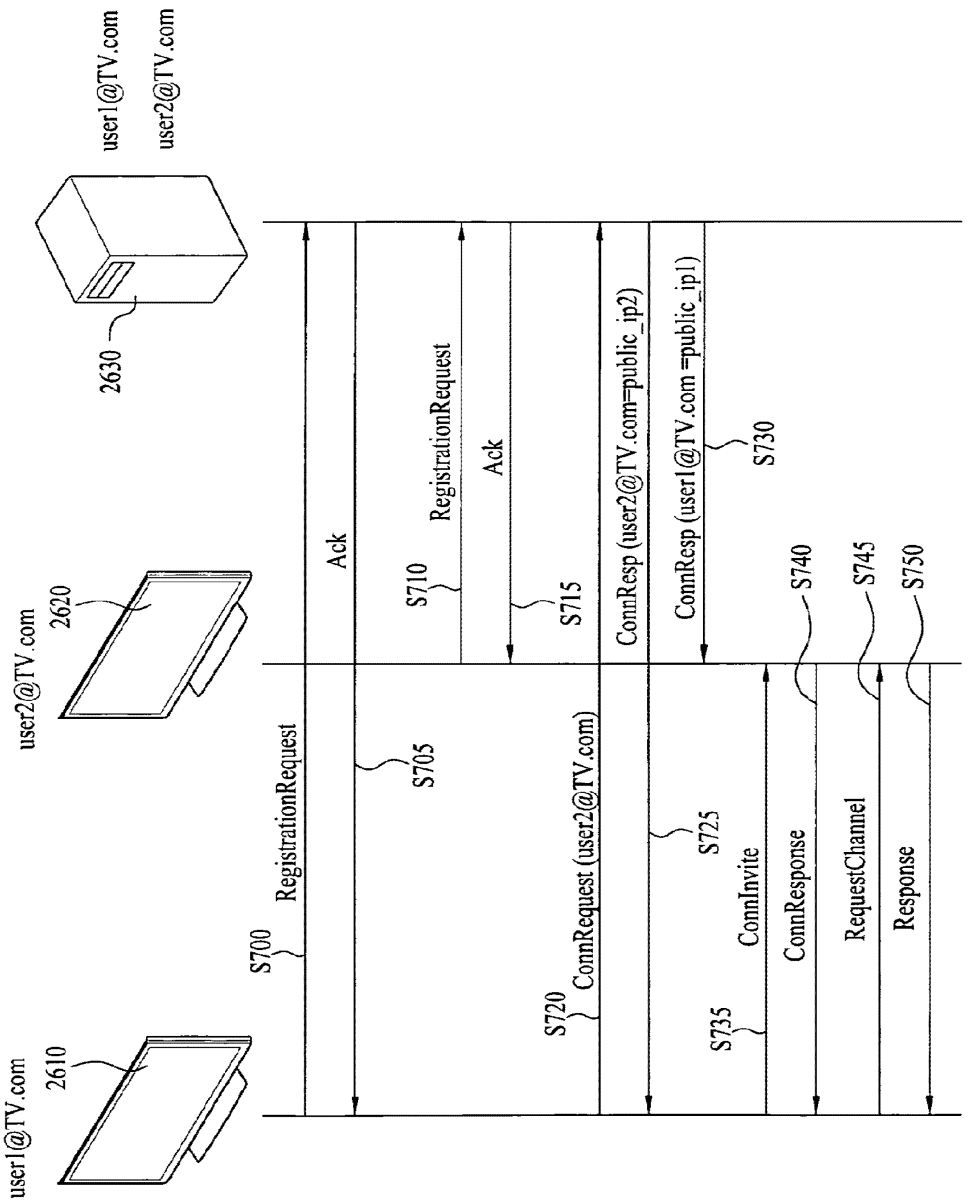

user1@TV.com
2610
user2@TV.com
2620
user1@TV.com
user2@TV.com
2630
S700
RegistrationRequest
S705
RegistrationRequest
S710
Ack
S715
ConnRequest (user2@TV.com)
S720
ConnResp (user2@TV.com=public_ip2)
S725
ConnResp (user1@TV.com =public_ip1)
S730
ConnInvite
S735
ConnResponse
S740
RequestChannel
S745
Response
S750
Ack

FIG. 27

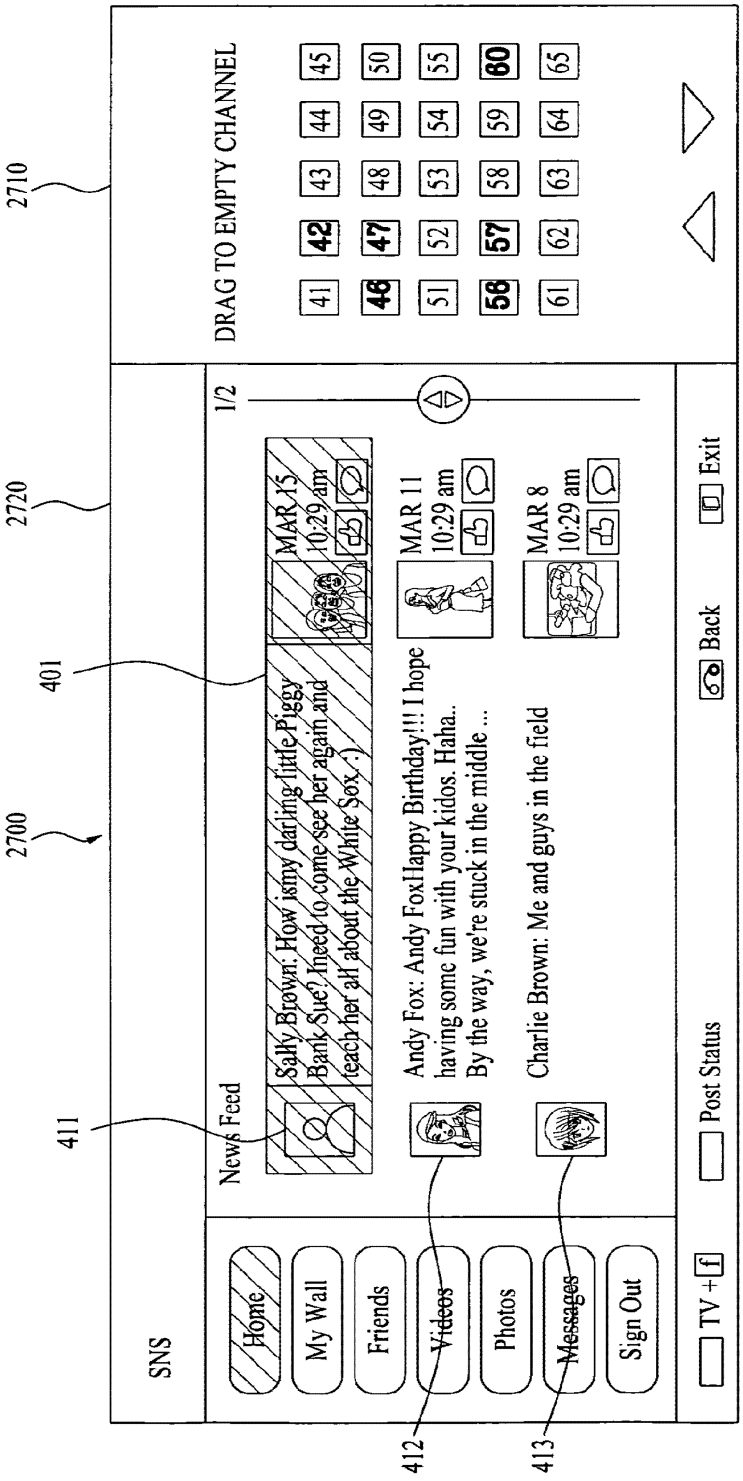

2710
DRAG TO EMPTY CHANNEL
41 42 43 44 45
46 47 48 49 50
51 52 53 54 55
58 57 58 59 60
61 62 63 64 65
2720
1/2
2700
401
411
SNS
Home
My Wall
Friends
Videos
Photos
Messages
Sign Out
News Feed
Sally Brown: How is my darling little Piggy Bank Sue? I need to come see her again and teach her all about the White Sox. :)
MAR 15 10:29 am
Andy Fox: Andy Fox!Happy Birthday!!! I hope having some fun with your kidos. Haha.. By the way, we're stuck in the middle ...
MAR 11 10:29 am
Charlie Brown: Me and guys in the field
MAR 8 10:29 am
TV +f
Post Status
Back
Exit
412
413

FIG. 28

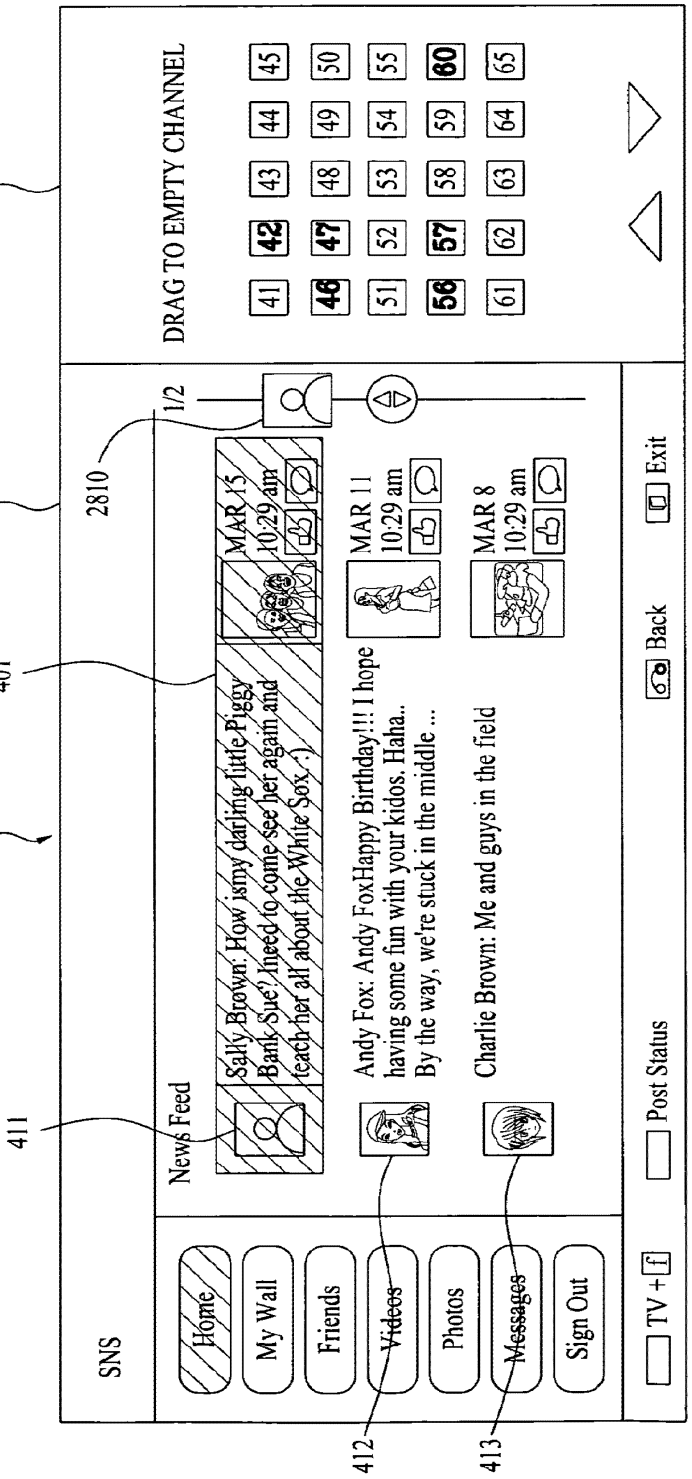

2710
DRAG TO EMPTY CHANNEL
41 42 43 44 45
46 47 48 49 50
51 52 53 54 55
56 57 58 59 60
61 62 63 64 65
2720
2810
1/2
2700
401
411
SNS
News Feed
Sally Brown: How is my darling little Piggy Bank Sue? I need to come see her again and teach her all about the White Sox. :)
MAR 15 10:29 am
Andy Fox: Andy FoxHappy Birthday!!! I hope having some fun with your kidos. Haha.. By the way, we're stuck in the middle ...
MAR 11 10:29 am
Charlie Brown: Me and guys in the field
MAR 8 10:29 am
Home
My Wall
Friends
Videos
Photos
Messages
Sign Out
412
413
TV + f
Post Status
Back
Exit

FIG. 29

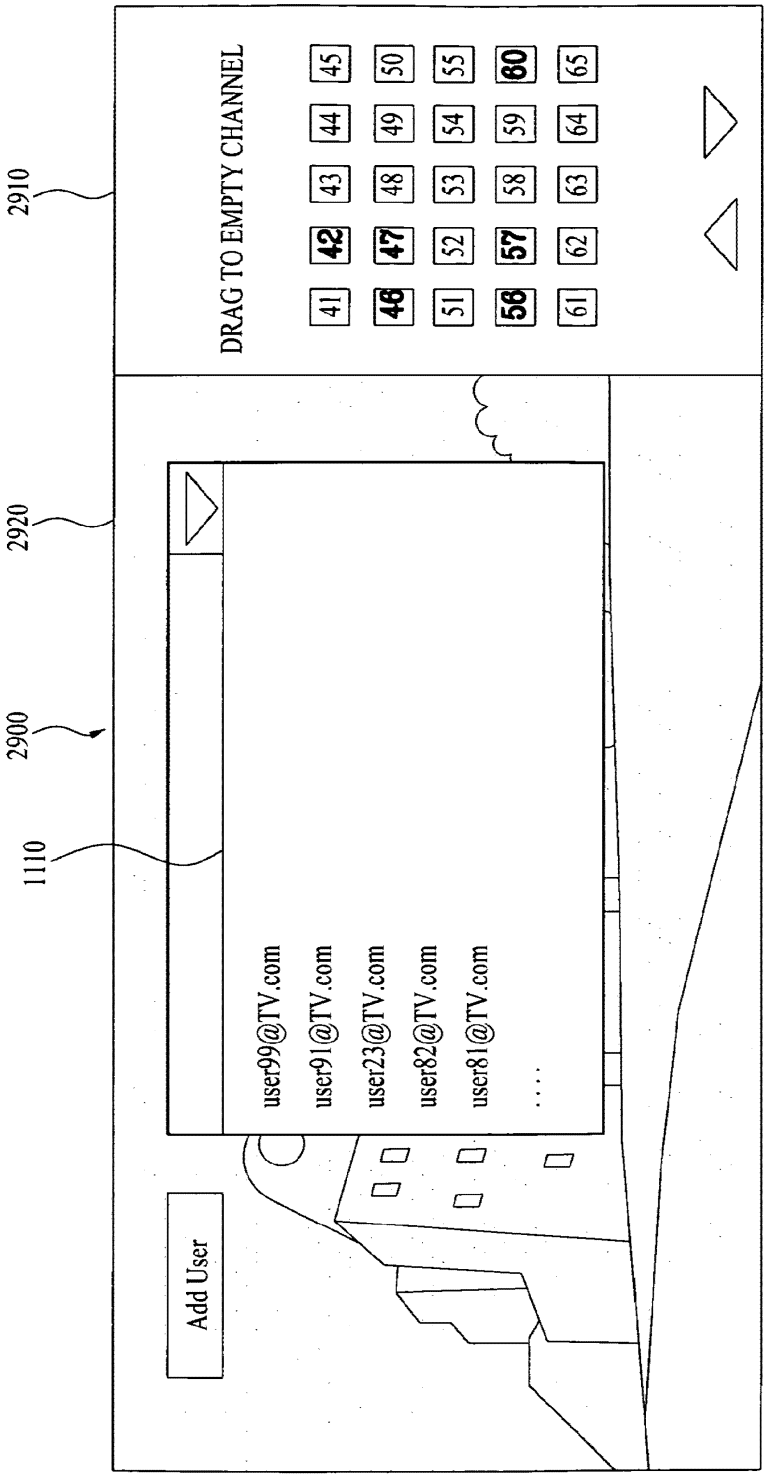

2910
2920
2900
1110
DRAG TO EMPTY CHANNEL
41 42 43 44 45
46 47 48 49 50
51 52 53 54 55
56 57 58 59 60
61 62 63 64 65
user99@TV.com
user91@TV.com
user23@TV.com
user82@TV.com
user81@TV.com
....
Add User

FIG. 30

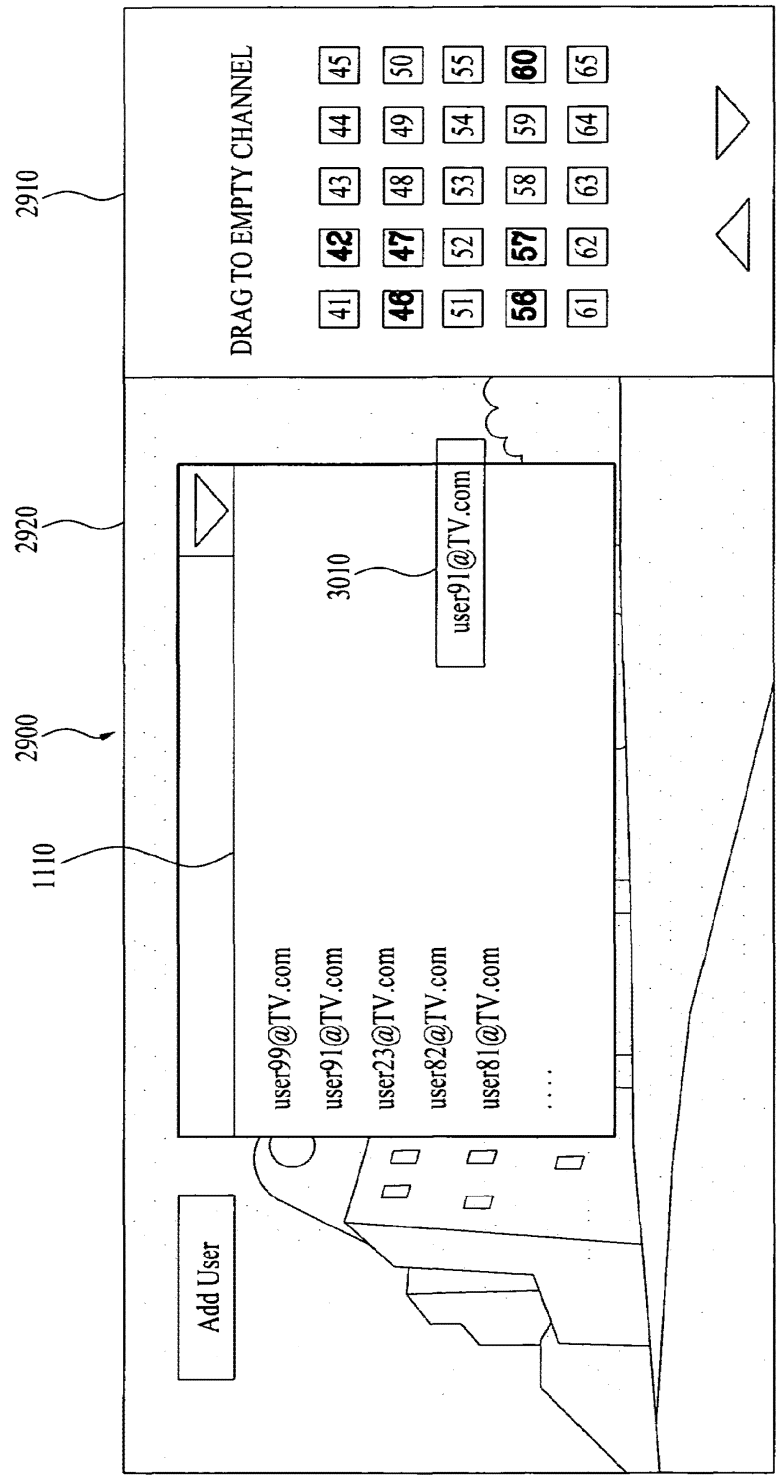

2910
DRAG TO EMPTY CHANNEL
41 42 43 44 45
46 47 48 49 50
51 52 53 54 55
56 57 58 59 60
61 62 63 64 65
2920
3010
user91@TV.com
2900
1110
user99@TV.com
user91@TV.com
user23@TV.com
user82@TV.com
user81@TV.com
....
Add User

FIG. 31

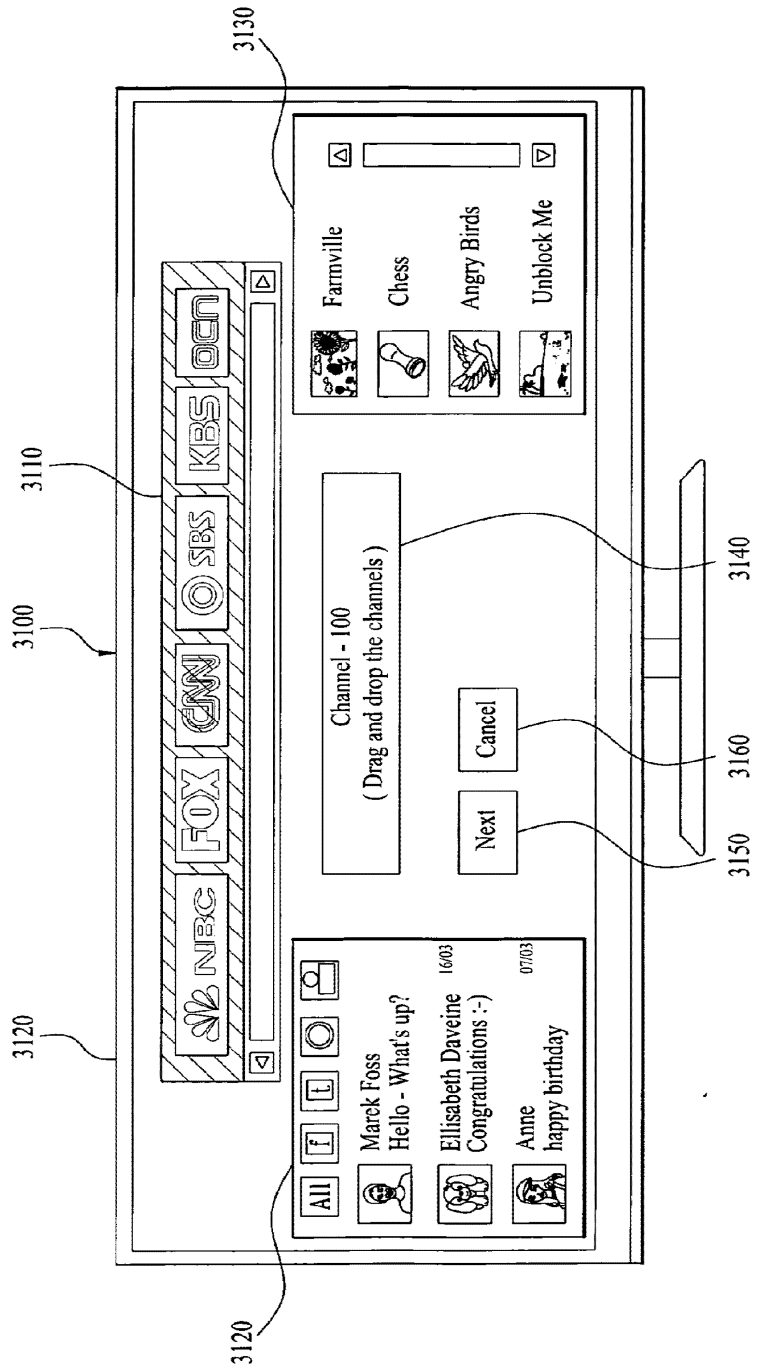

3130
3110
3100
3120
3140
3160
3150
3120
NBC
FOX
CNN
SBS
KBS
DCN
Farmville
Chess
Angry Birds
Unblock Me
Channel - 100
(Drag and drop the channels)
Next
Cancel
All
Marek Foss
Hello - What's up?
Ellisabeth Daveine
Congratulations :-)
16/03
Anne
happy birthday
07/03

FIG. 32

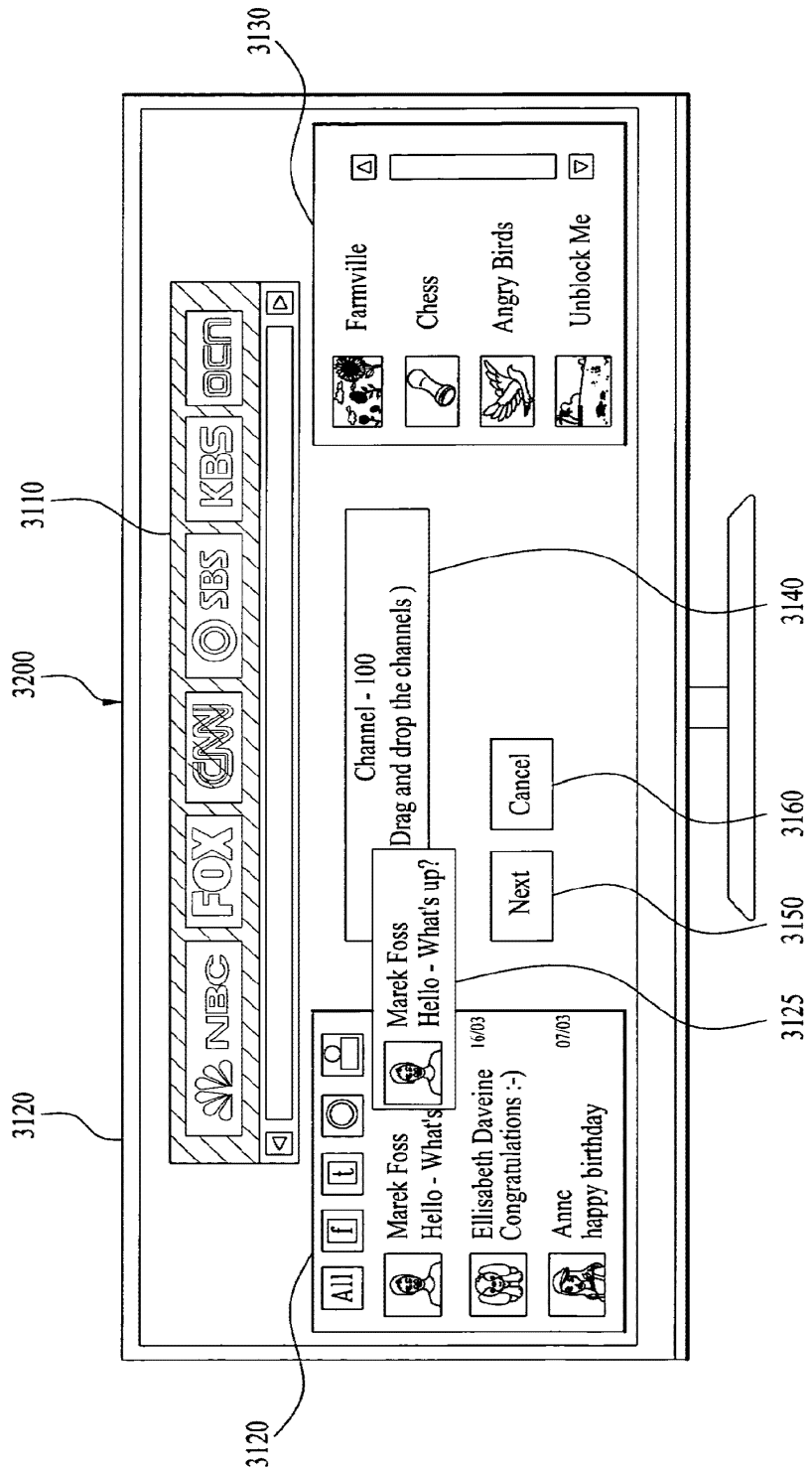

3130
3110
3200
3120
3120
3140
3150
3160
3125
NBC
FOX
CNN
SBS
KBS
OCN
Farmville
Chess
Angry Birds
Unblock Me
Channel - 100
Drag and drop the channels)
Marek Foss
Hello - What's up?
Next
Cancel
All
Marek Foss
Hello - What's
Ellisabeth Daveine
Congratulations :-)
16/03
Anne
happy birthday
07/03

FIG. 33

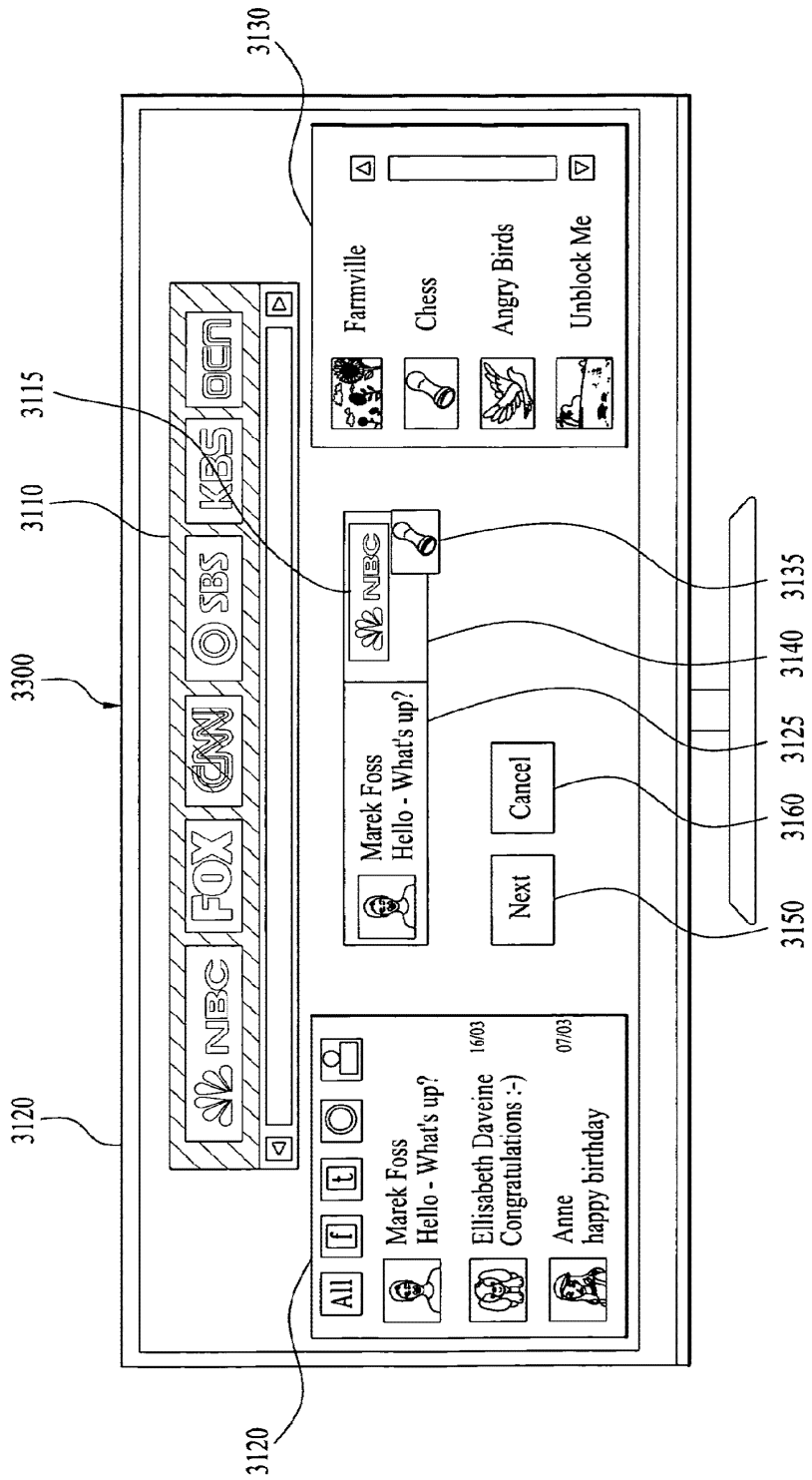

3130
3115
3110
3300
3120
3120
3135
3140
3125
3160
3150
NBC
FOX
CNN
SBS
KBS
OCN
Farmville
Chess
Angry Birds
Unblock Me
Marek Foss
Hello - What's up?
Cancel
Next
All
Marek Foss
Hello - What's up?
Ellisabeth Daveine
Congratulations :-)
16/03
Anne
happy birthday
07/03

FIG. 34A

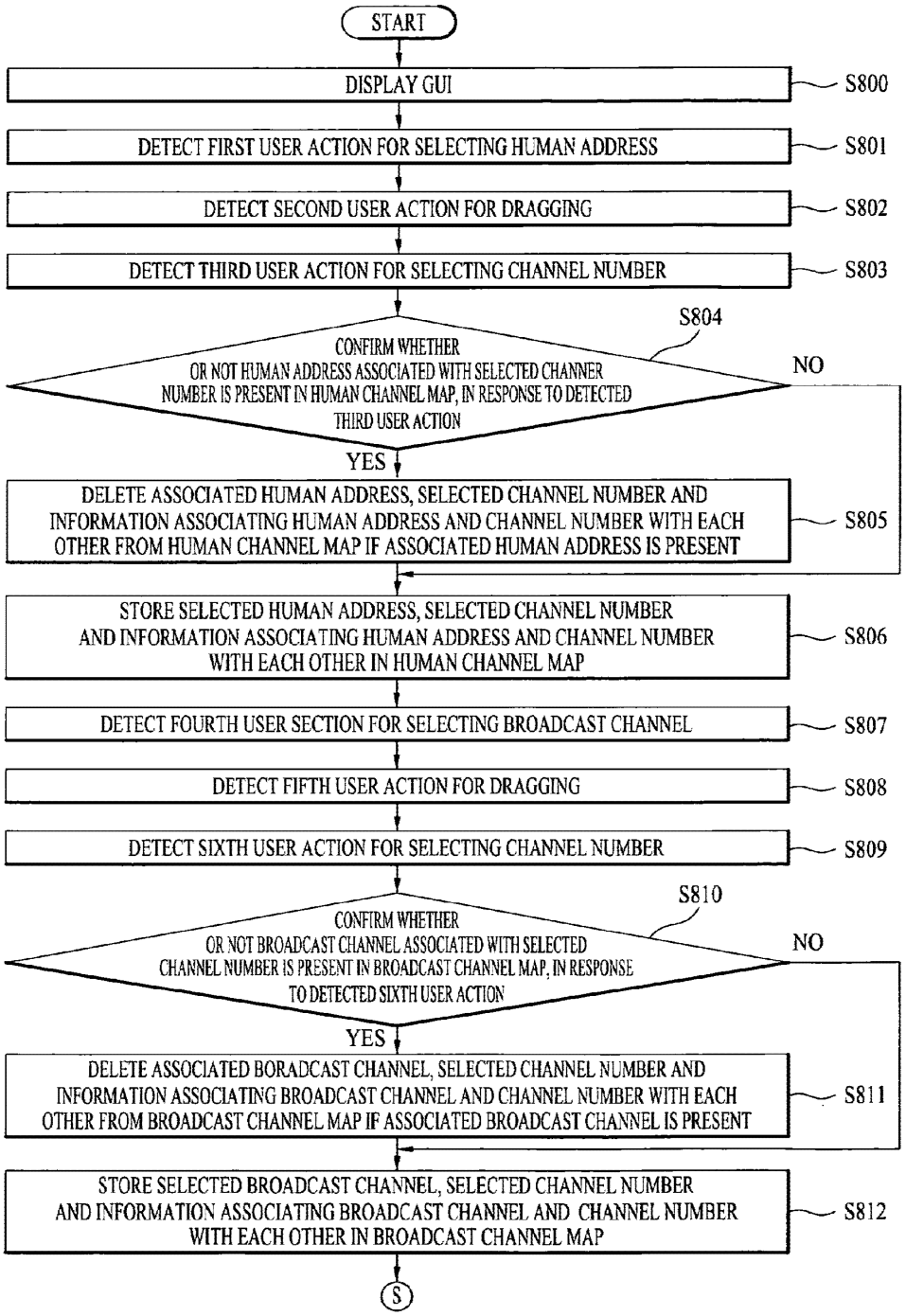

START
DISPLAY GUI
S800
DETECT FIRST USER ACTION FOR SELECTING HUMAN ADDRESS
S801
DETECT SECOND USER ACTION FOR DRAGGING
S802
DETECT THIRD USER ACTION FOR SELECTING CHANNEL NUMBER
S803
S804
CONFIRM WHETHER OR NOT HUMAN ADDRESS ASSOCIATED WITH SELECTED CHANNER NUMBER IS PRESENT IN HUMAN CHANNEL MAP, IN RESPONSE TO DETECTED THIRD USER ACTION
NO
YES
DELETE ASSOCIATED HUMAN ADDRESS, SELECTED CHANNEL NUMBER AND INFORMATION ASSOCIATING HUMAN ADDRESS AND CHANNEL NUMBER WITH EACH OTHER FROM HUMAN CHANNEL MAP IF ASSOCIATED HUMAN ADDRESS IS PRESENT
S805
STORE SELECTED HUMAN ADDRESS, SELECTED CHANNEL NUMBER AND INFORMATION ASSOCIATING HUMAN ADDRESS AND CHANNEL NUMBER WITH EACH OTHER IN HUMAN CHANNEL MAP
S806
DETECT FOURTH USER SECTION FOR SELECTING BROADCAST CHANNEL
S807
DETECT FIFTH USER ACTION FOR DRAGGING
S808
DETECT SIXTH USER ACTION FOR SELECTING CHANNEL NUMBER
S809
S810
CONFIRM WHETHER OR NOT BROADCAST CHANNEL ASSOCIATED WITH SELECTED CHANNEL NUMBER IS PRESENT IN BROADCAST CHANNEL MAP, IN RESPONSE TO DETECTED SIXTH USER ACTION
NO
YES
DELETE ASSOCIATED BORADCAST CHANNEL, SELECTED CHANNEL NUMBER AND INFORMATION ASSOCIATING BROADCAST CHANNEL AND CHANNEL NUMBER WITH EACH OTHER FROM BROADCAST CHANNEL MAP IF ASSOCIATED BROADCAST CHANNEL IS PRESENT
S811
STORE SELECTED BROADCAST CHANNEL, SELECTED CHANNEL NUMBER AND INFORMATION ASSOCIATING BROADCAST CHANNEL AND CHANNEL NUMBER WITH EACH OTHER IN BROADCAST CHANNEL MAP
S812
S

FIG. 34B

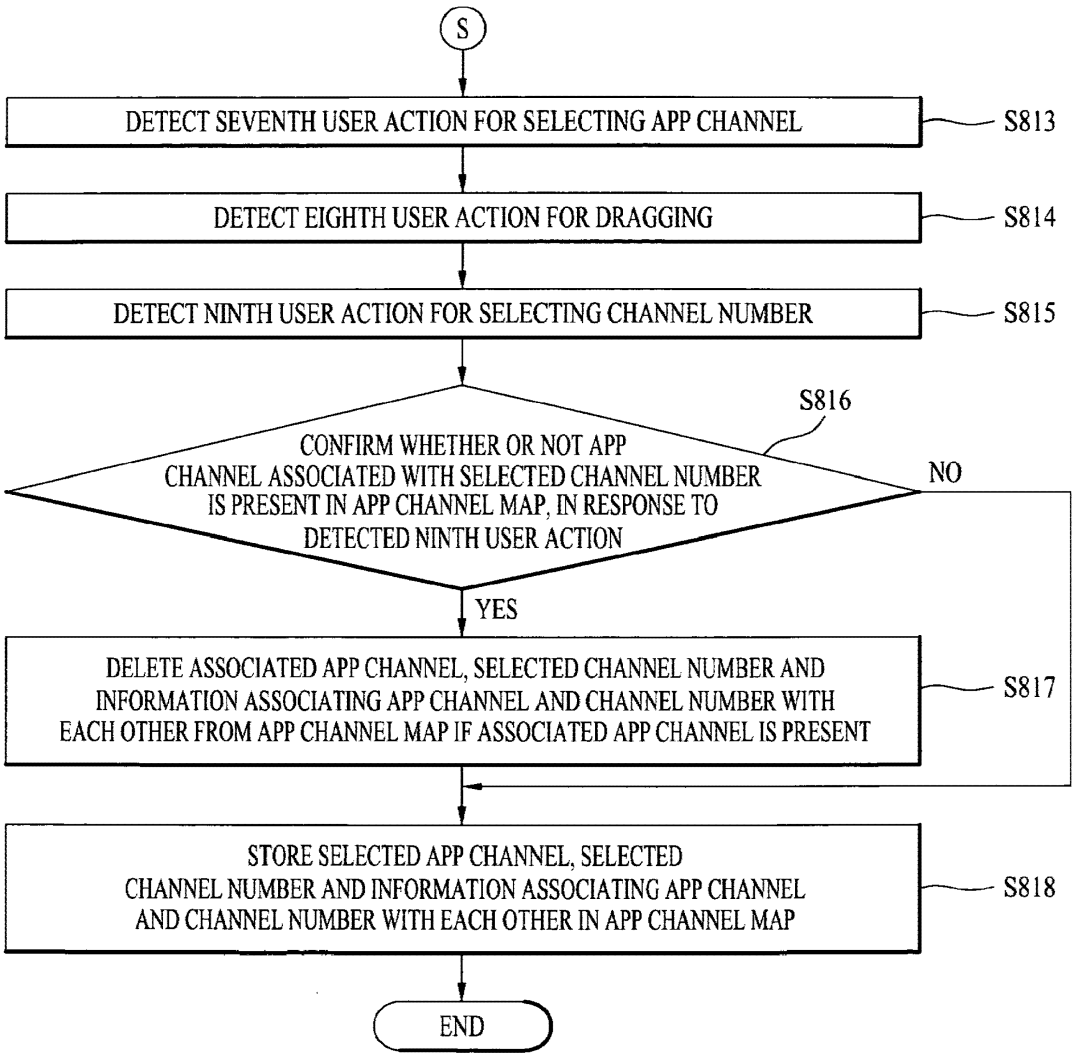

S
DETECT SEVENTH USER ACTION FOR SELECTING APP CHANNEL
S813
DETECT EIGHTH USER ACTION FOR DRAGGING
S814
DETECT NINTH USER ACTION FOR SELECTING CHANNEL NUMBER
S815
S816
CONFIRM WHETHER OR NOT APP CHANNEL ASSOCIATED WITH SELECTED CHANNEL NUMBER IS PRESENT IN APP CHANNEL MAP, IN RESPONSE TO DETECTED NINTH USER ACTION
NO
YES
DELETE ASSOCIATED APP CHANNEL, SELECTED CHANNEL NUMBER AND INFORMATION ASSOCIATING APP CHANNEL AND CHANNEL NUMBER WITH EACH OTHER FROM APP CHANNEL MAP IF ASSOCIATED APP CHANNEL IS PRESENT
S817
STORE SELECTED APP CHANNEL, SELECTED CHANNEL NUMBER AND INFORMATION ASSOCIATING APP CHANNEL AND CHANNEL NUMBER WITH EACH OTHER IN APP CHANNEL MAP
S818
END

FIG. 35

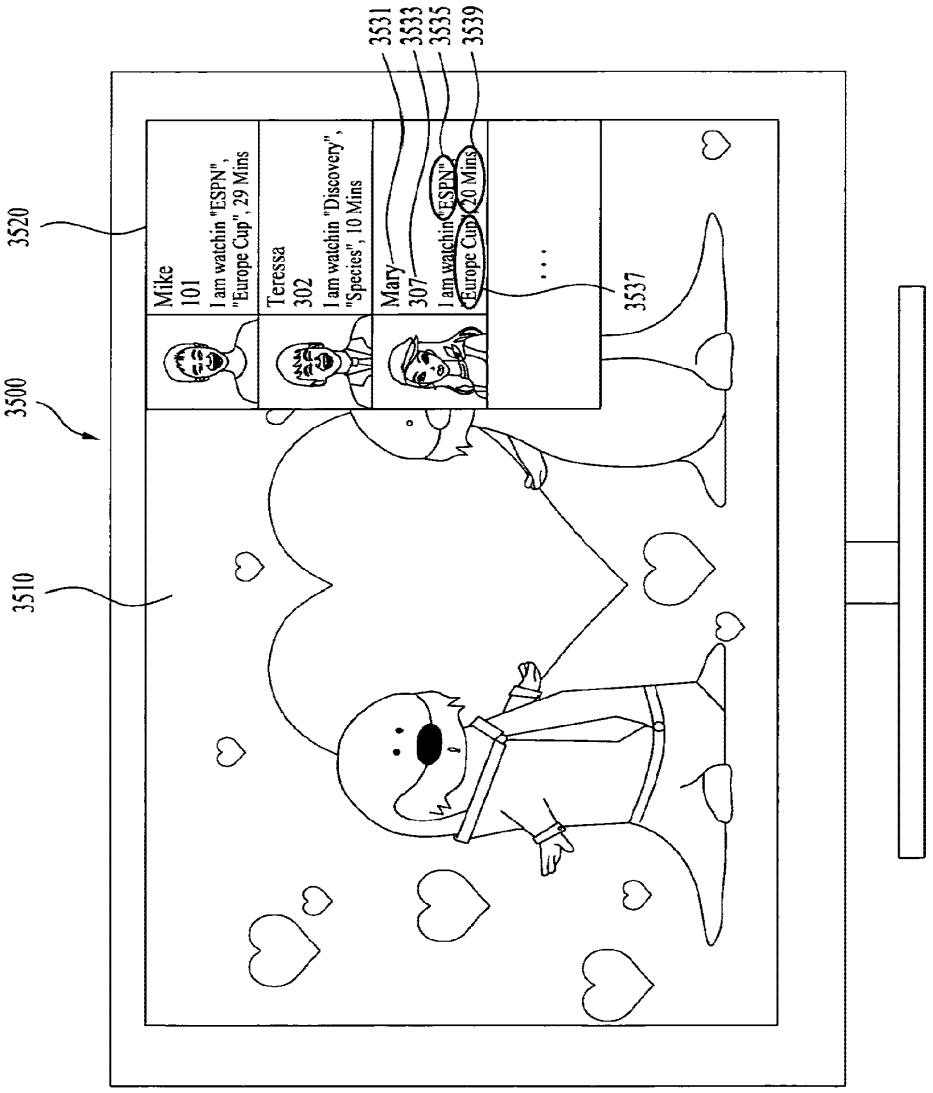

3531
3533
3535
3539
3520
3500
3510
Mike
101
I am watchin "ESPN",
"Europe Cup", 29 Mins
Teressa
302
I am watchin "Discovery",
"Species", 10 Mins
Mary
307
I am watchin "ESPN",
"Europe Cup", 20 Mins
...
3537

FIG. 36

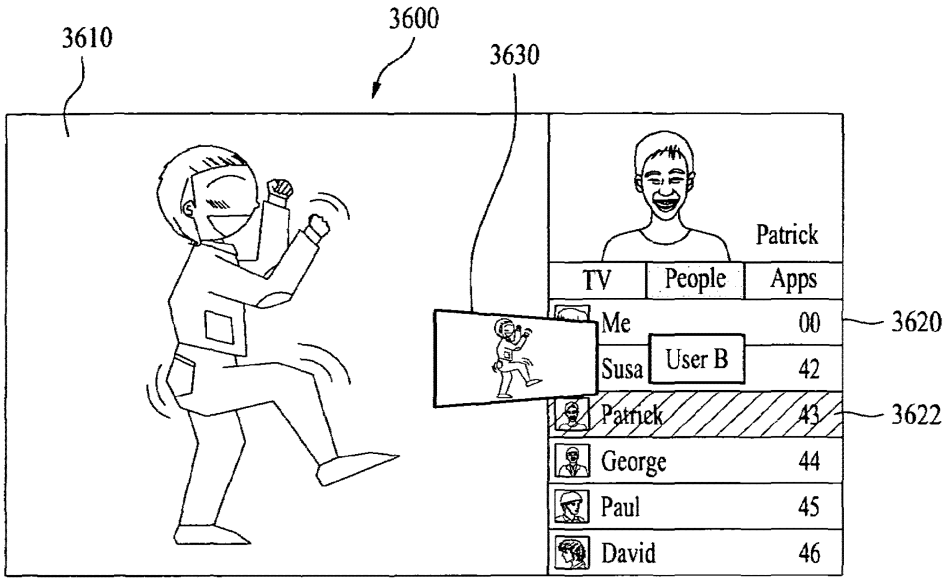

3610
3600
3630
Patrick
TV
People
Apps
Me
00
3620
Susa
User B
42
Patrick
43
3622
George
44
Paul
45
David
46

FIG. 37

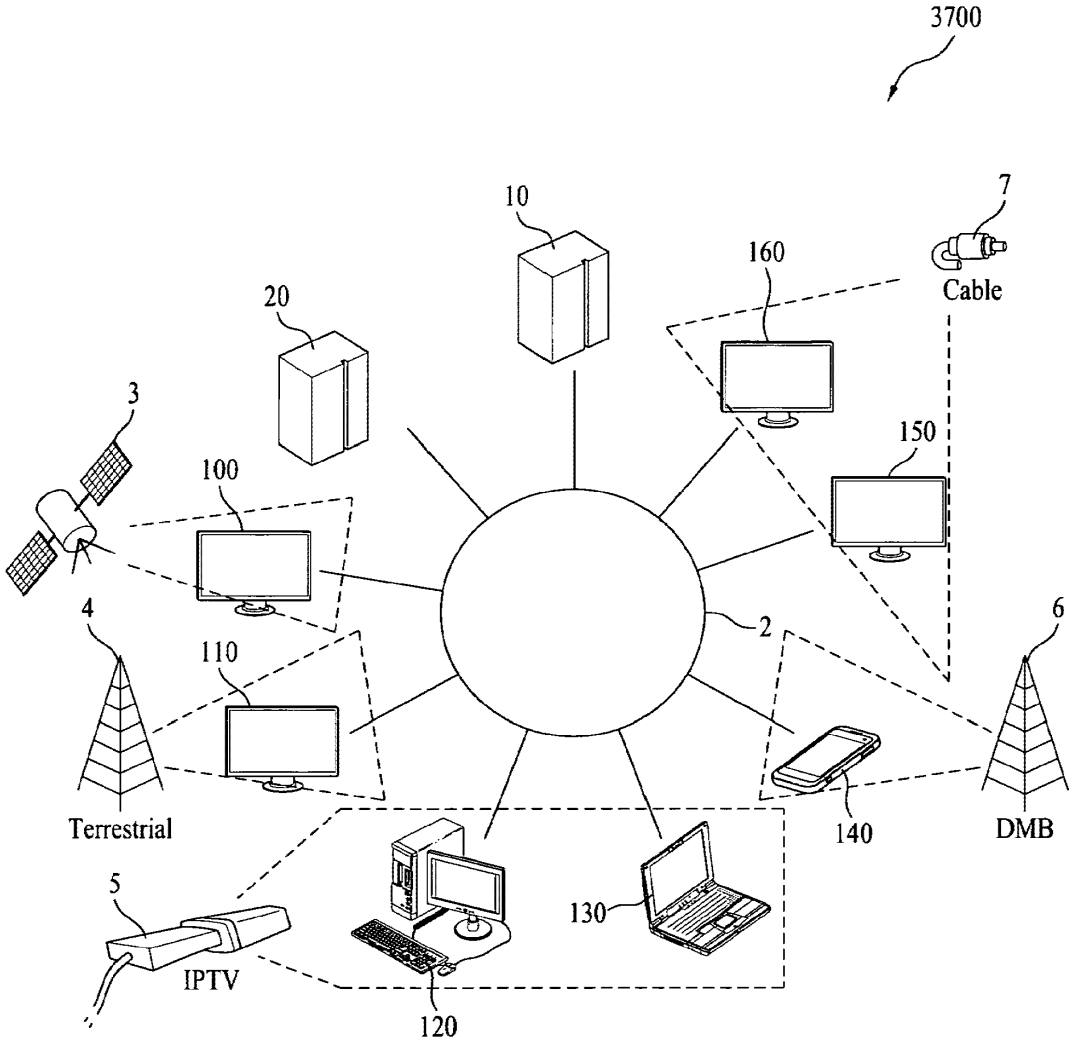

3700
10
7
Cable
160
20
3
150
100
2
4
6
110
Terrestrial
140
DMB
5
130
IPTV
120

FIG. 38

3800

Field Name	bits
Details_of_user	Var
Physical_channel_details	Var
Service_Name	Var
Service_ID	64
Channel_number	64
Event_Name	Var
Event_ID	64
Transport_Stream_ID	64
Network_ID	64
ServiceProvider	Var
Originating_medium	64
Originating_Country	Var

FIG. 39

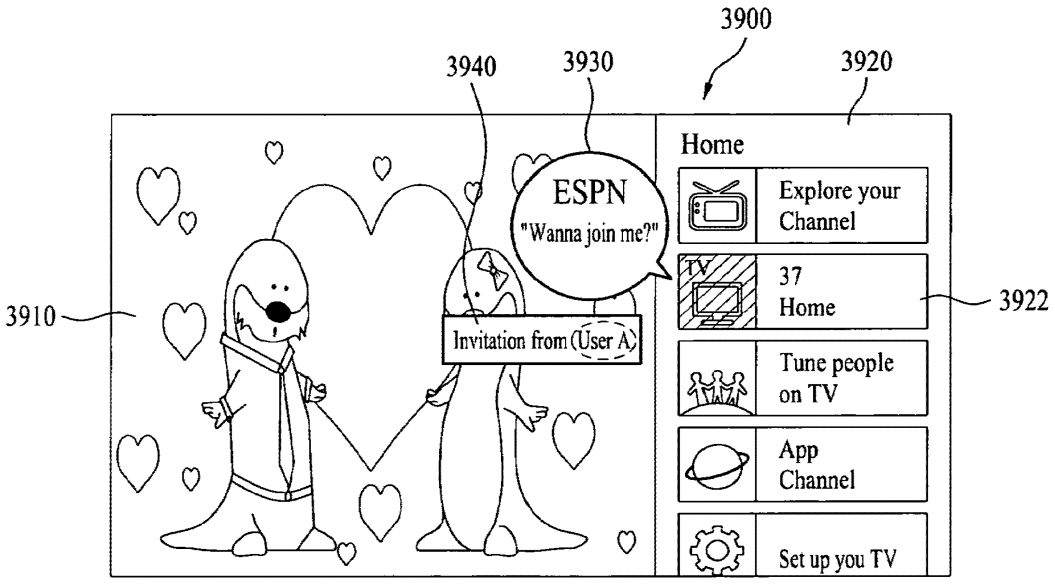

3900
3940
3930
3920
3910
3922
ESPN
"Wanna join me?"
Invitation from (User A)
Home
Explore your Channel
TV
37 Home
Tune people on TV
App Channel
Set up you TV

FIG. 40

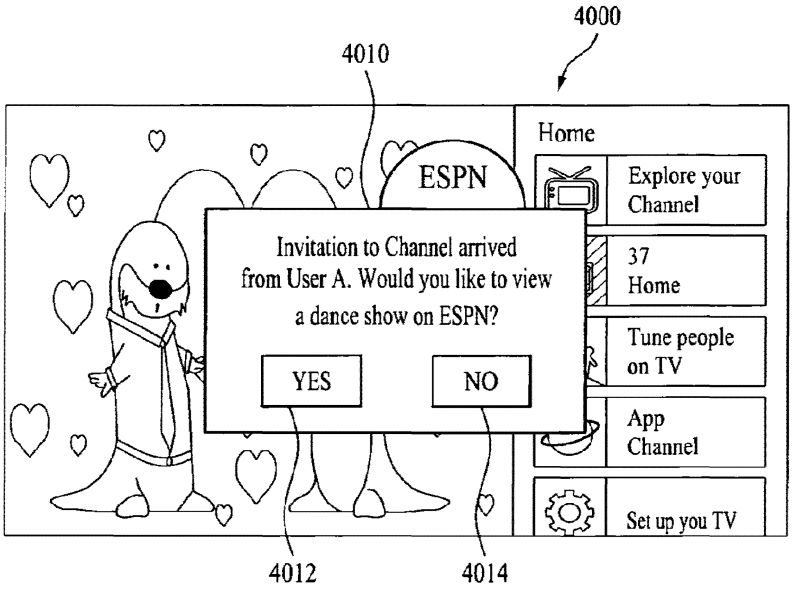

4000
4010
Home
ESPN
Explore your Channel
37 Home
Tune people on TV
App Channel
Set up you TV
Invitation to Channel arrived from User A. Would you like to view a dance show on ESPN?
YES
NO
4012
4014

FIG. 41

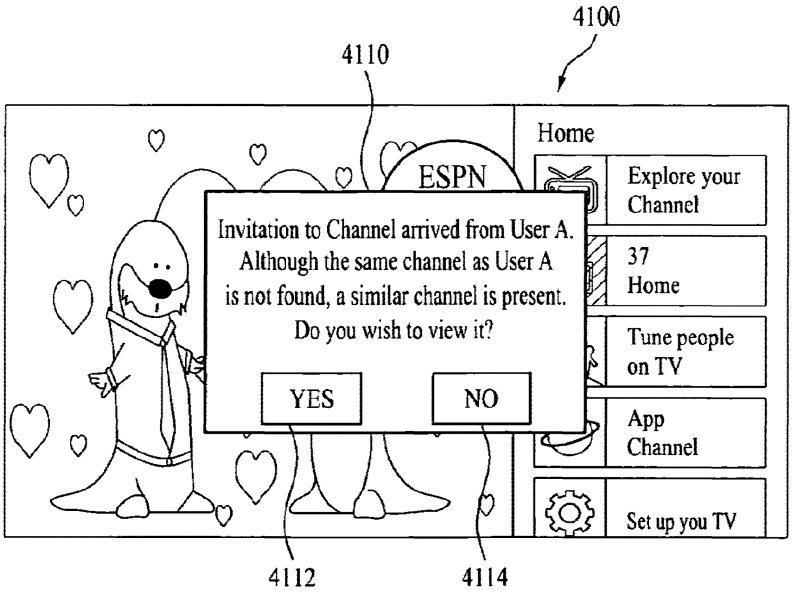

4100
4110
Home
ESPN
Explore your Channel
37 Home
Tune people on TV
App Channel
Set up you TV
Invitation to Channel arrived from User A. Although the same channel as User A is not found, a similar channel is present. Do you wish to view it?
YES
NO
4112
4114

FIG. 42

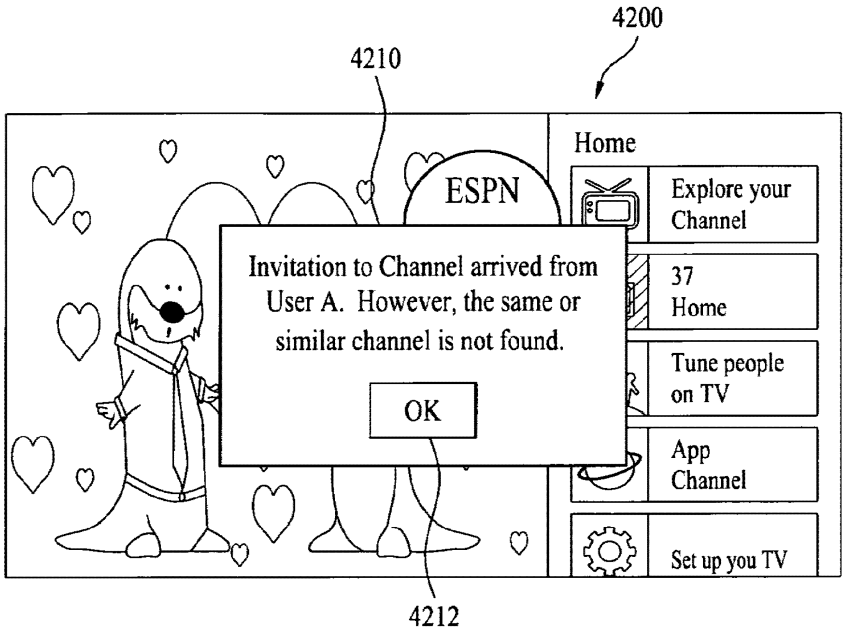

4200
4210
ESPN
Home
Explore your Channel
37 Home
Tune people on TV
App Channel
Set up you TV
Invitation to Channel arrived from User A. However, the same or similar channel is not found.
OK
4212

FIG. 43A

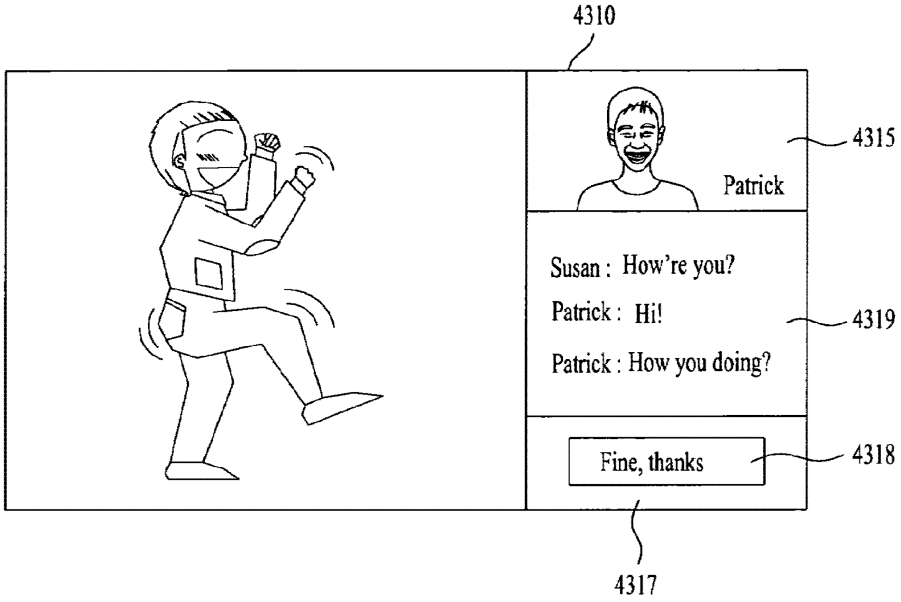


FIG. 43B

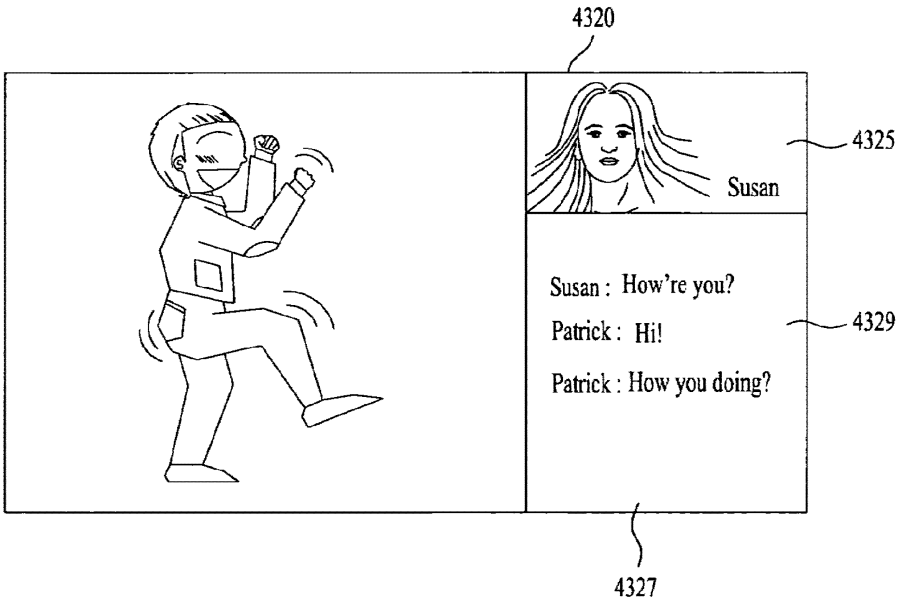


FIG. 44

4400

Service provider 1		Service provider 2	
Channel number	Frequency	Channel number	Frequency
101	10800MHZ	901	11100MHZ
202	11800MHZ	345	11010MHZ

FIG. 45

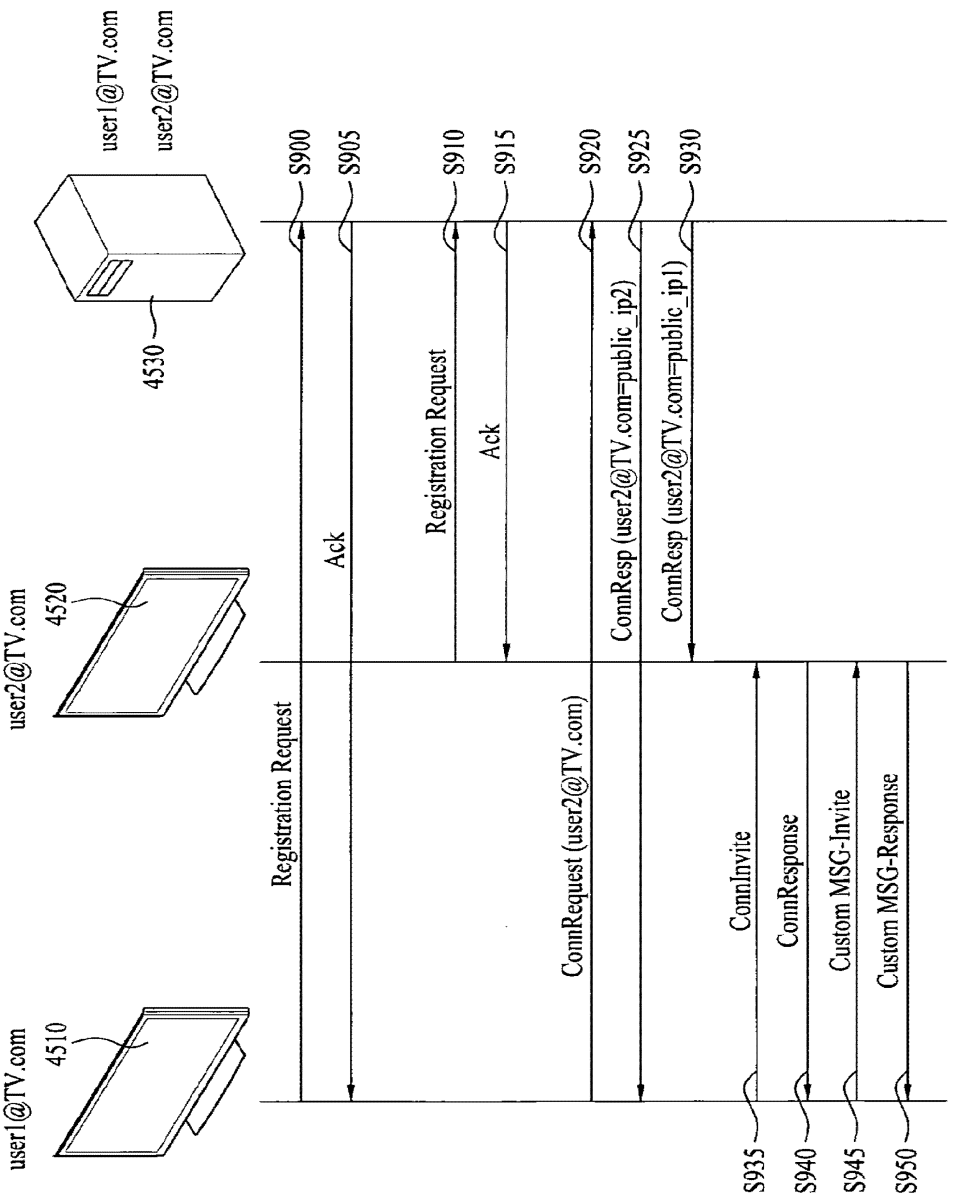

user1@TV.com
4510
user2@TV.com
4520
user1@TV.com
user2@TV.com
4530
S900
S905
S910
S915
S920
S925
S930
S935
S940
S945
S950
Registration Request
Ack
Registration Request
Ack
ConnRequest (user2@TV.com)
ConnResp (user2@TV.com=public_ip2)
ConnResp (user2@TV.com=public_ip1)
ConnInvite
ConnResponse
Custom MSG-Invite
Custom MSG-Response

FIG. 46

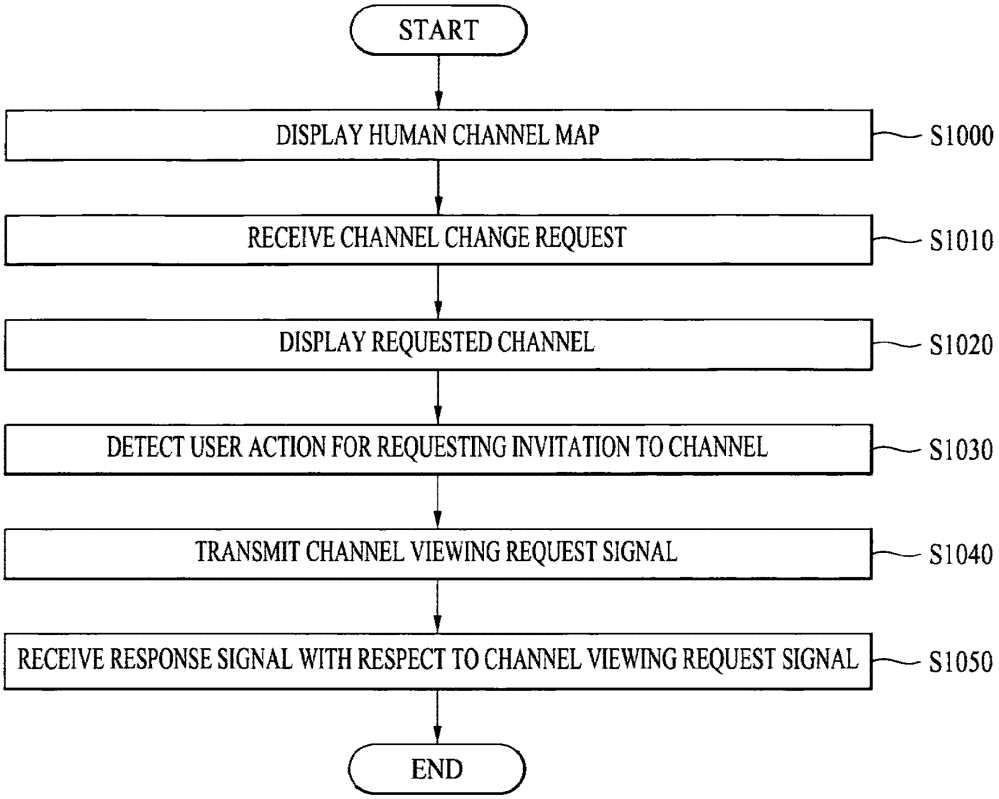

START
DISPLAY HUMAN CHANNEL MAP
S1000
RECEIVE CHANNEL CHANGE REQUEST
S1010
DISPLAY REQUESTED CHANNEL
S1020
DETECT USER ACTION FOR REQUESTING INVITATION TO CHANNEL
S1030
TRANSMIT CHANNEL VIEWING REQUEST SIGNAL
S1040
RECEIVE RESPONSE SIGNAL WITH RESPECT TO CHANNEL VIEWING REQUEST SIGNAL
S1050
END

FIG. 47

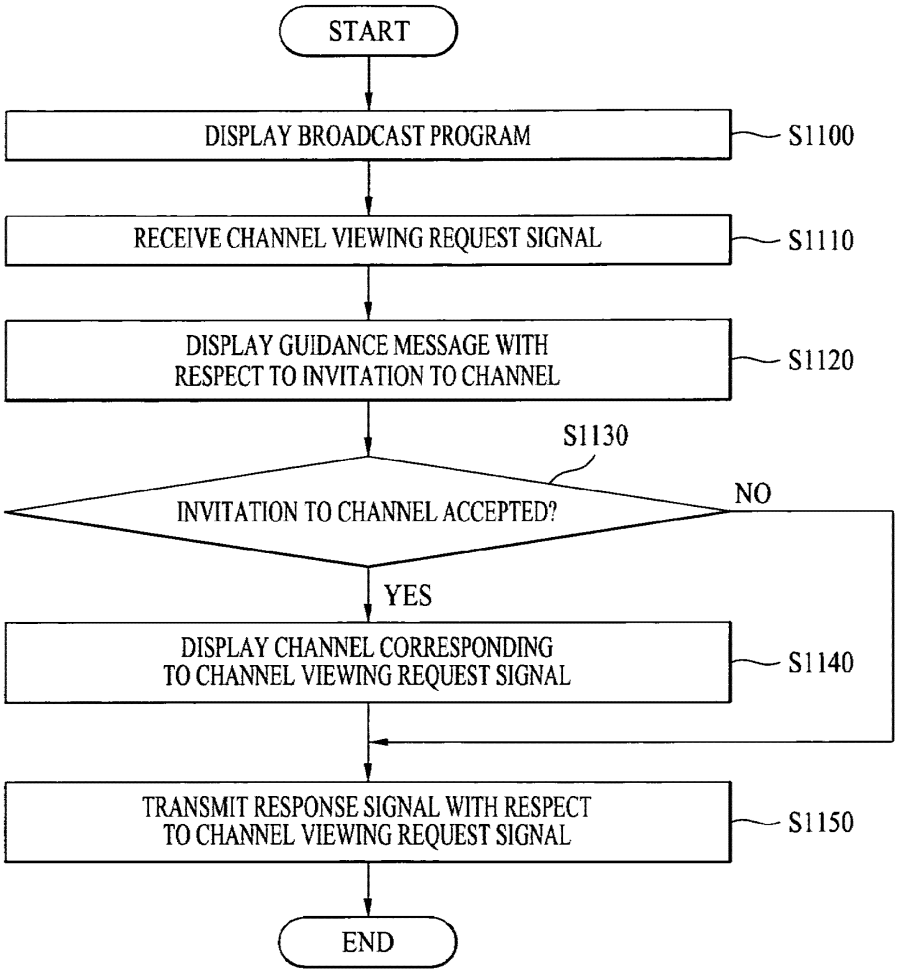

START
DISPLAY BROADCAST PROGRAM
S1100
RECEIVE CHANNEL VIEWING REQUEST SIGNAL
S1110
DISPLAY GUIDANCE MESSAGE WITH RESPECT TO INVITATION TO CHANNEL
S1120
S1130
INVITATION TO CHANNEL ACCEPTED?
NO
YES
DISPLAY CHANNEL CORRESPONDING TO CHANNEL VIEWING REQUEST SIGNAL
S1140
TRANSMIT RESPONSE SIGNAL WITH RESPECT TO CHANNEL VIEWING REQUEST SIGNAL
S1150
END

FIG. 48

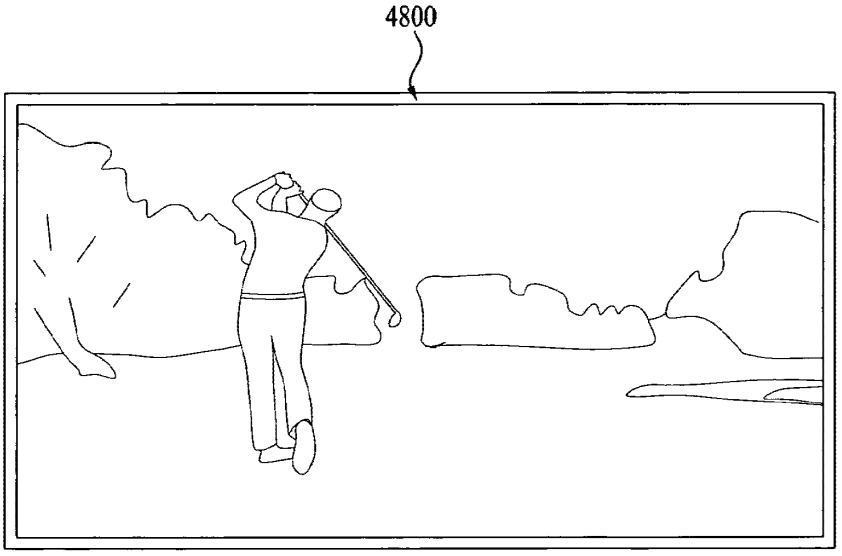


FIG. 49

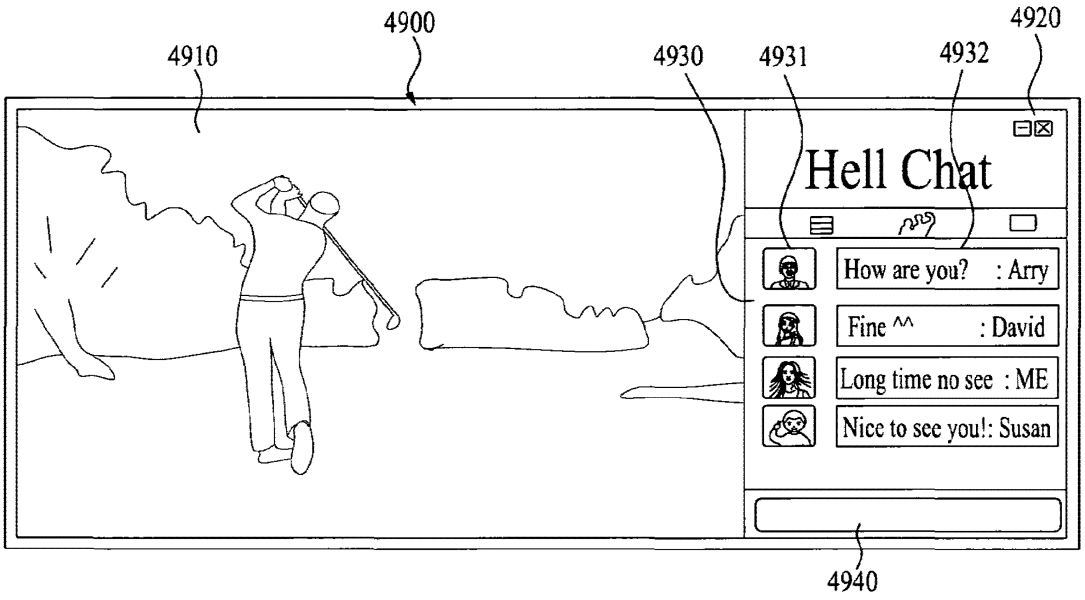

4900
4910
4920
4930
4931
4932
Hell Chat
How are you? : Arry
Fine ^^ : David
Long time no see : ME
Nice to see you!: Susan
4940

FIG. 50

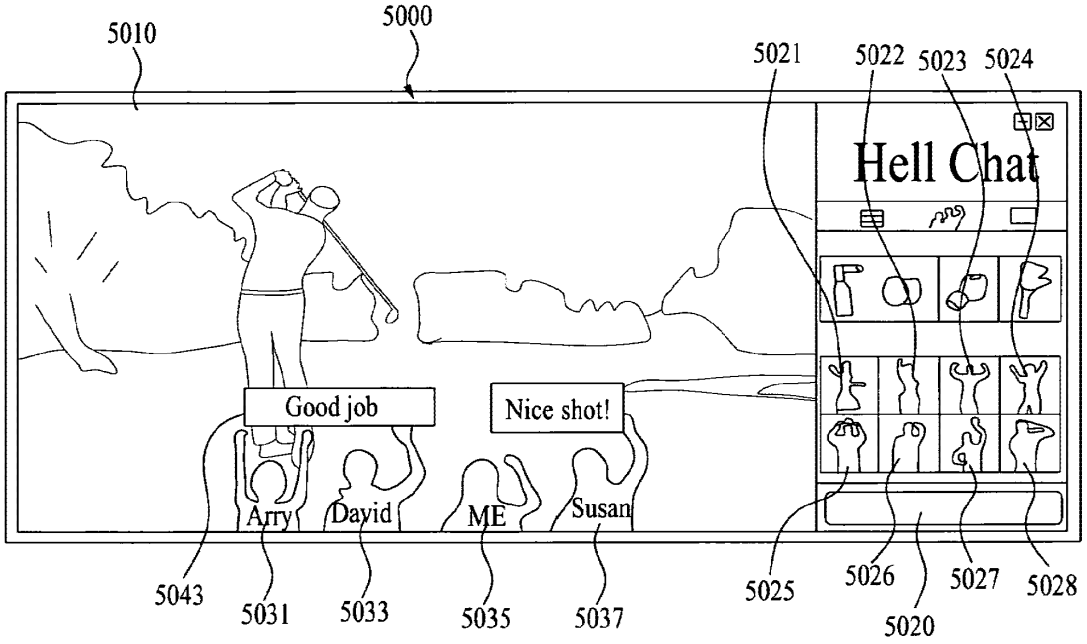

5010
5000
5021
5022
5023
5024
Hell Chat
Good job
Nice shot!
Arry
David
ME
Susan
5043
5031
5033
5035
5037
5025
5026
5027
5028
5020

FIG. 51

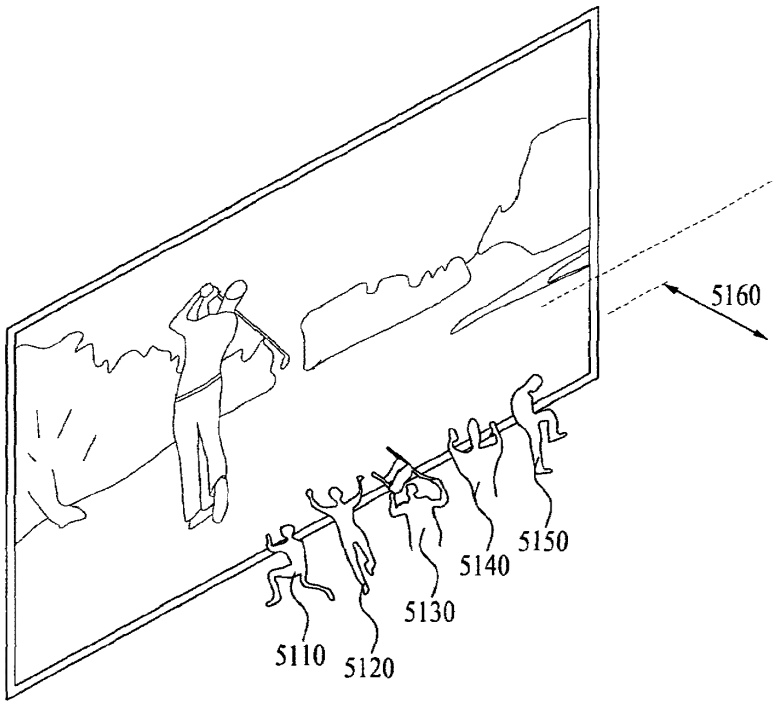


FIG. 52

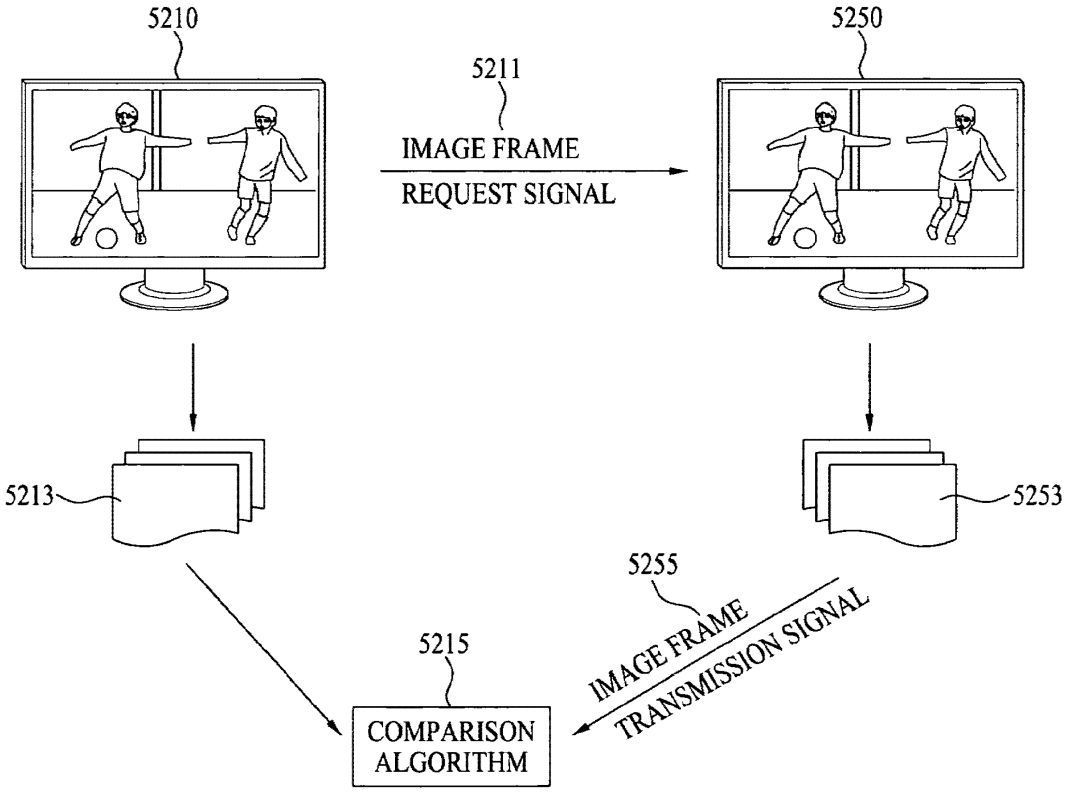

5210
5211
IMAGE FRAME
REQUEST SIGNAL
5250
5213
5253
5255
IMAGE FRAME
TRANSMISSION SIGNAL
5215
COMPARISON
ALGORITHM

FIG. 53

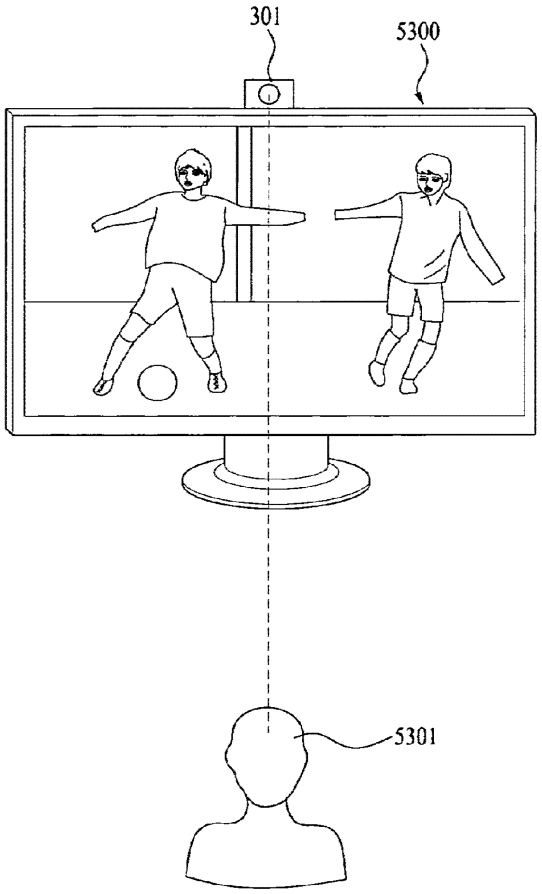


FIG. 54

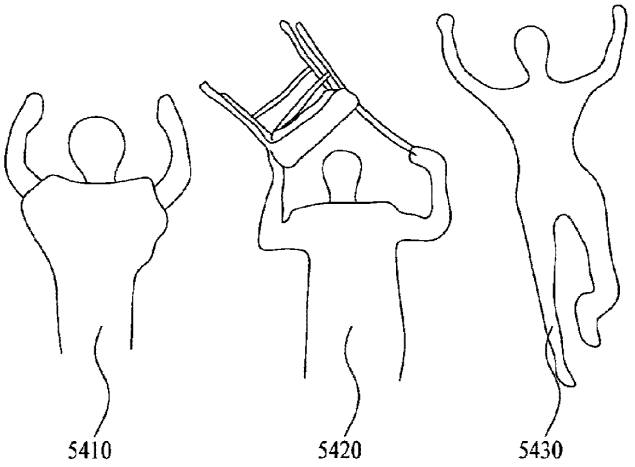


FIG. 55

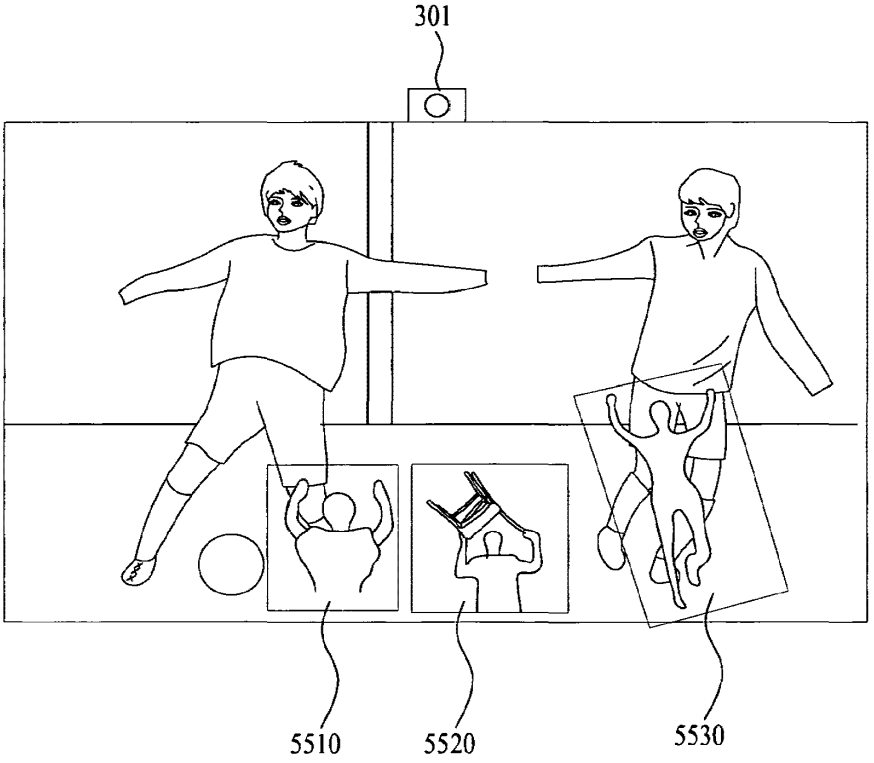


FIG. 56

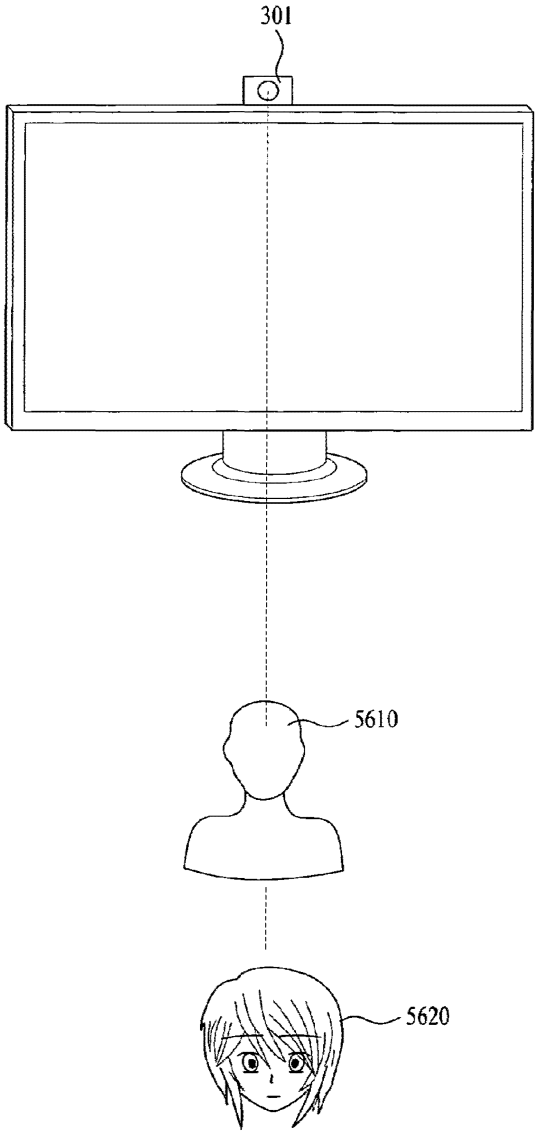


FIG. 57

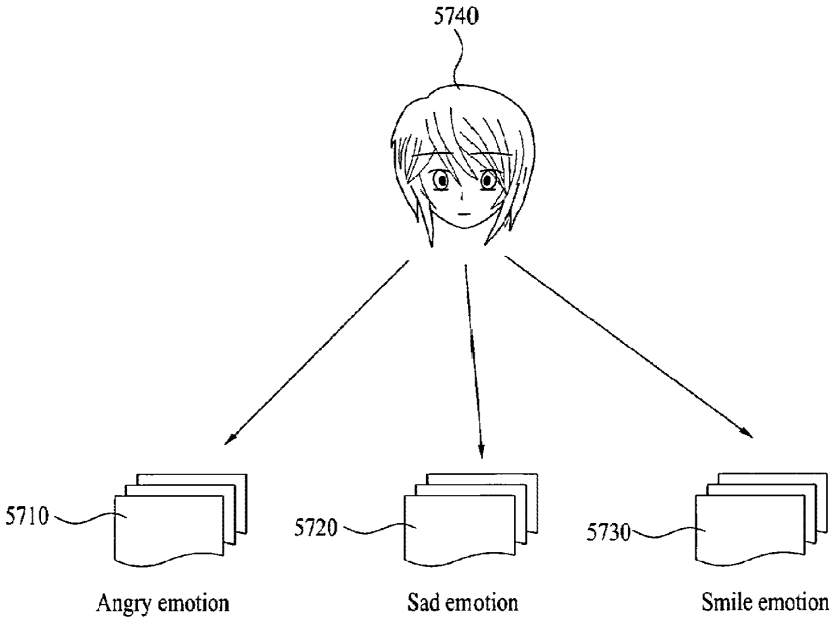

5740
5710
5720
5730
Angry emotion
Sad emotion
Smile emotion

FIG. 58

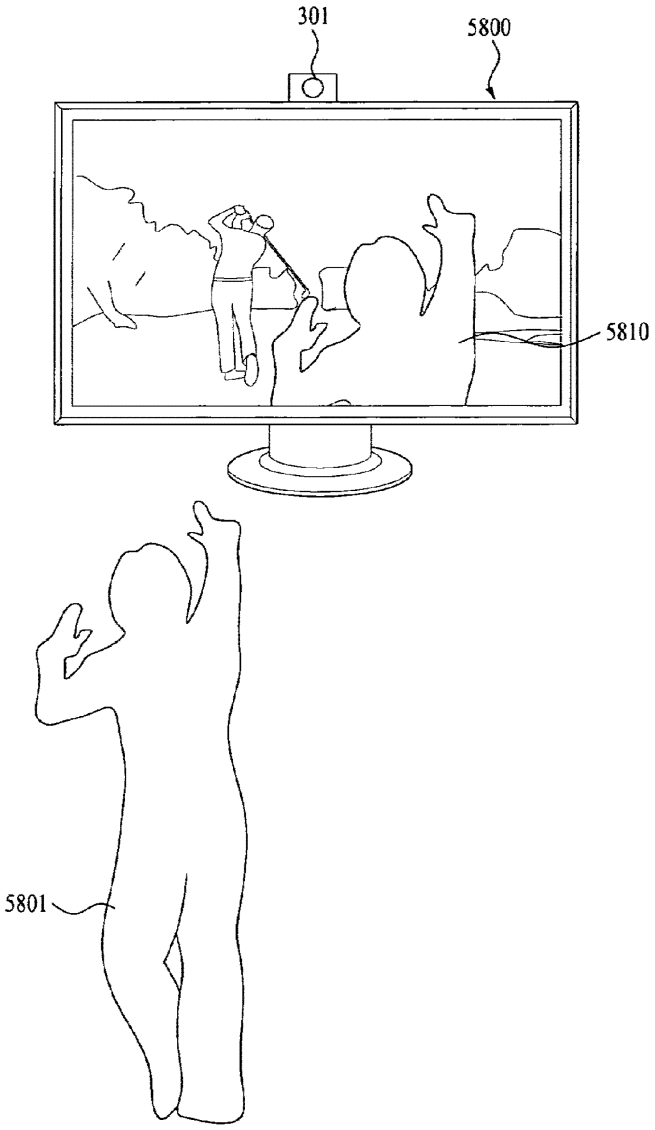


FIG. 59A

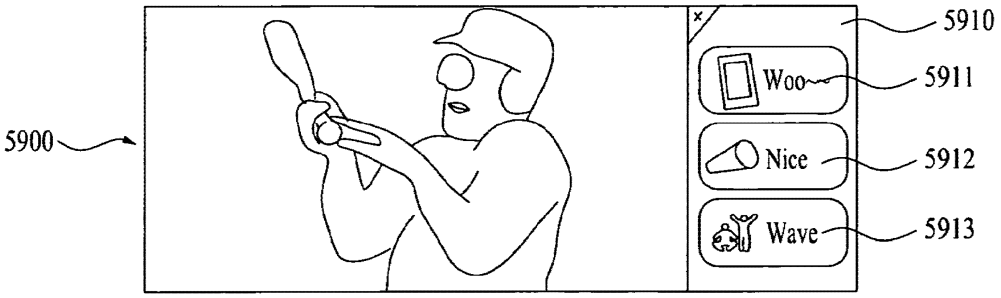


FIG. 59B

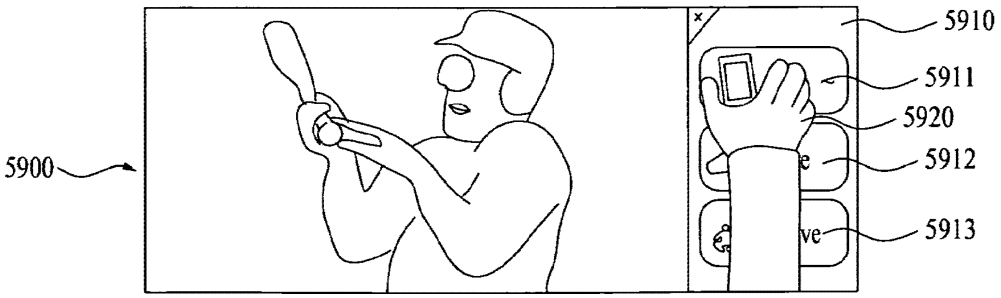


FIG. 59C

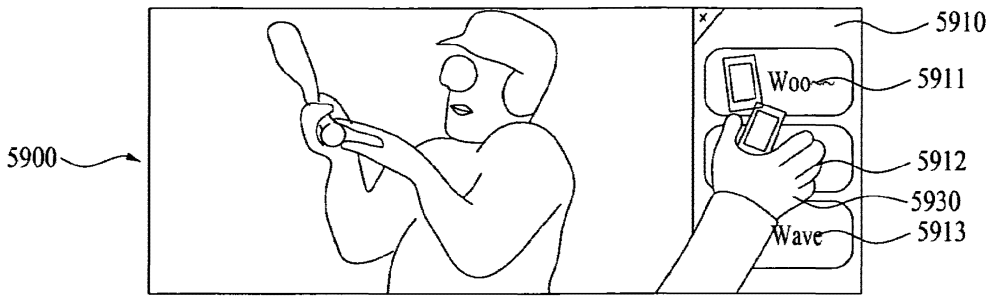


FIG. 59D

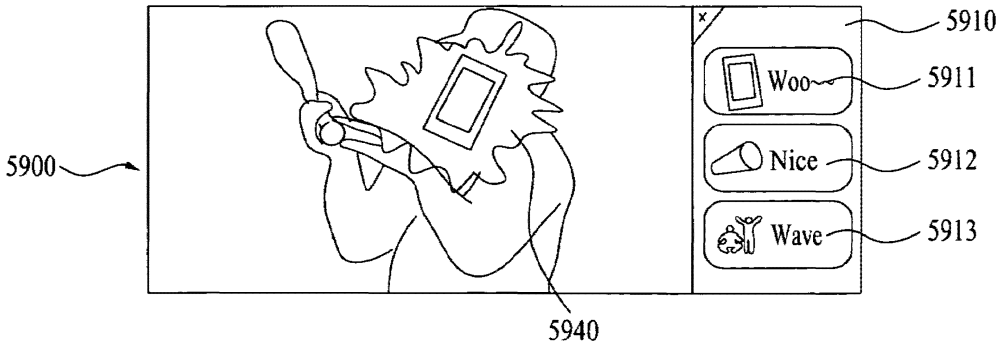


FIG. 60

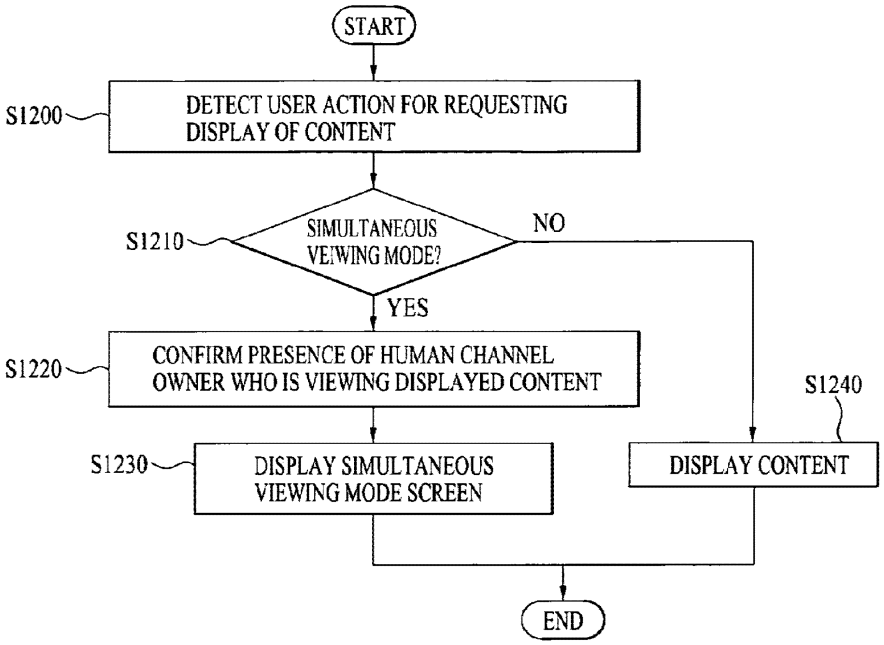

START
S1200
DETECT USER ACTION FOR REQUESTING DISPLAY OF CONTENT
S1210
SIMULTANEOUS VEIWING MODE?
NO
YES
S1220
CONFIRM PRESENCE OF HUMAN CHANNEL OWNER WHO IS VIEWING DISPLAYED CONTENT
S1240
S1230
DISPLAY SIMULTANEOUS VIEWING MODE SCREEN
DISPLAY CONTENT
END

FIG. 61

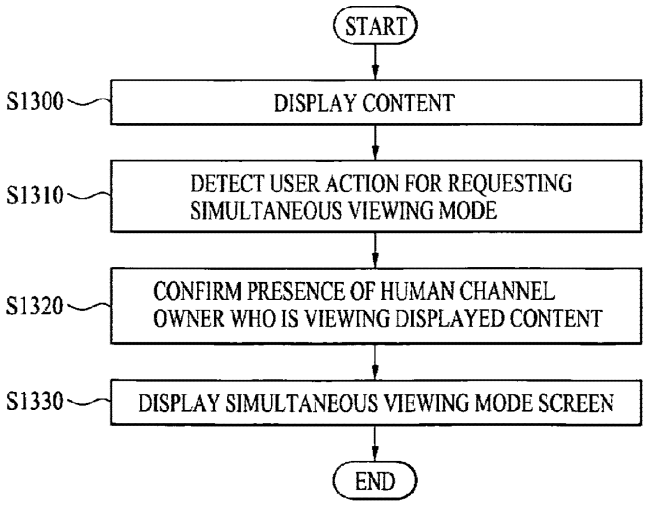

START
S1300
DISPLAY CONTENT
S1310
DETECT USER ACTION FOR REQUESTING SIMULTANEOUS VIEWING MODE
S1320
CONFIRM PRESENCE OF HUMAN CHANNEL OWNER WHO IS VIEWING DISPLAYED CONTENT
S1330
DISPLAY SIMULTANEOUS VIEWING MODE SCREEN
END

FIG. 62

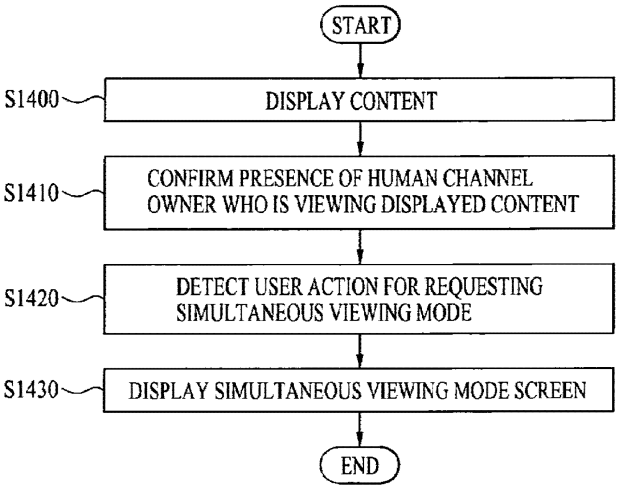

START
S1400
DISPLAY CONTENT
S1410
CONFIRM PRESENCE OF HUMAN CHANNEL OWNER WHO IS VIEWING DISPLAYED CONTENT
S1420
DETECT USER ACTION FOR REQUESTING SIMULTANEOUS VIEWING MODE
S1430
DISPLAY SIMULTANEOUS VIEWING MODE SCREEN
END

FIG. 63

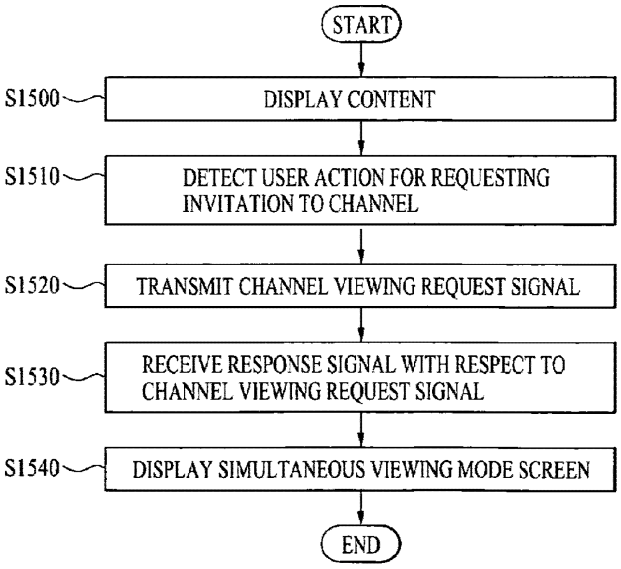

START
S1500
DISPLAY CONTENT
S1510
DETECT USER ACTION FOR REQUESTING INVITATION TO CHANNEL
S1520
TRANSMIT CHANNEL VIEWING REQUEST SIGNAL
S1530
RECEIVE RESPONSE SIGNAL WITH RESPECT TO CHANNEL VIEWING REQUEST SIGNAL
S1540
DISPLAY SIMULTANEOUS VIEWING MODE SCREEN
END

FIG. 64

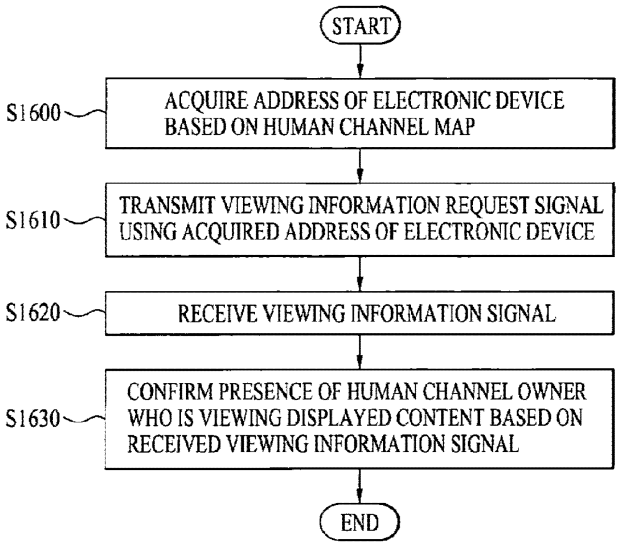

START
S1600
ACQUIRE ADDRESS OF ELECTRONIC DEVICE BASED ON HUMAN CHANNEL MAP
S1610
TRANSMIT VIEWING INFORMATION REQUEST SIGNAL USING ACQUIRED ADDRESS OF ELECTRONIC DEVICE
S1620
RECEIVE VIEWING INFORMATION SIGNAL
S1630
CONFIRM PRESENCE OF HUMAN CHANNEL OWNER WHO IS VIEWING DISPLAYED CONTENT BASED ON RECEIVED VIEWING INFORMATION SIGNAL
END

FIG. 65

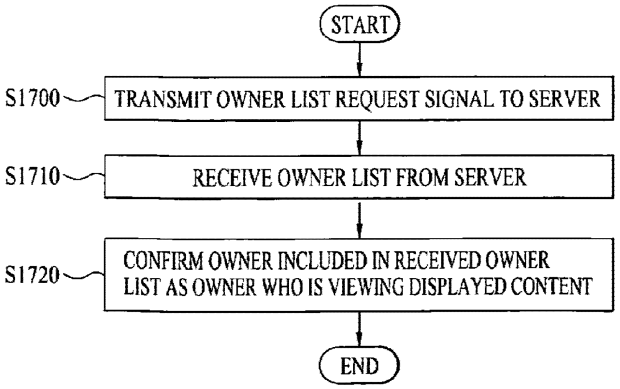

START
S1700
TRANSMIT OWNER LIST REQUEST SIGNAL TO SERVER
S1710
RECEIVE OWNER LIST FROM SERVER
S1720
CONFIRM OWNER INCLUDED IN RECEIVED OWNER LIST AS OWNER WHO IS VIEWING DISPLAYED CONTENT
END

FIG. 66

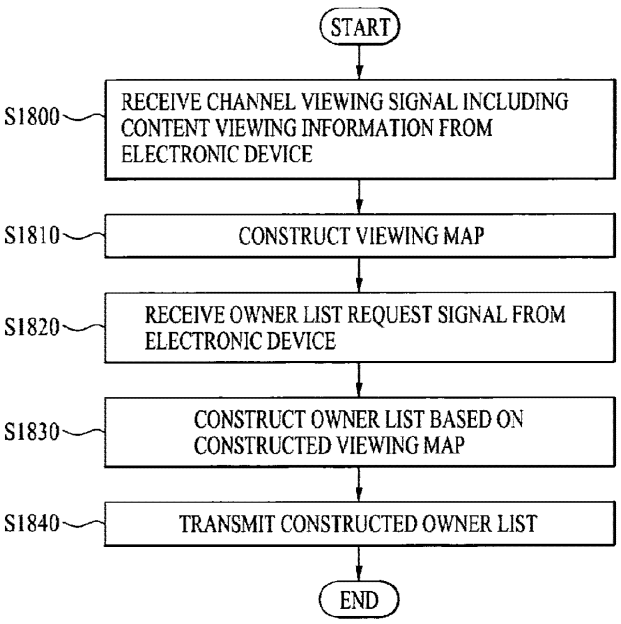

START
S1800
RECEIVE CHANNEL VIEWING SIGNAL INCLUDING CONTENT VIEWING INFORMATION FROM ELECTRONIC DEVICE
S1810
CONSTRUCT VIEWING MAP
S1820
RECEIVE OWNER LIST REQUEST SIGNAL FROM ELECTRONIC DEVICE
S1830
CONSTRUCT OWNER LIST BASED ON CONSTRUCTED VIEWING MAP
S1840
TRANSMIT CONSTRUCTED OWNER LIST
END

FIG. 67

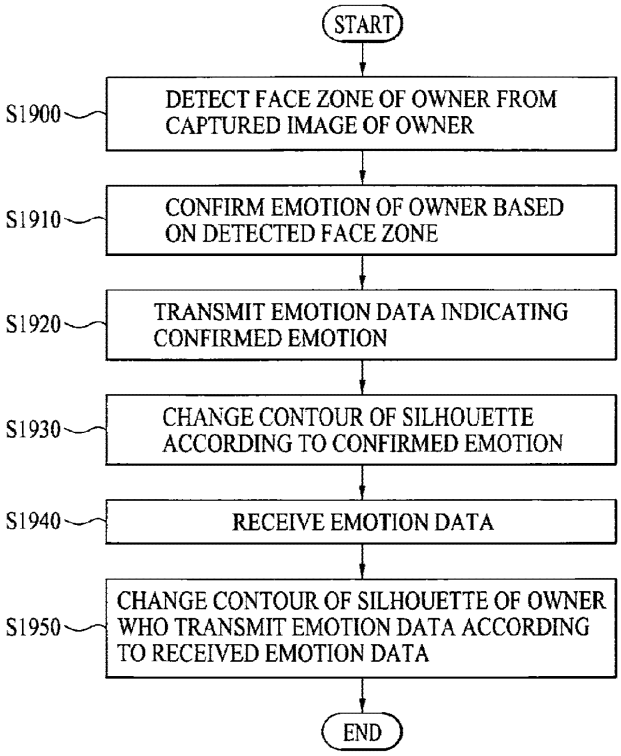

START
S1900
DETECT FACE ZONE OF OWNER FROM CAPTURED IMAGE OF OWNER
S1910
CONFIRM EMOTION OF OWNER BASED ON DETECTED FACE ZONE
S1920
TRANSMIT EMOTION DATA INDICATING CONFIRMED EMOTION
S1930
CHANGE CONTOUR OF SILHOUETTE ACCORDING TO CONFIRMED EMOTION
S1940
RECEIVE EMOTION DATA
S1950
CHANGE CONTOUR OF SILHOUETTE OF OWNER WHO TRANSMIT EMOTION DATA ACCORDING TO RECEIVED EMOTION DATA
END

FIG. 68

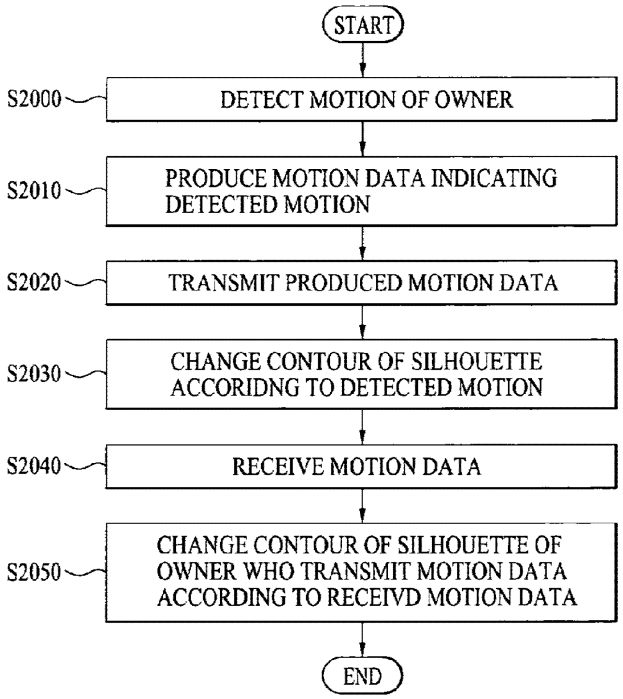

START
S2000
DETECT MOTION OF OWNER
S2010
PRODUCE MOTION DATA INDICATING DETECTED MOTION
S2020
TRANSMIT PRODUCED MOTION DATA
S2030
CHANGE CONTOUR OF SILHOUETTE ACCORIDNG TO DETECTED MOTION
S2040
RECEIVE MOTION DATA
S2050
CHANGE CONTOUR OF SILHOUETTE OF OWNER WHO TRANSMIT MOTION DATA ACCORDING TO RECEIVD MOTION DATA
END

FIG. 69

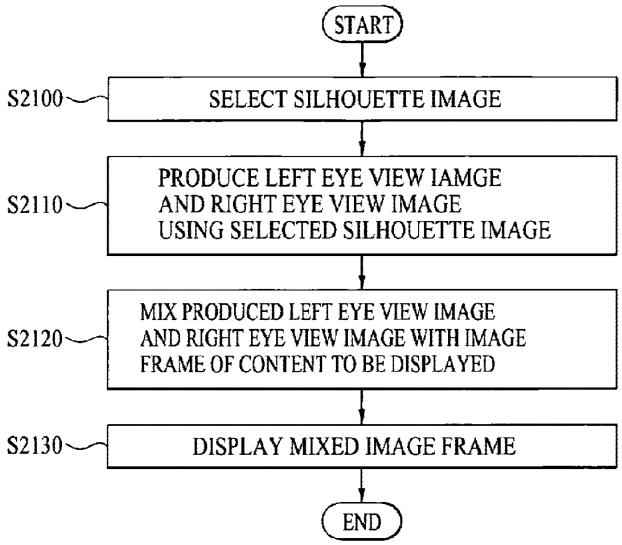

START
S2100
SELECT SILHOUETTE IMAGE
S2110
PRODUCE LEFT EYE VIEW IAMGE
AND RIGHT EYE VIEW IMAGE
USING SELECTED SILHOUETTE IMAGE
S2120
MIX PRODUCED LEFT EYE VIEW IMAGE
AND RIGHT EYE VIEW IMAGE WITH IMAGE
FRAME OF CONTENT TO BE DISPLAYED
S2130
DISPLAY MIXED IMAGE FRAME
END

FIG. 70

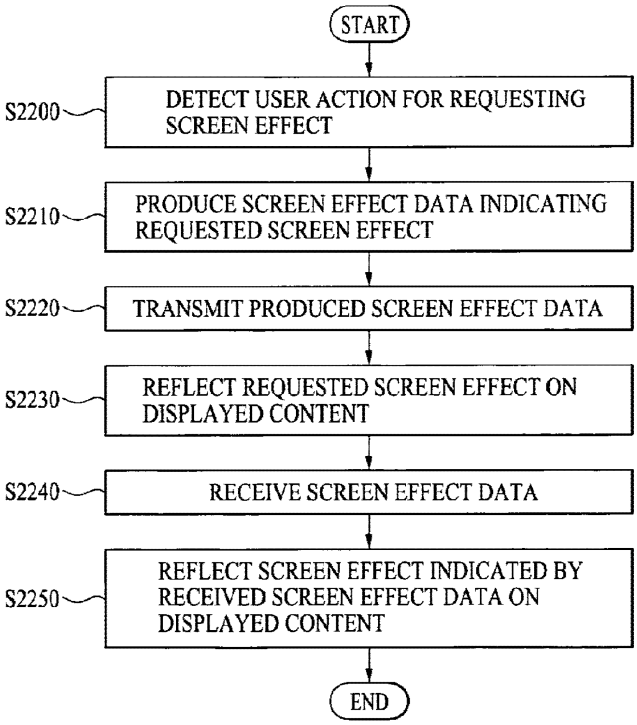

START
S2200
DETECT USER ACTION FOR REQUESTING SCREEN EFFECT
S2210
PRODUCE SCREEN EFFECT DATA INDICATING REQUESTED SCREEN EFFECT
S2220
TRANSMIT PRODUCED SCREEN EFFECT DATA
S2230
REFLECT REQUESTED SCREEN EFFECT ON DISPLAYED CONTENT
S2240
RECEIVE SCREEN EFFECT DATA
S2250
REFLECT SCREEN EFFECT INDICATED BY RECEIVED SCREEN EFFECT DATA ON DISPLAYED CONTENT
END

FIG. 71

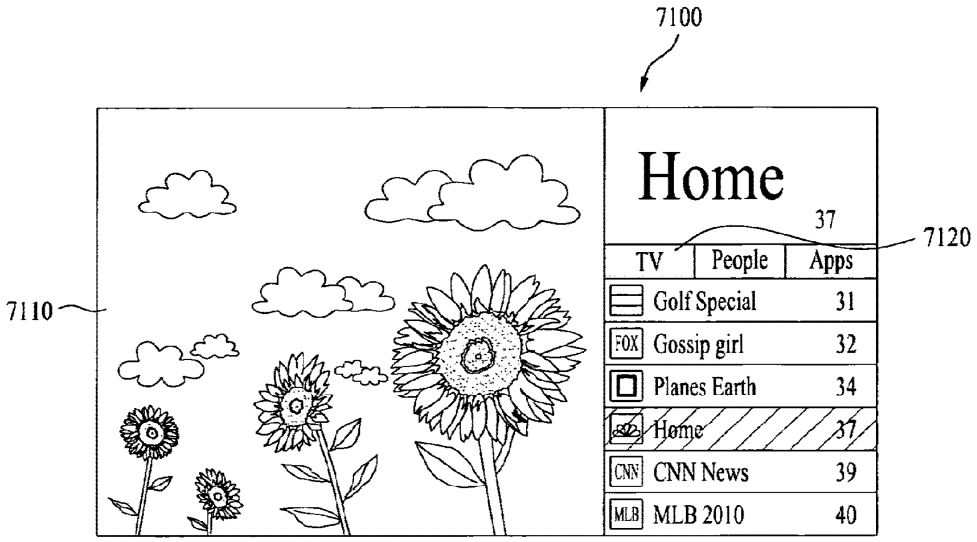

7100
Home
37
7120
TV
People
Apps
Golf Special 31
Gossip girl 32
Planes Earth 34
Home 37
CNN News 39
MLB 2010 40
7110

FIG. 72

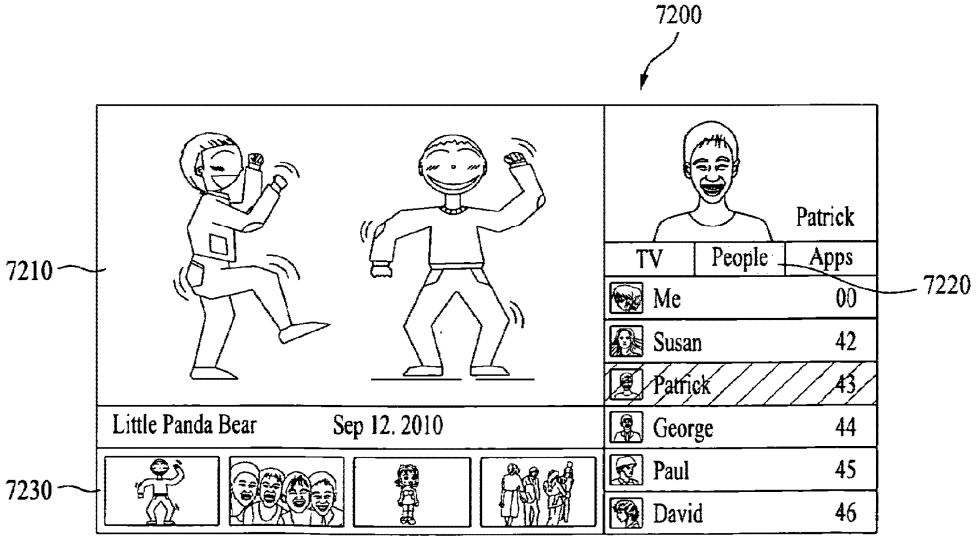

7200
Patrick
TV
People
Apps
7220
Me 00
Susan 42
Patrick 43
George 44
Paul 45
David 46
Little Panda Bear Sep 12. 2010
7210
7230

FIG. 73

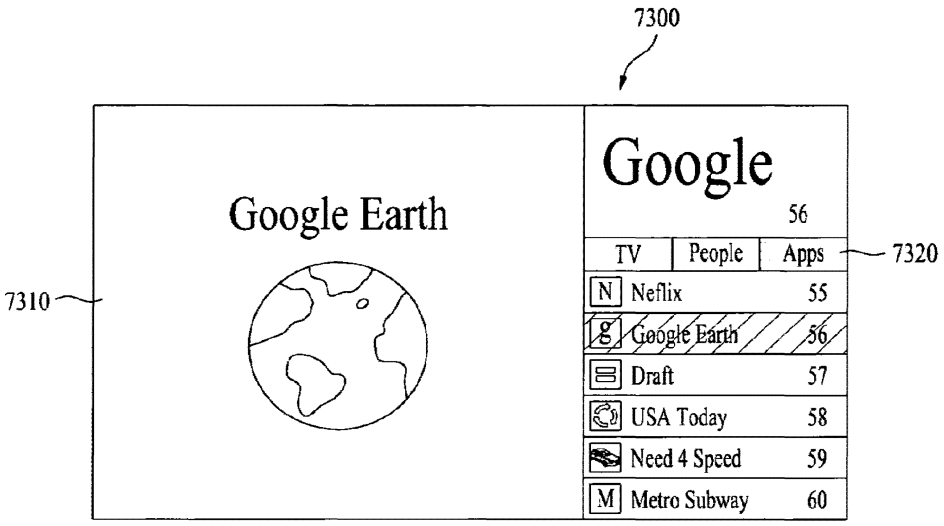
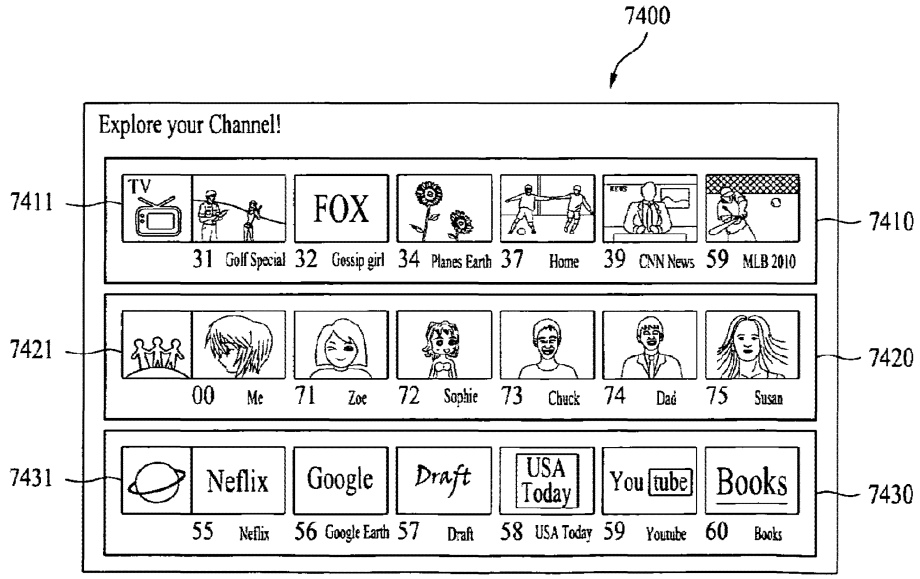


FIG. 74



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FIG. 75

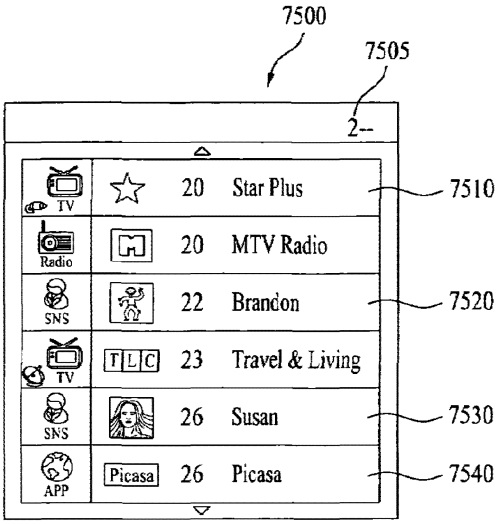

7500
7505
2--
TV
20 Star Plus
7510
Radio
20 MTV Radio
SNS
22 Brandon
7520
TV
T L C
23 Travel & Living
SNS
26 Susan
7530
APP
Picasa
26 Picasa
7540

FIG. 76

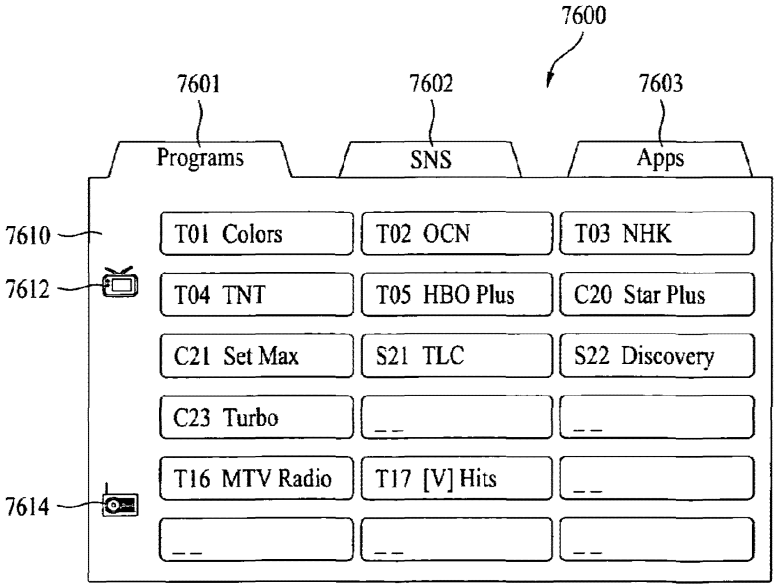

7600
7601
7602
7603
Programs
SNS
Apps
7610
T01 Colors
T02 OCN
T03 NHK
7612
T04 TNT
T05 HBO Plus
C20 Star Plus
C21 Set Max
S21 TLC
S22 Discovery
C23 Turbo
T16 MTV Radio
T17 [V] Hits
7614

FIG. 77

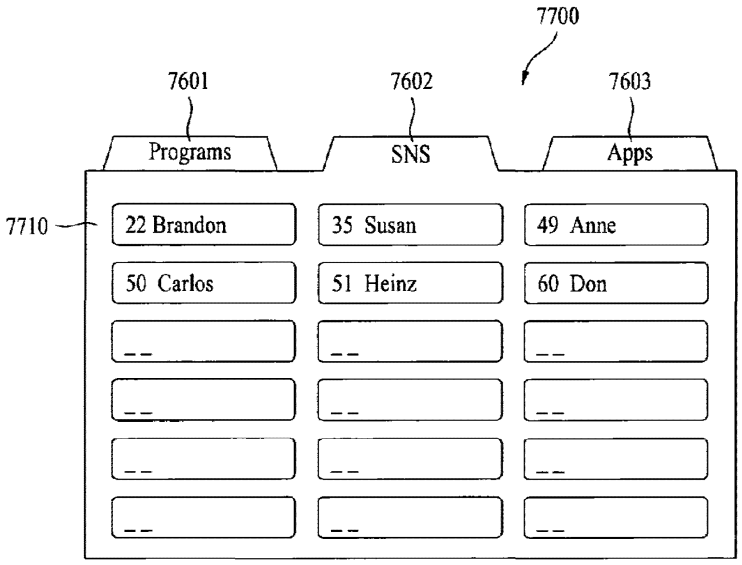

7700
7601
7602
7603
Programs
SNS
Apps
7710
22 Brandon
35 Susan
49 Anne
50 Carlos
51 Heinz
60 Don

FIG. 78

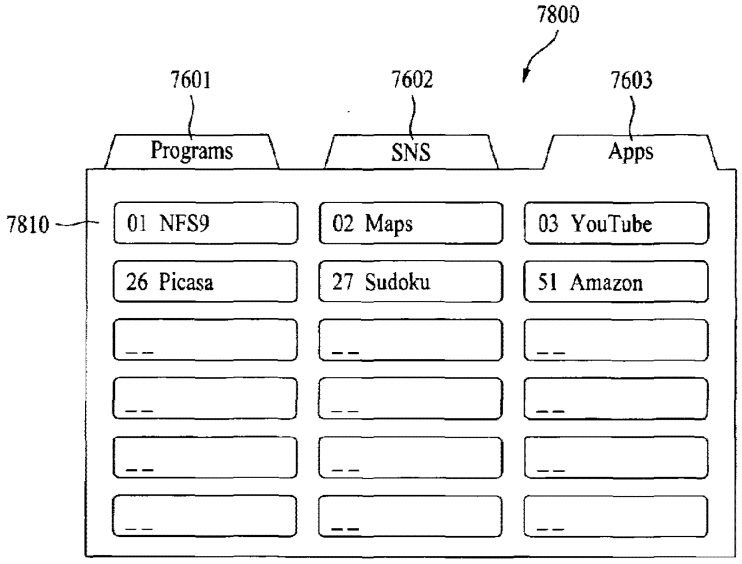
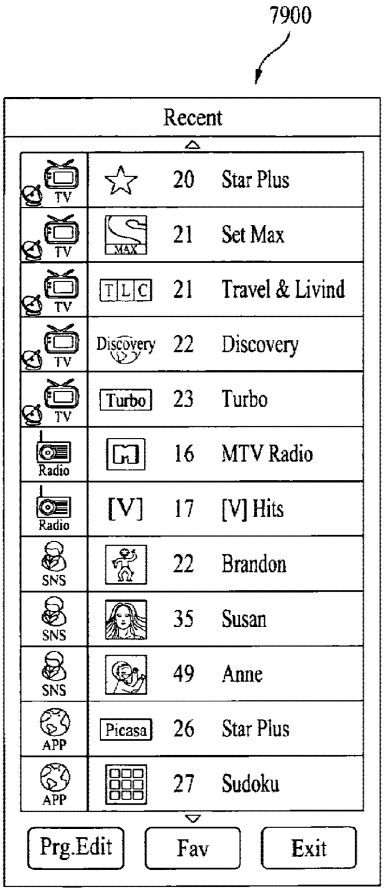

7800
7601
7602
7603
Programs
SNS
Apps
7810
01 NFS9
02 Maps
03 YouTube
26 Picasa
27 Sudoku
51 Amazon

FIG. 79



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FIG. 80

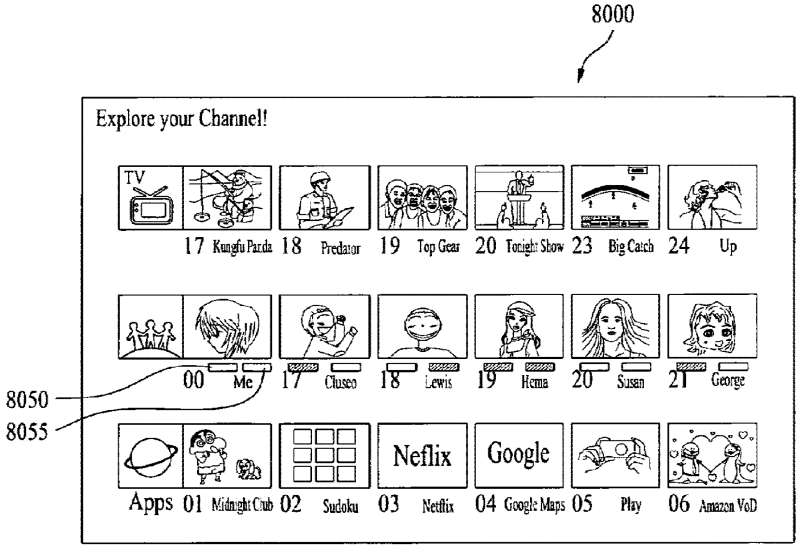

8000
Explore your Channel!
TV
17 Kungfu Panda
18 Predator
19 Top Gear
20 Tonight Show
23 Big Catch
24 Up
00 Me
17 Cluseo
18 Lewis
19 Hema
20 Susan
21 George
8050
8055
Apps
01 Midnight Club
02 Sudoku
Neflix
03 Netflix
Google
04 Google Maps
05 Play
06 Amazon VoD

FIG. 81A

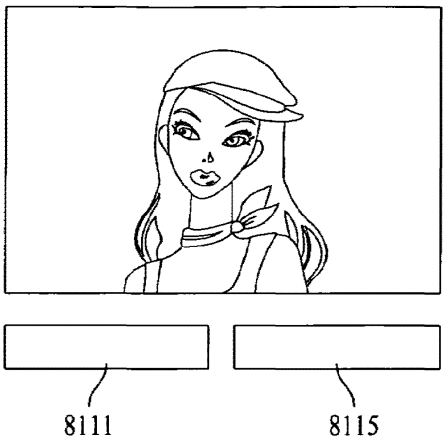


FIG. 81B

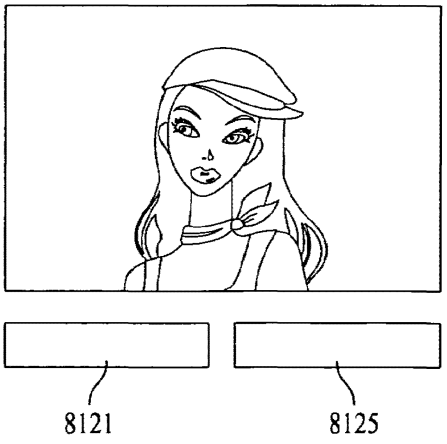


FIG. 81C

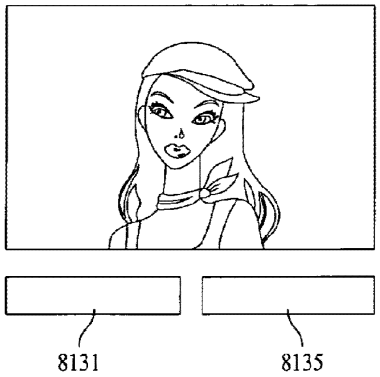


FIG. 81D

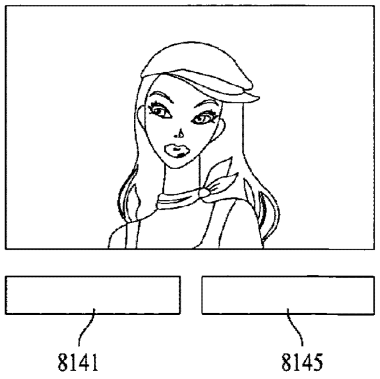


FIG. 82

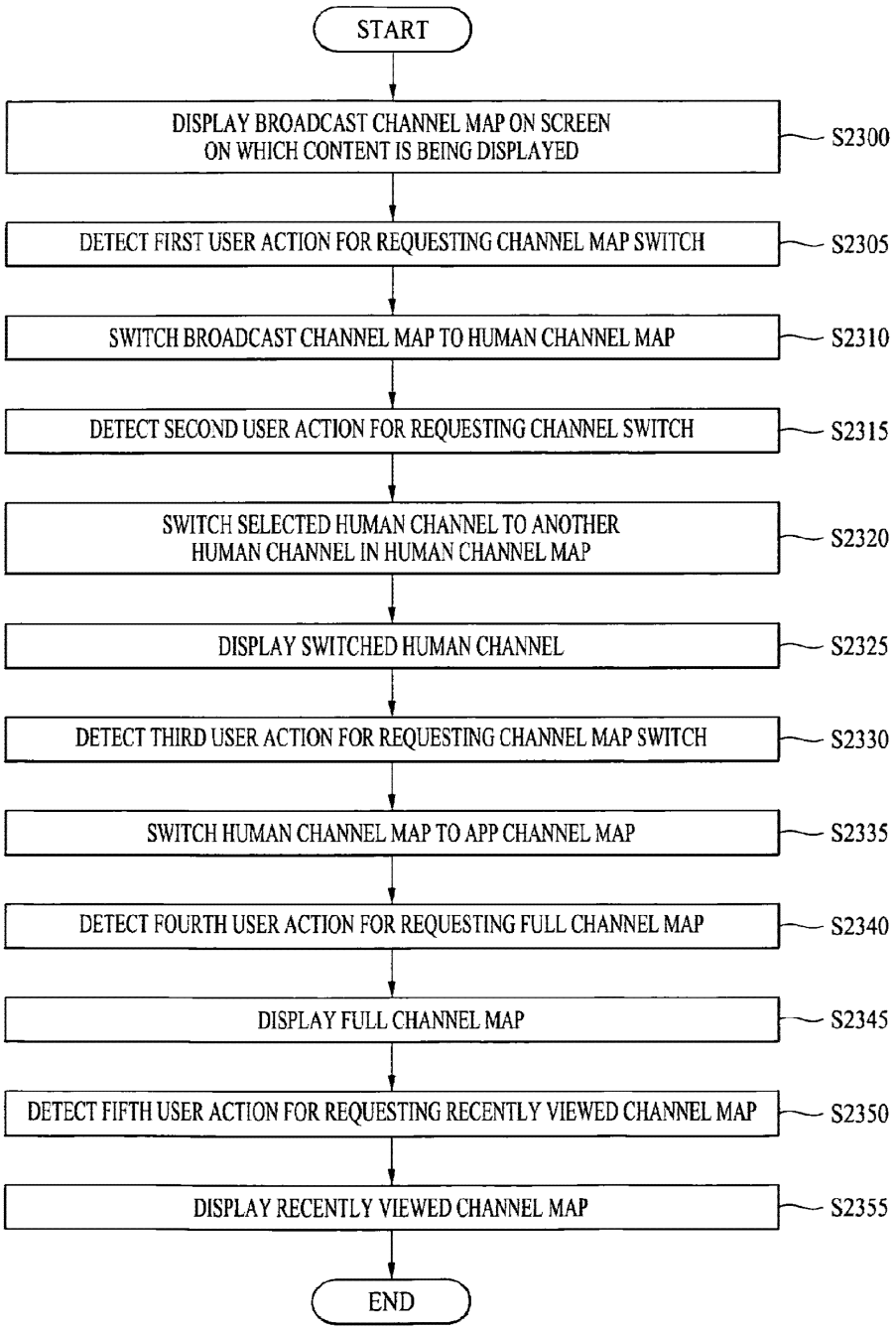

START
DISPLAY BROADCAST CHANNEL MAP ON SCREEN ON WHICH CONTENT IS BEING DISPLAYED
S2300
DETECT FIRST USER ACTION FOR REQUESTING CHANNEL MAP SWITCH
S2305
SWITCH BROADCAST CHANNEL MAP TO HUMAN CHANNEL MAP
S2310
DETECT SECOND USER ACTION FOR REQUESTING CHANNEL SWITCH
S2315
SWITCH SELECTED HUMAN CHANNEL TO ANOTHER HUMAN CHANNEL IN HUMAN CHANNEL MAP
S2320
DISPLAY SWITCHED HUMAN CHANNEL
S2325
DETECT THIRD USER ACTION FOR REQUESTING CHANNEL MAP SWITCH
S2330
SWITCH HUMAN CHANNEL MAP TO APP CHANNEL MAP
S2335
DETECT FOURTH USER ACTION FOR REQUESTING FULL CHANNEL MAP
S2340
DISPLAY FULL CHANNEL MAP
S2345
DETECT FIFTH USER ACTION FOR REQUESTING RECENTLY VIEWED CHANNEL MAP
S2350
DISPLAY RECENTLY VIEWED CHANNEL MAP
S2355
END

FIG. 83

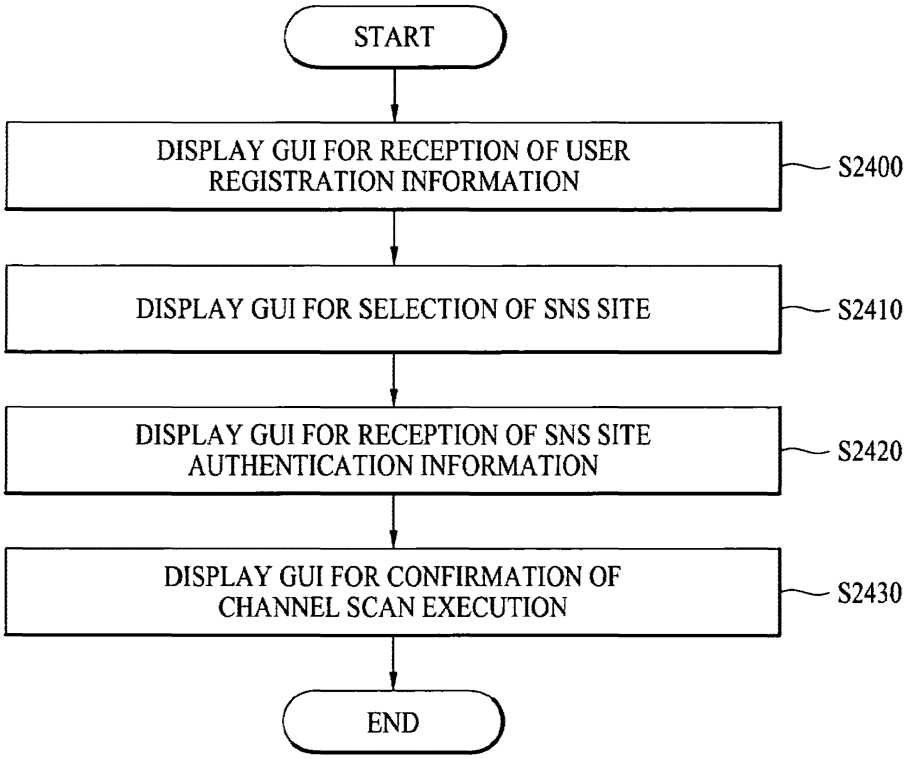
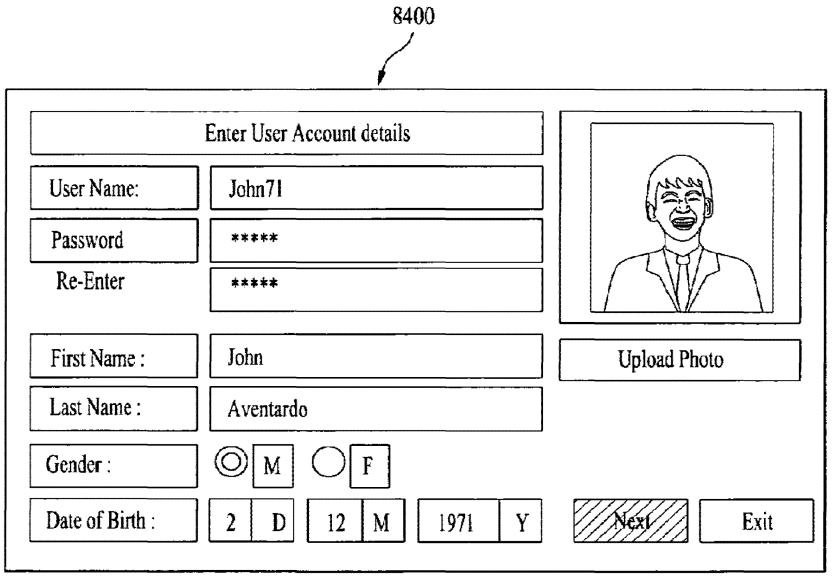
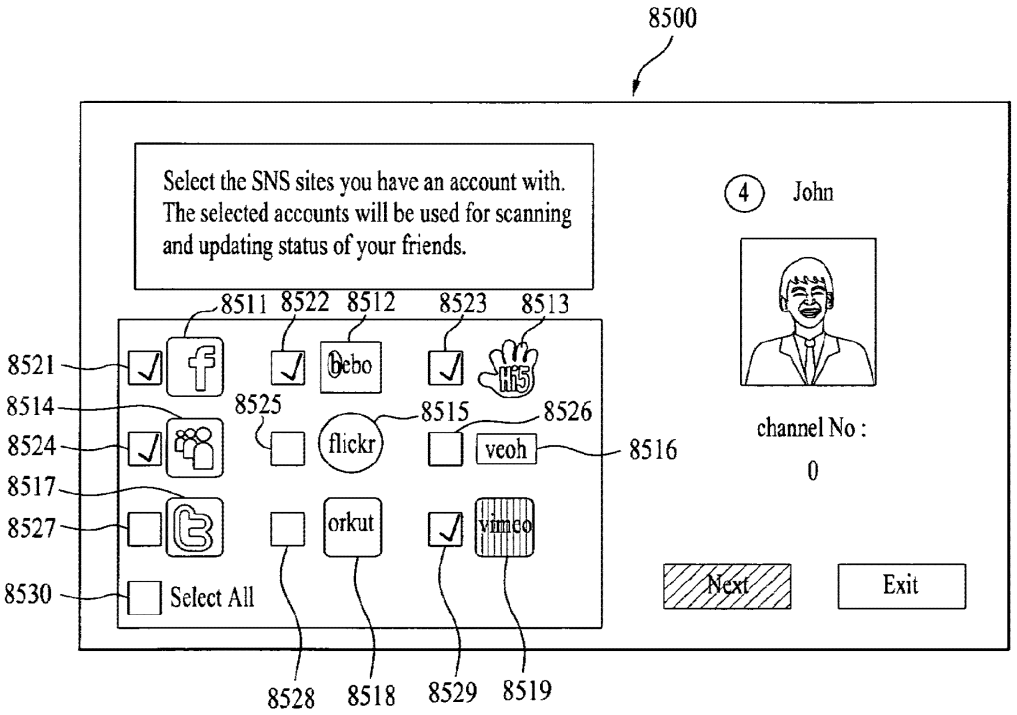

START
DISPLAY GUI FOR RECEPTION OF USER REGISTRATION INFORMATION
S2400
DISPLAY GUI FOR SELECTION OF SNS SITE
S2410
DISPLAY GUI FOR RECEPTION OF SNS SITE AUTHENTICATION INFORMATION
S2420
DISPLAY GUI FOR CONFIRMATION OF CHANNEL SCAN EXECUTION
S2430
END

FIG. 84



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FIG. 85



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FIG. 86

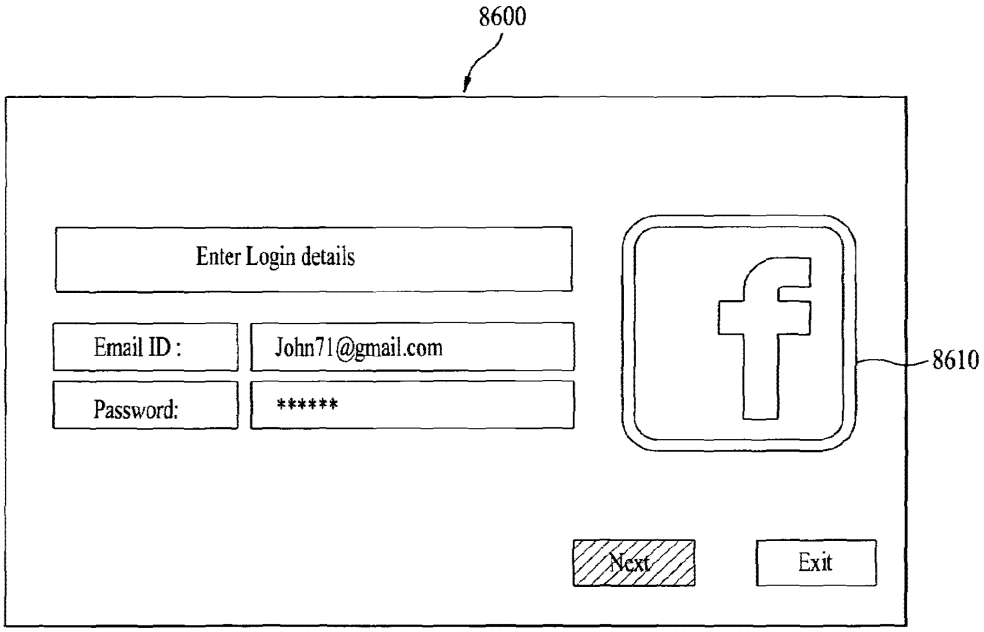

8600
Enter Login details
Email ID :
John71@gmail.com
Password:
******
8610
Next
Exit

FIG. 87

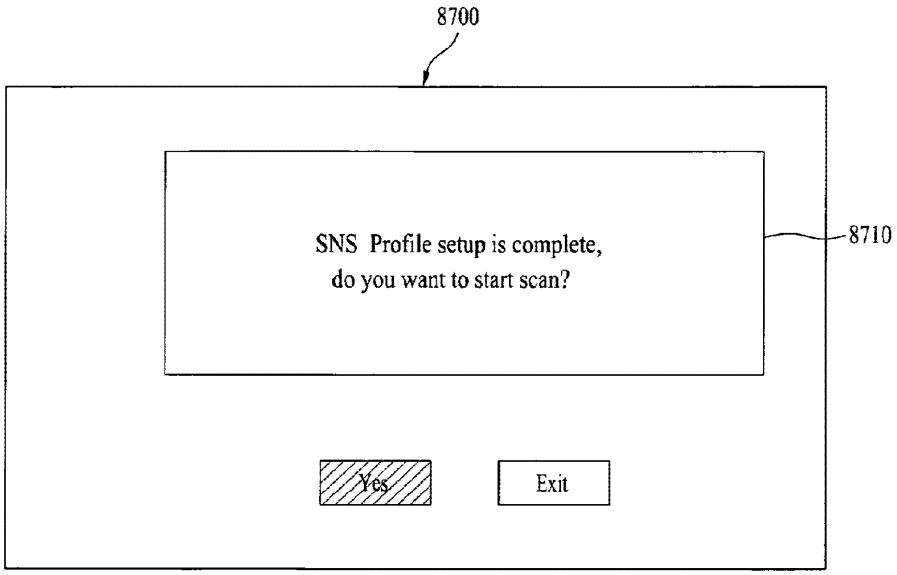
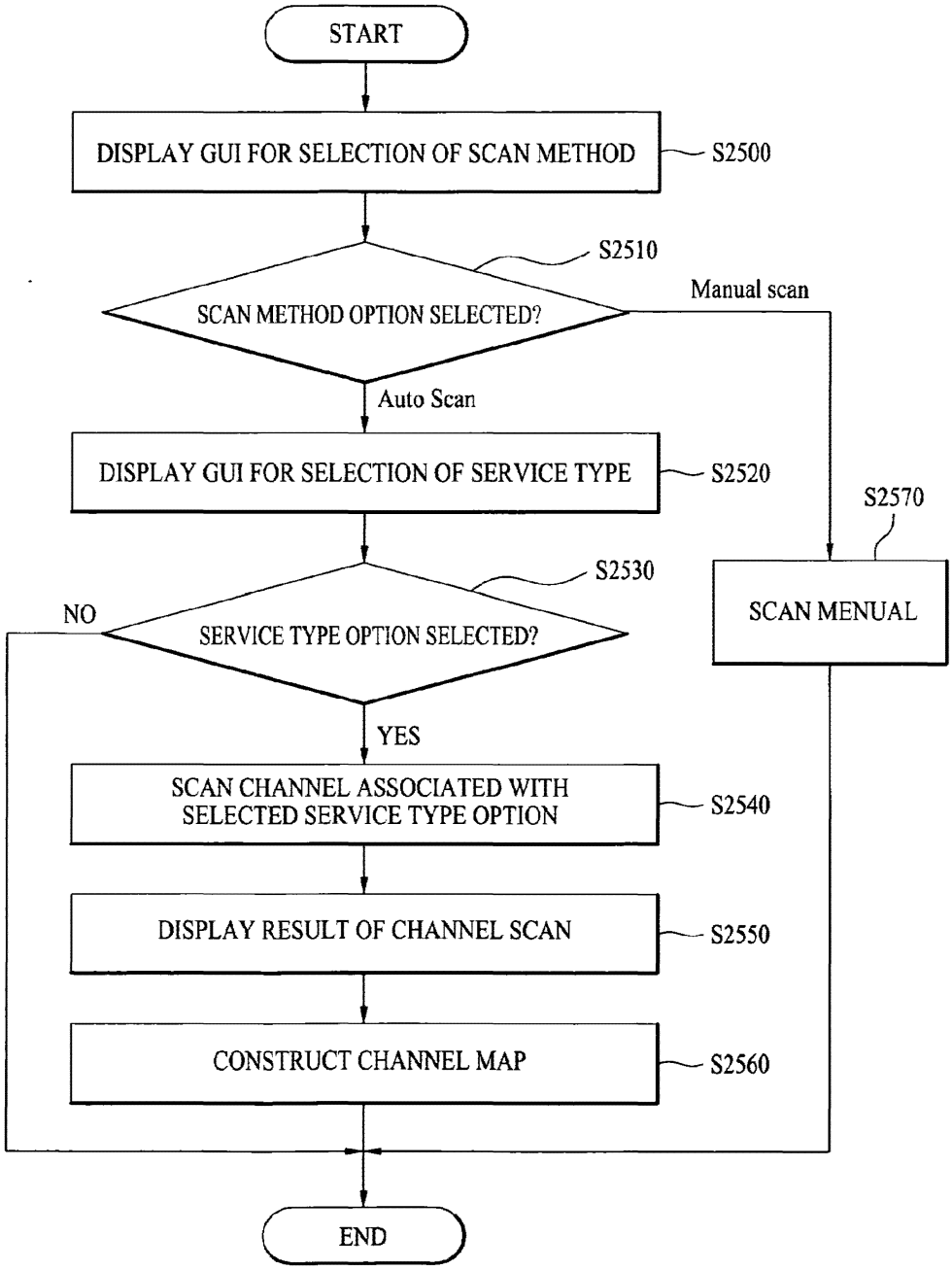

8700
SNS Profile setup is complete,
do you want to start scan?
8710
Yes
Exit

FIG. 88



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FIG. 89

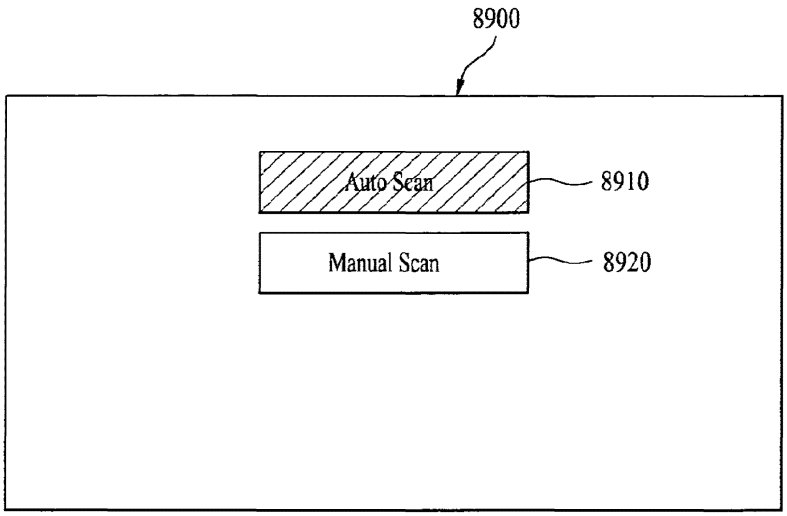

8900
Auto Scan
8910
Manual Scan
8920

FIG. 90

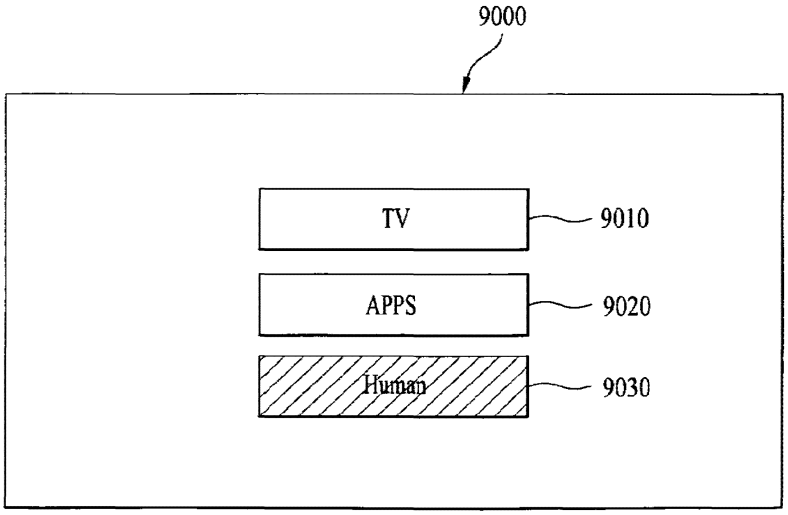

9000
TV
9010
APPS
9020
Human
9030

FIG. 91

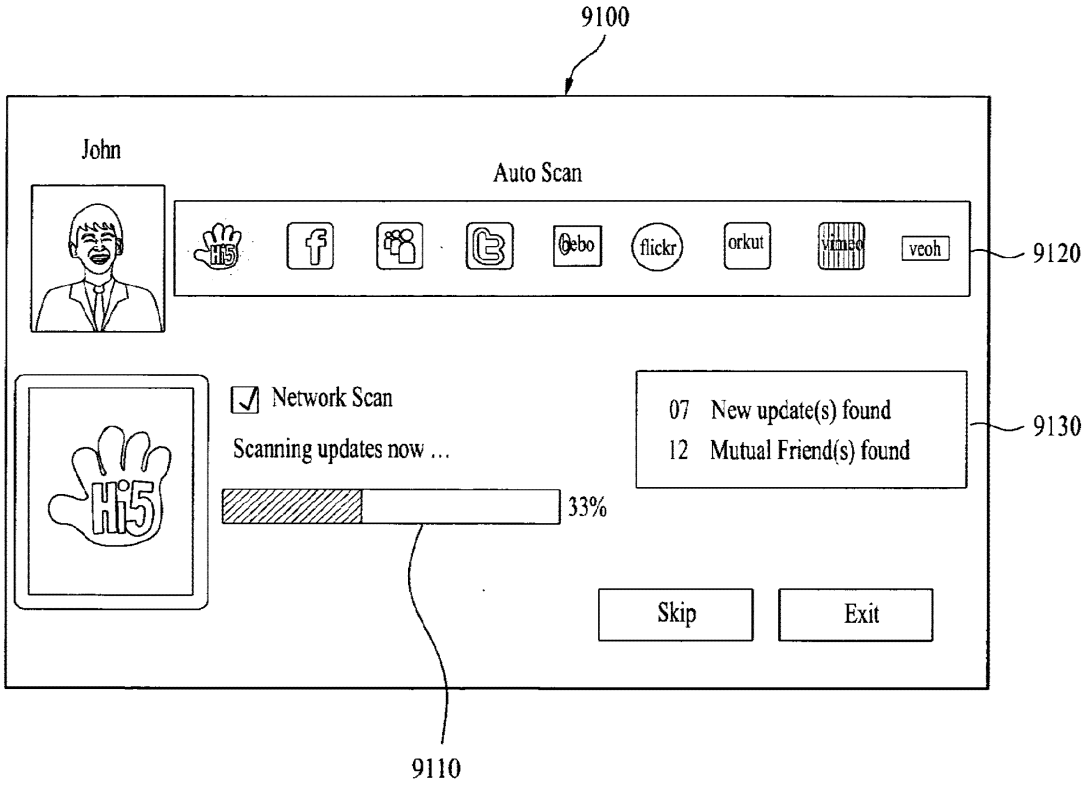
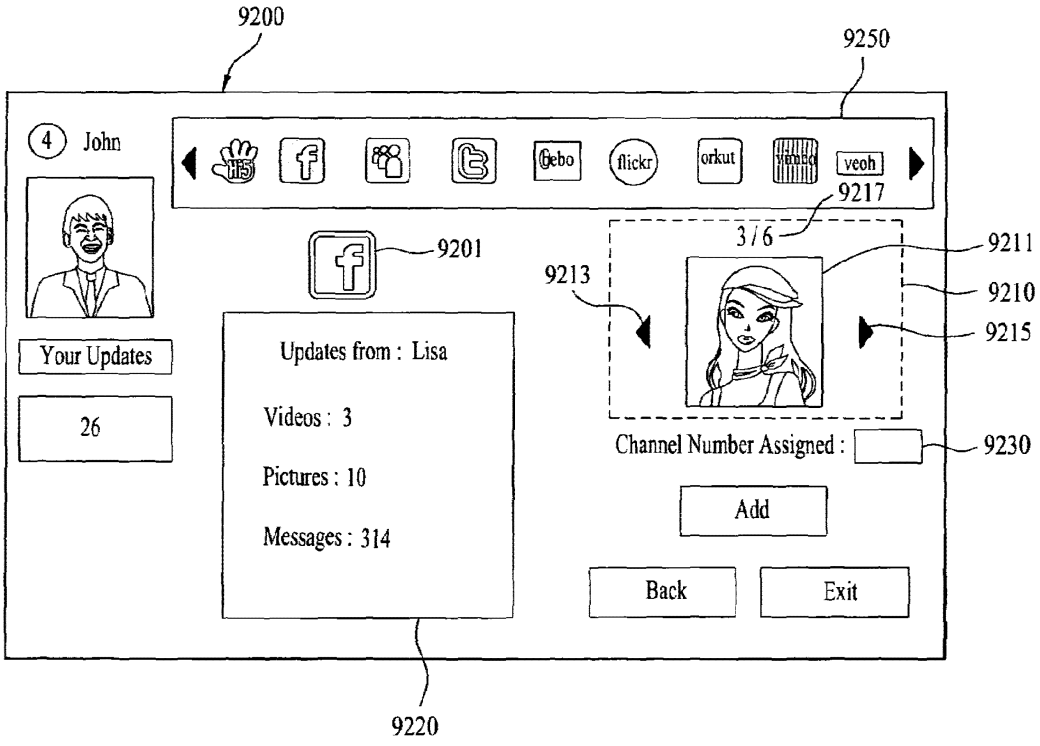

9100
John
Auto Scan
hi5
bebo
flickr
orkut
vimeo
veoh
9120
Network Scan
Scanning updates now ...
33%
07 New update(s) found
12 Mutual Friend(s) found
9130
Skip
Exit
9110

FIG. 92



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LG Electronics, Inc.

FIG. 93

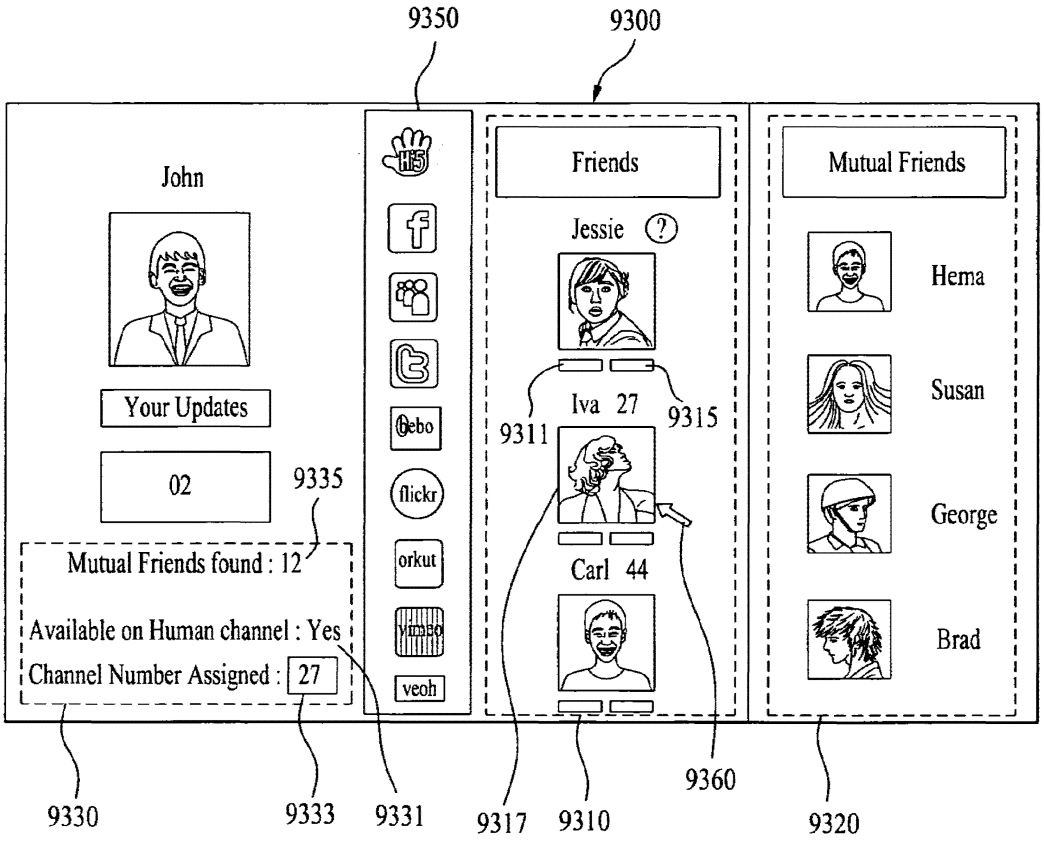

9350
9300
John
Your Updates
02
9335
Mutual Friends found : 12
Available on Human channel : Yes
Channel Number Assigned : 27
Friends
Jessie
Iva 27
9311
9315
Carl 44
Mutual Friends
Hema
Susan
George
Brad
9330
9333
9331
9317
9310
9360
9320

FIG. 94

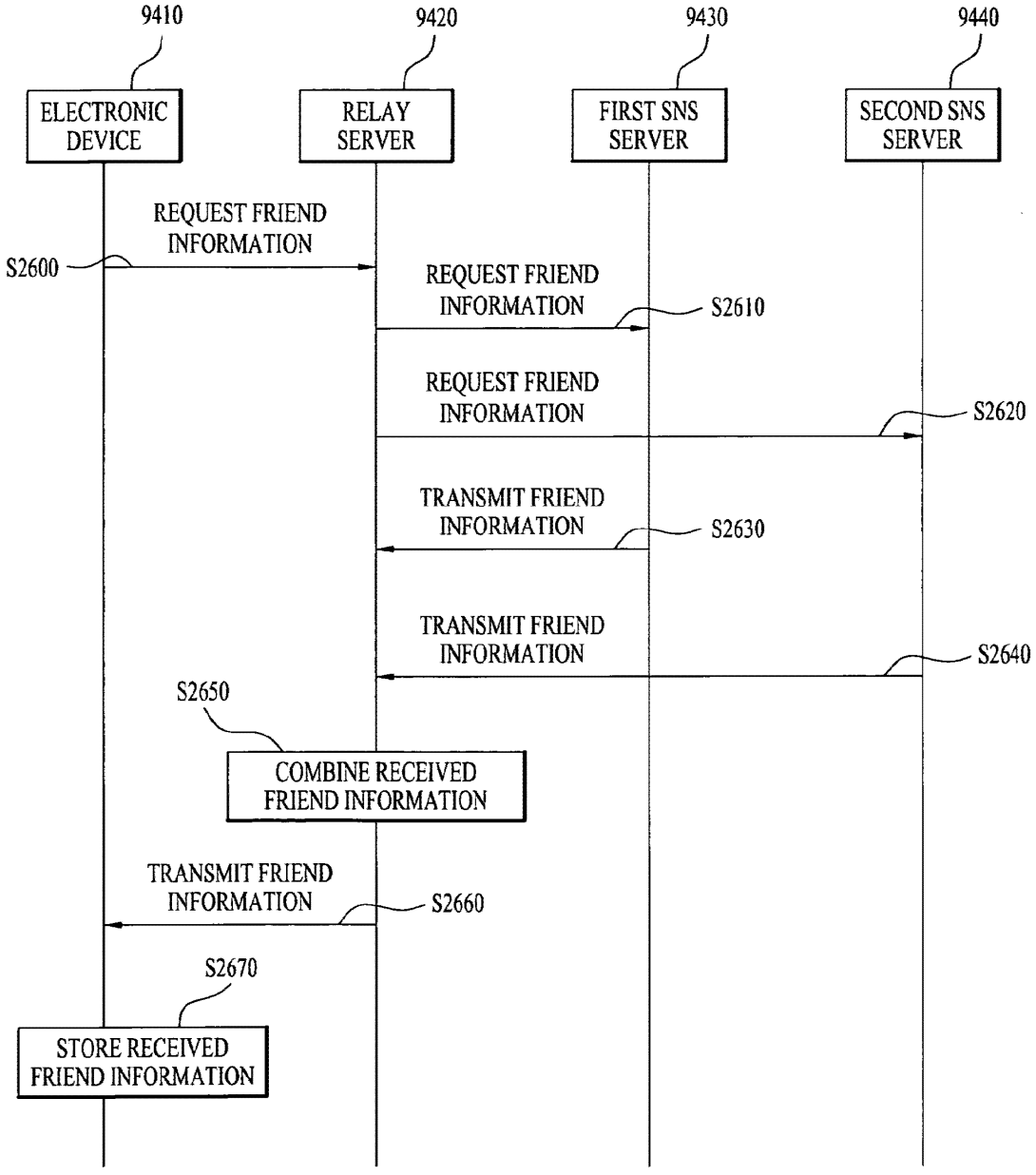
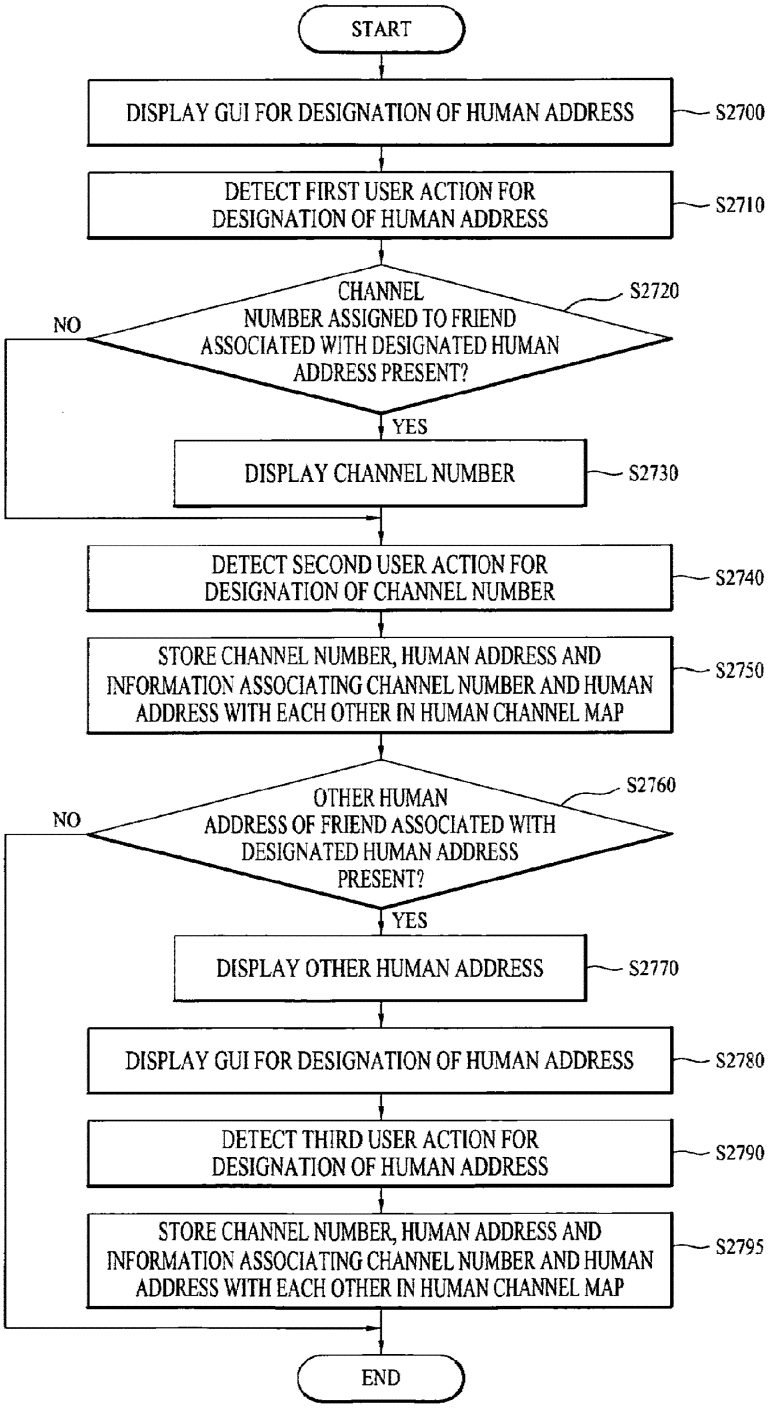

9410
9420
9430
9440
ELECTRONIC DEVICE
RELAY SERVER
FIRST SNS SERVER
SECOND SNS SERVER
REQUEST FRIEND INFORMATION
S2600
REQUEST FRIEND INFORMATION
S2610
REQUEST FRIEND INFORMATION
S2620
TRANSMIT FRIEND INFORMATION
S2630
TRANSMIT FRIEND INFORMATION
S2640
S2650
COMBINE RECEIVED FRIEND INFORMATION
TRANSMIT FRIEND INFORMATION
S2660
S2670
STORE RECEIVED FRIEND INFORMATION

FIG. 95



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LG Electronics, Inc.

FIG. 96

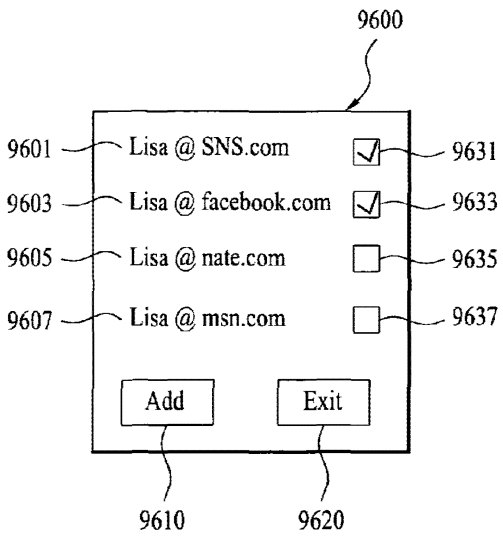
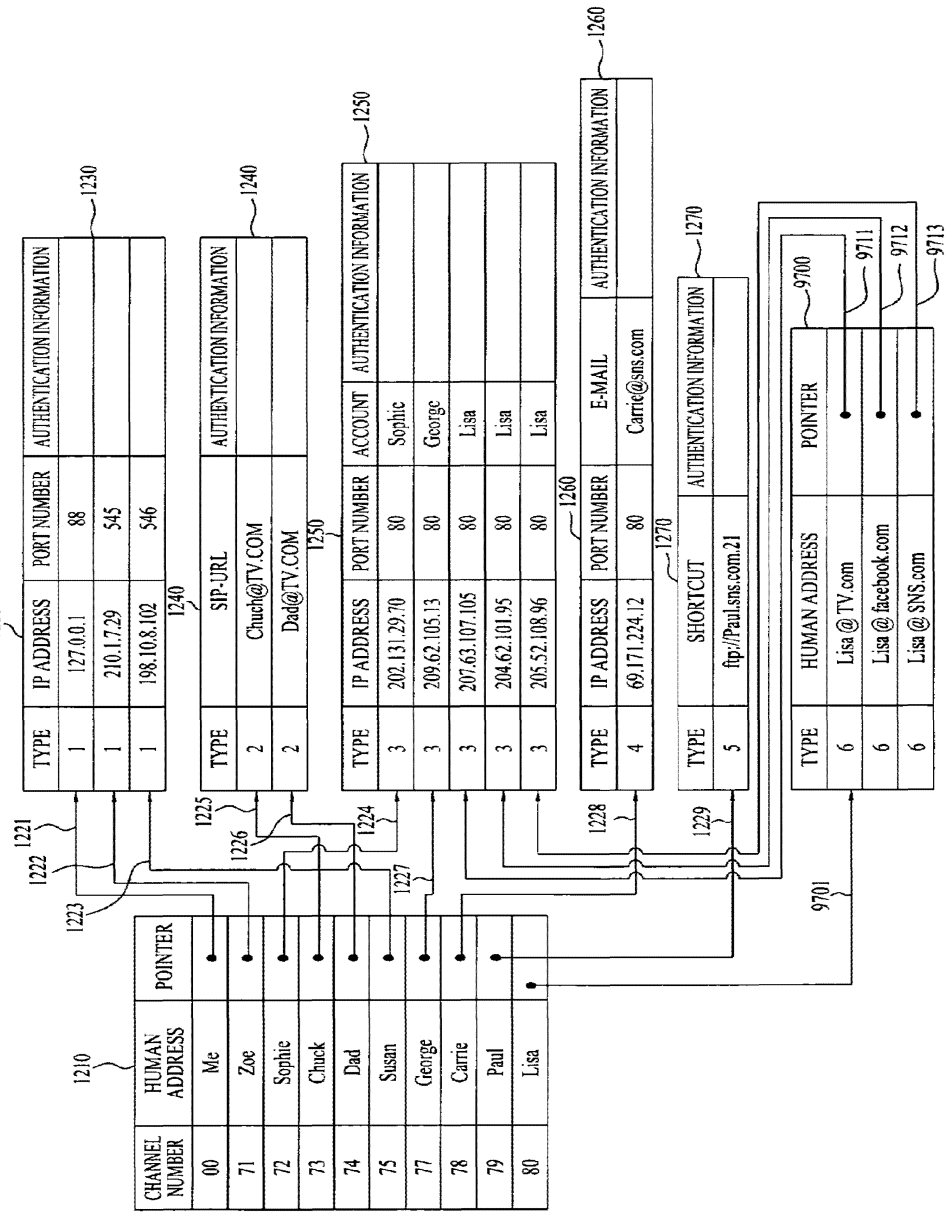

9600
9601
Lisa @ SNS.com
9631
9603
Lisa @ facebook.com
9633
9605
Lisa @ nate.com
9635
9607
Lisa @ msn.com
9637
Add
Exit
9610
9620

FIG. 97



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LG Electronics, Inc.

FIG. 98

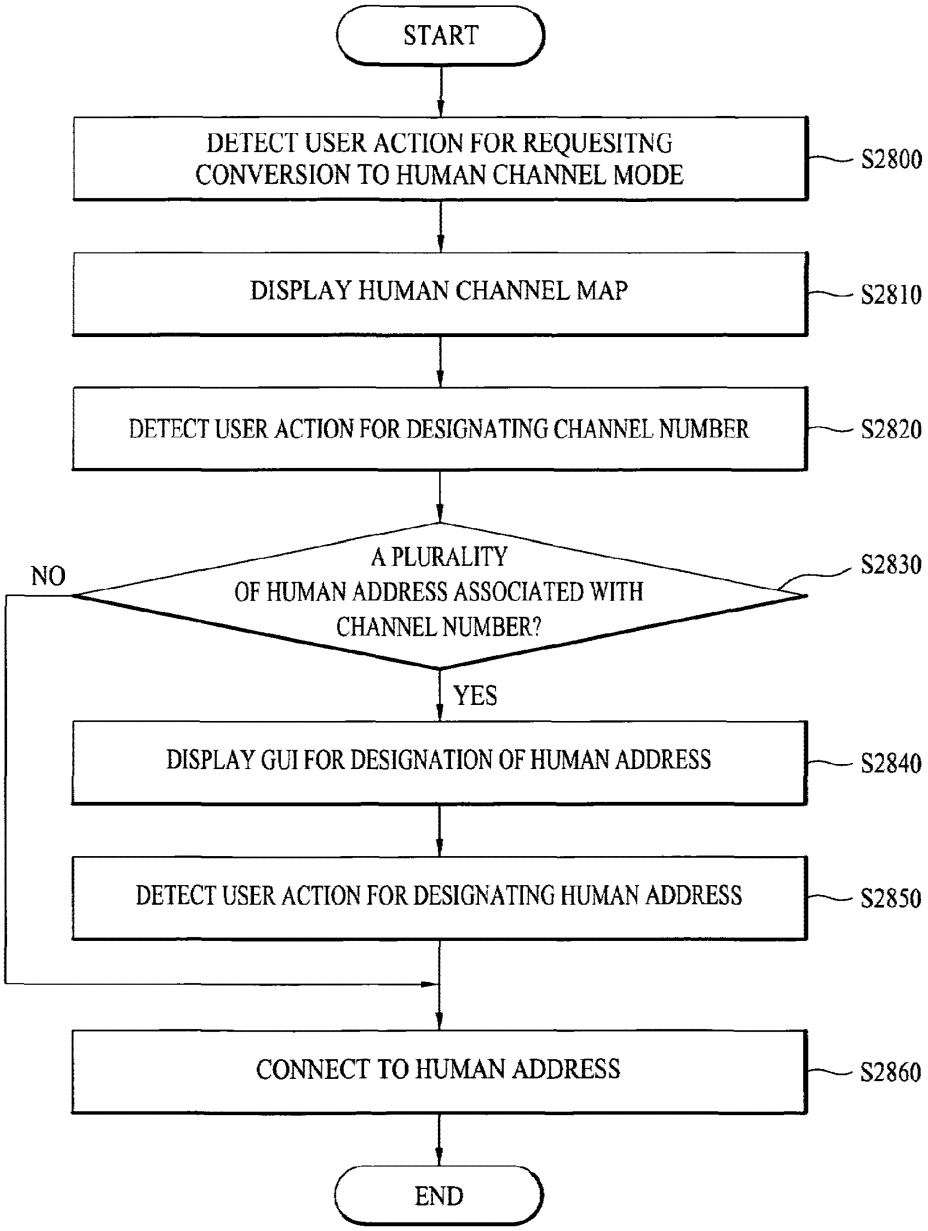

START
DETECT USER ACTION FOR REQUESITNG CONVERSION TO HUMAN CHANNEL MODE
S2800
DISPLAY HUMAN CHANNEL MAP
S2810
DETECT USER ACTION FOR DESIGNATING CHANNEL NUMBER
S2820
A PLURALITY OF HUMAN ADDRESS ASSOCIATED WITH CHANNEL NUMBER?
S2830
NO
YES
DISPLAY GUI FOR DESIGNATION OF HUMAN ADDRESS
S2840
DETECT USER ACTION FOR DESIGNATING HUMAN ADDRESS
S2850
CONNECT TO HUMAN ADDRESS
S2860
END

FIG. 99

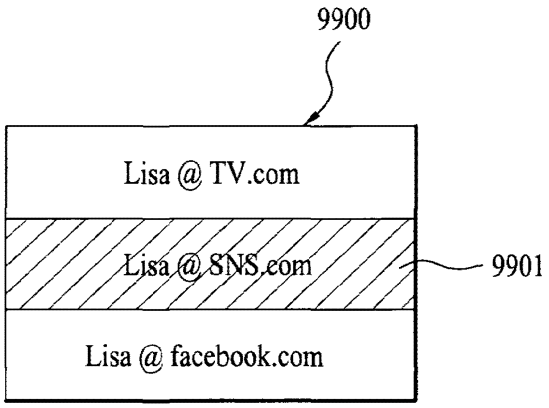


FIG. 100

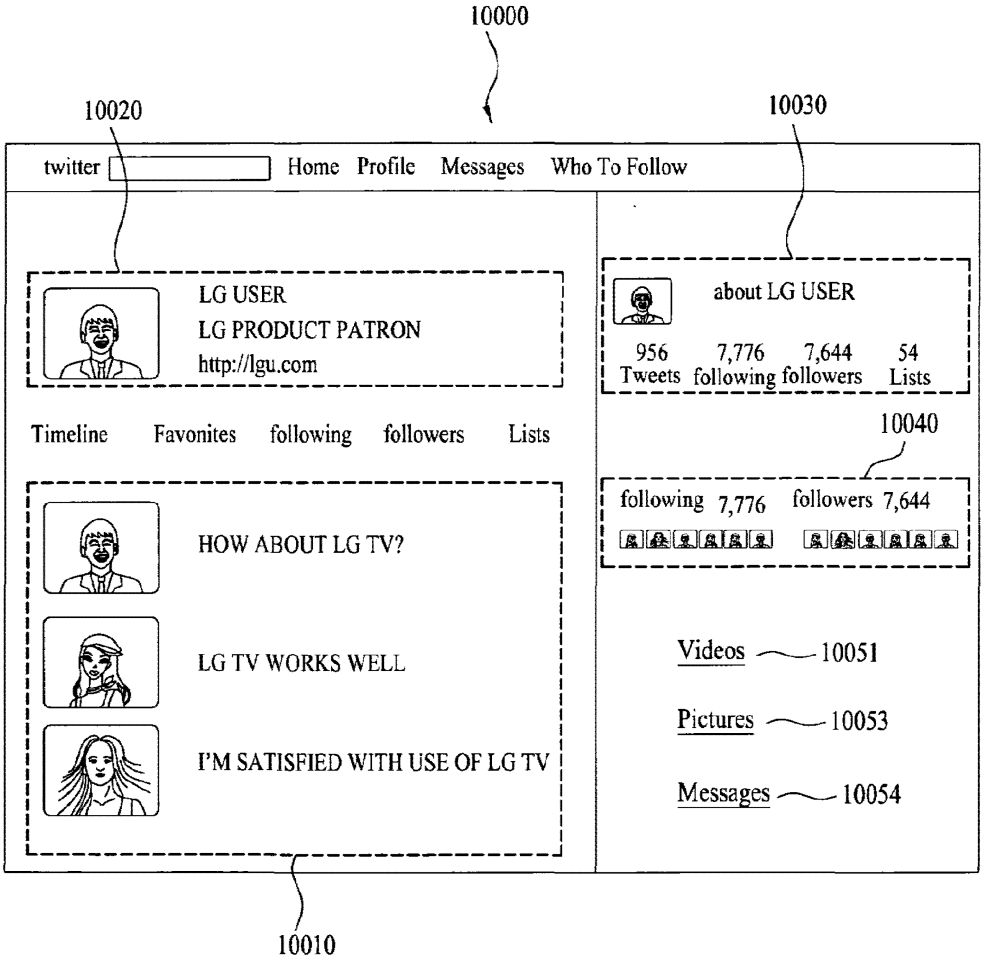

10000
10020
10030
twitter
Home Profile Messages Who To Follow
LG USER
LG PRODUCT PATRON
http://lgu.com
about LG USER
956 Tweets
7,776 following
7,644 followers
54 Lists
Timeline Favonites following followers Lists
10040
following 7,776 followers 7,644
HOW ABOUT LG TV?
LG TV WORKS WELL
I'M SATISFIED WITH USE OF LG TV
Videos 10051
Pictures 10053
Messages 10054
10010

FIG. 101

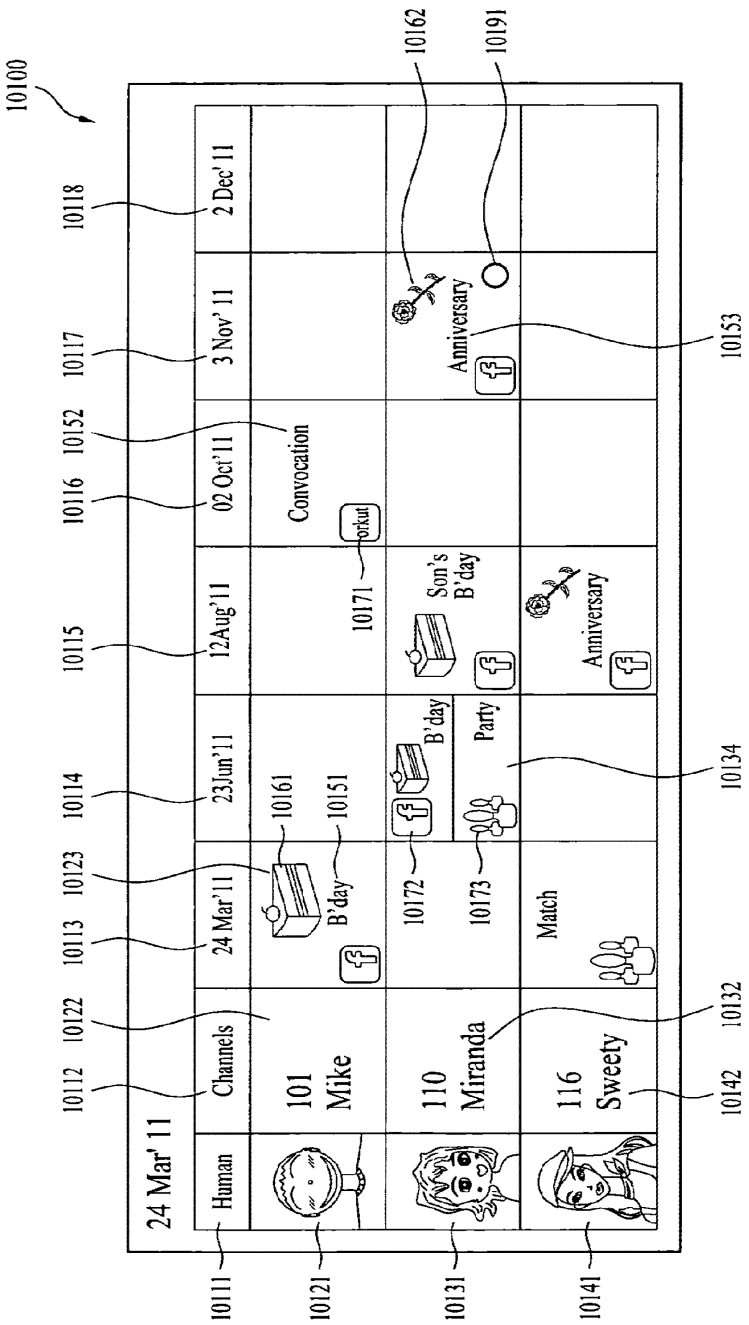
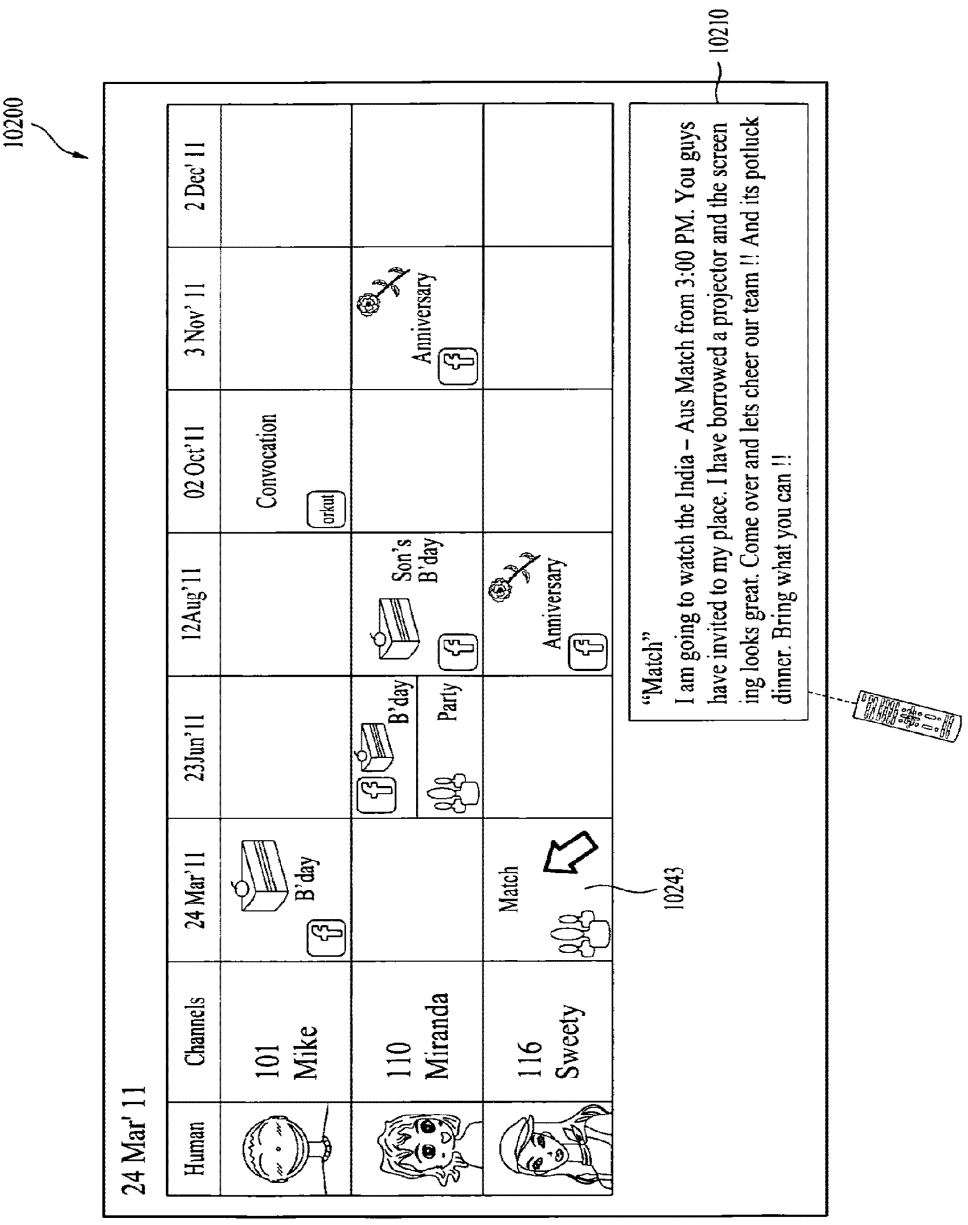

10100
10162
10191
10118
10117
10116
10115
10114
10123
10113
10122
10112
10111
10121
10131
10141
10152
10171
10161
10151
10172
10173
10142
10132
10153
10134
24 Mar' 11
Human
Channels
101
Mike
110
Miranda
116
Sweety
24 Mar'11
23Jun'11
12Aug'11
02 Oct'11
3 Nov' 11
2 Dec' 11
B'day
Match
Convocation
orkut
B'day
Party
Son's
B'day
Anniversary
Anniversary

FIG. 102



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LG Electronics, Inc.

FIG. 103

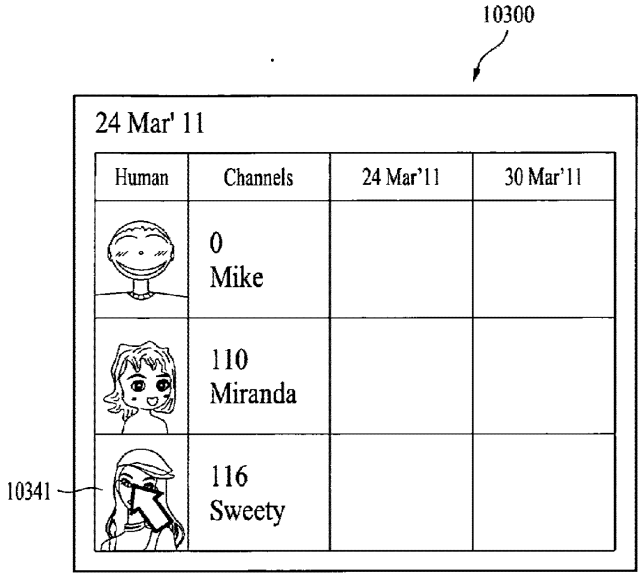

10300
24 Mar' 11
Human
Channels
24 Mar'11
30 Mar'11
0
Mike
110
Miranda
116
Sweety
10341

FIG. 104

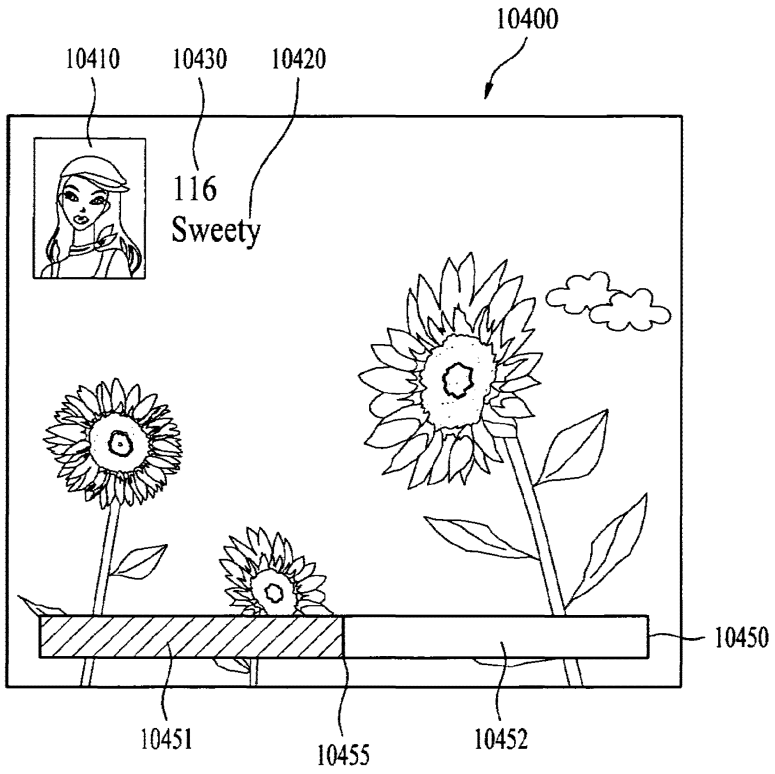


FIG. 105

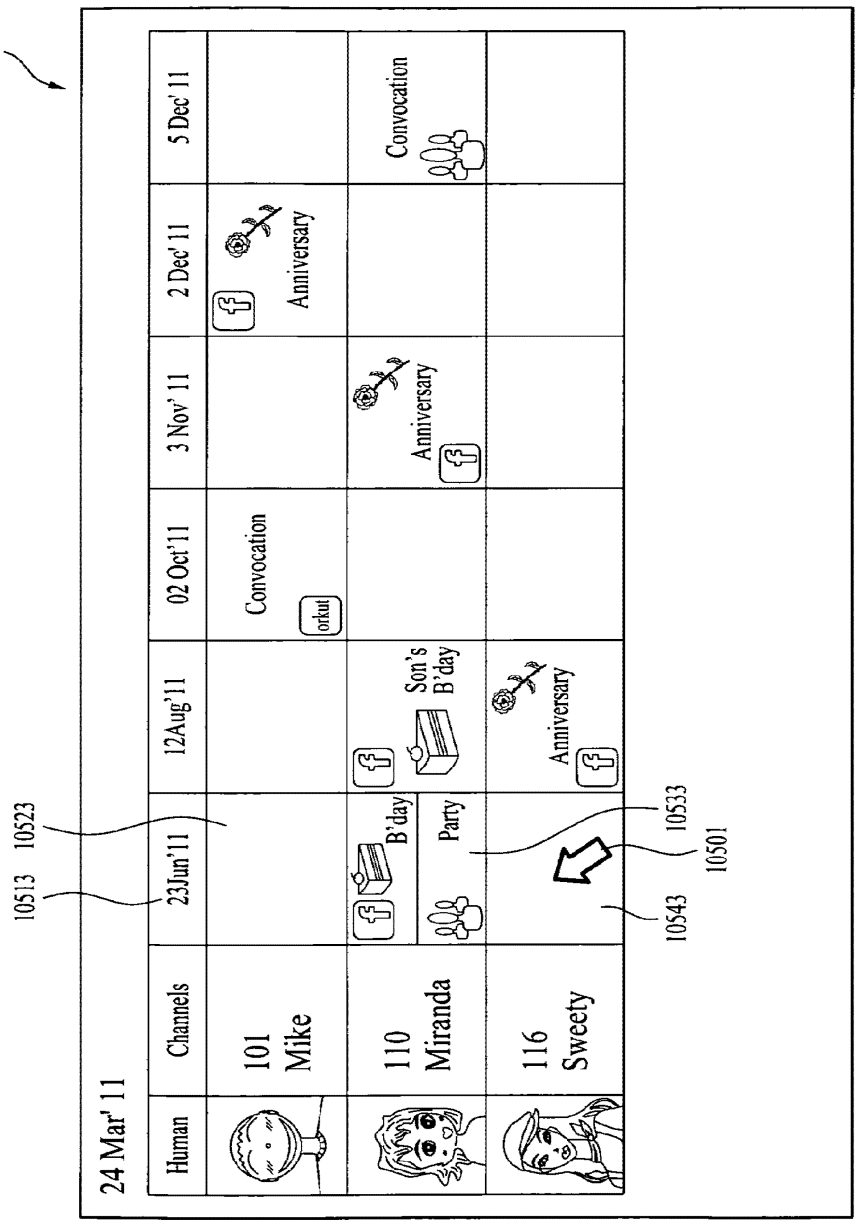

10500
24 Mar' 11
Human
Channels
23Jun'11
12Aug'11
02 Oct'11
3 Nov' 11
2 Dec' 11
5 Dec' 11
101 Mike
110 Miranda
116 Sweety
Convocation
orkut
Anniversary
B'day
Party
Son's B'day
Anniversary
Anniversary
Convocation
10513
10523
10533
10501
10543

FIG. 106

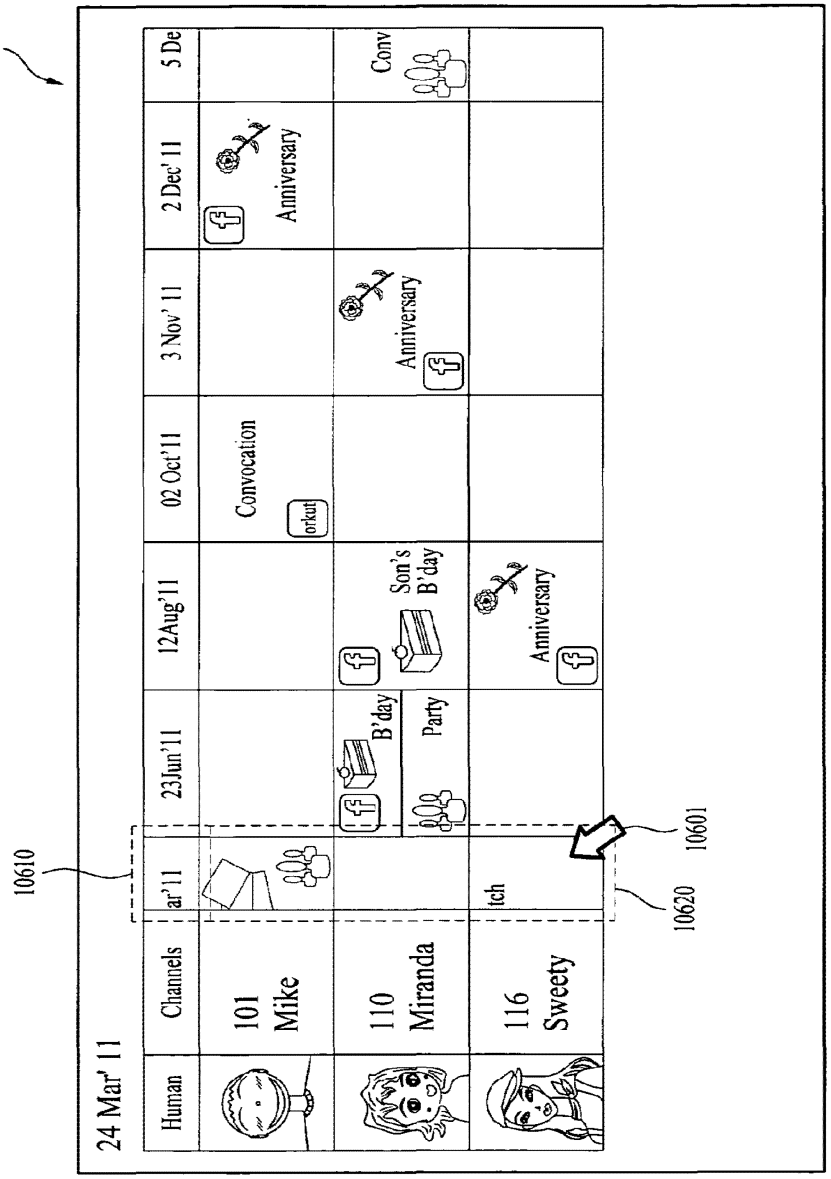
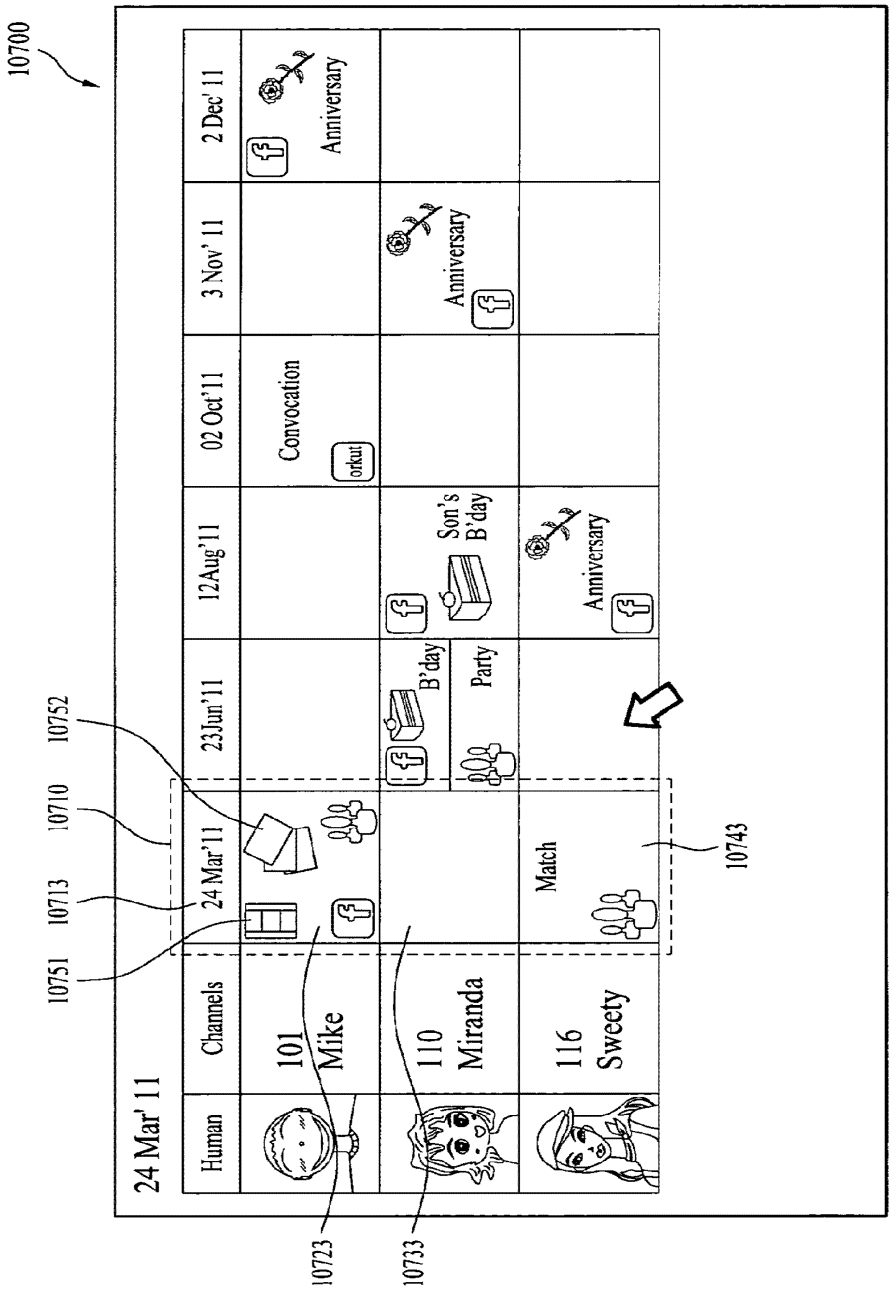

10600
24 Mar' 11
Human
Channels
ar'11
23Jun'11
12Aug'11
02 Oct'11
3 Nov' 11
2 Dec' 11
5 De
101 Mike
110 Miranda
116 Sweety
Convocation
orkut
B'day
Party
Son's B'day
Anniversary
Conv
tch
10610
10601
10620

FIG. 107



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LG Electronics, Inc.

FIG. 108

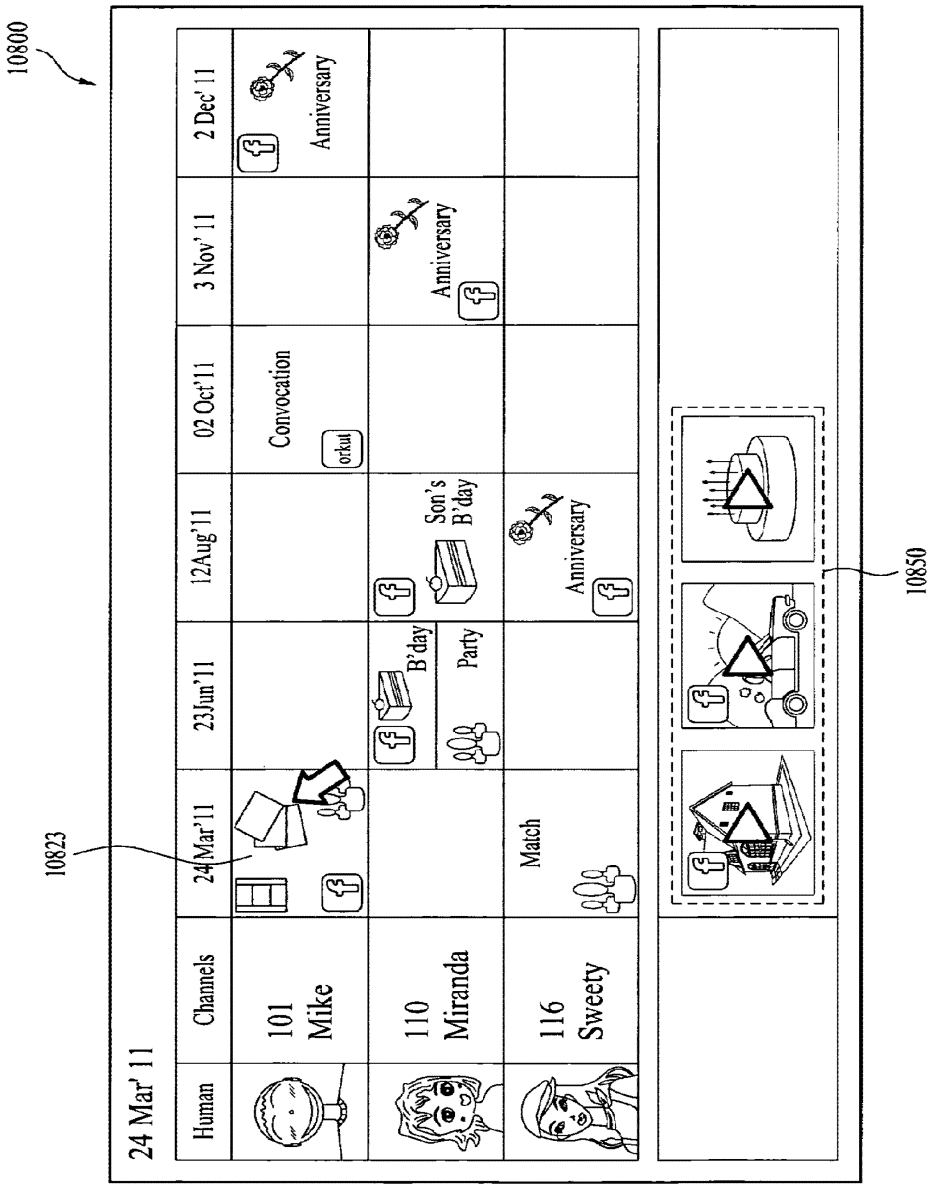
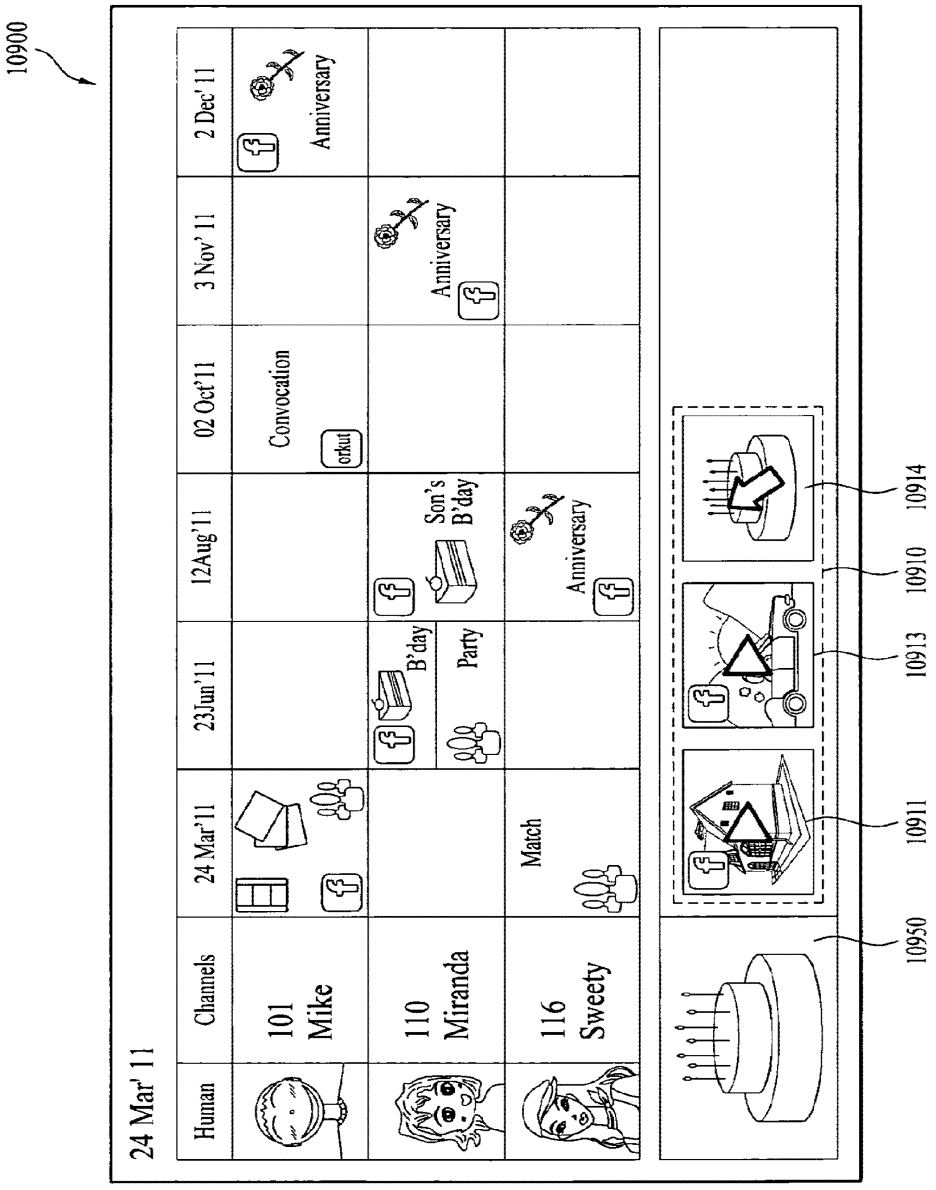

10800
24 Mar' 11
Human
Channels
24Mar'11
23Jun'11
12Aug'11
02 Oct'11
3 Nov' 11
2 Dec' 11
101 Mike
110 Miranda
116 Sweety
Convocation
orkut
Anniversary
B'day
Party
Son's B'day
Anniversary
Match
Anniversary
10823
10850

FIG. 109



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LG Electronics, Inc.

FIG. 110

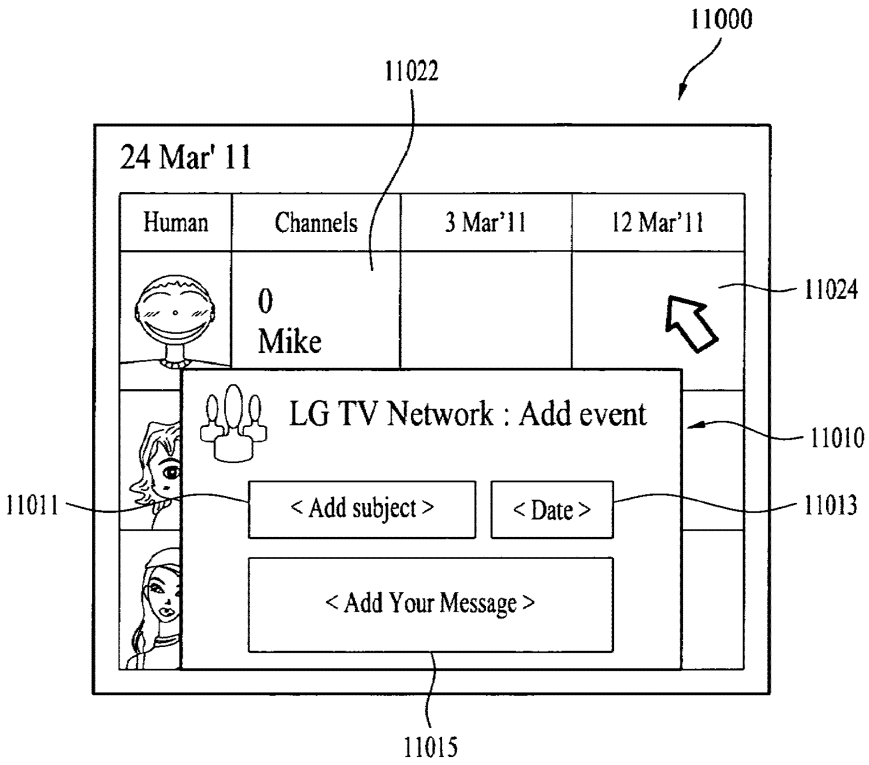

11000
11022
24 Mar' 11
Human
Channels
3 Mar'11
12 Mar'11
0
Mike
11024
LG TV Network : Add event
11010
11011
< Add subject >
< Date >
11013
< Add Your Message >
11015

FIG. 111

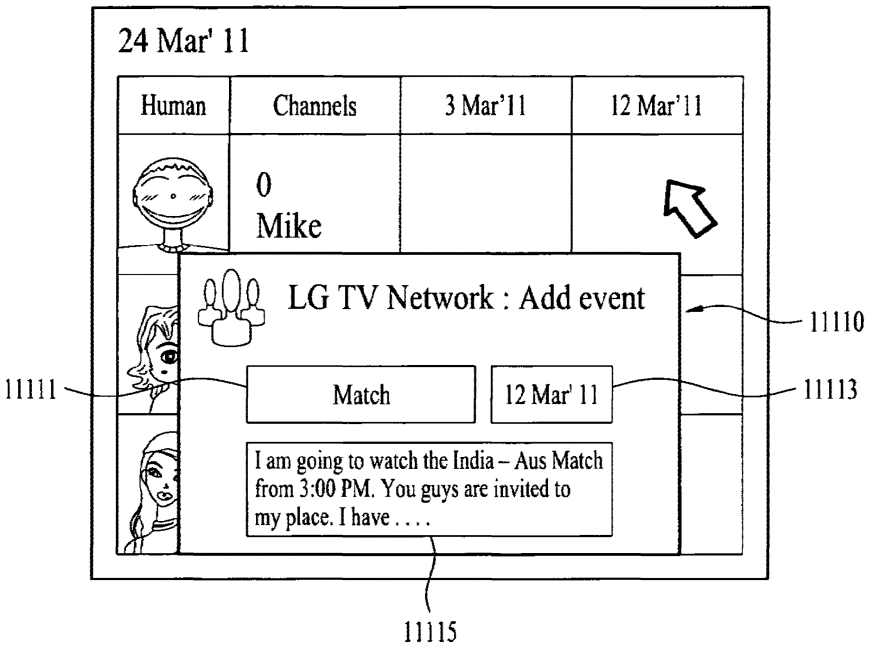

24 Mar' 11
Human
Channels
3 Mar'11
12 Mar'11
0
Mike
LG TV Network : Add event
11110
11111
Match
12 Mar' 11
11113
I am going to watch the India – Aus Match from 3:00 PM. You guys are invited to my place. I have . . . .
11115

FIG. 112A

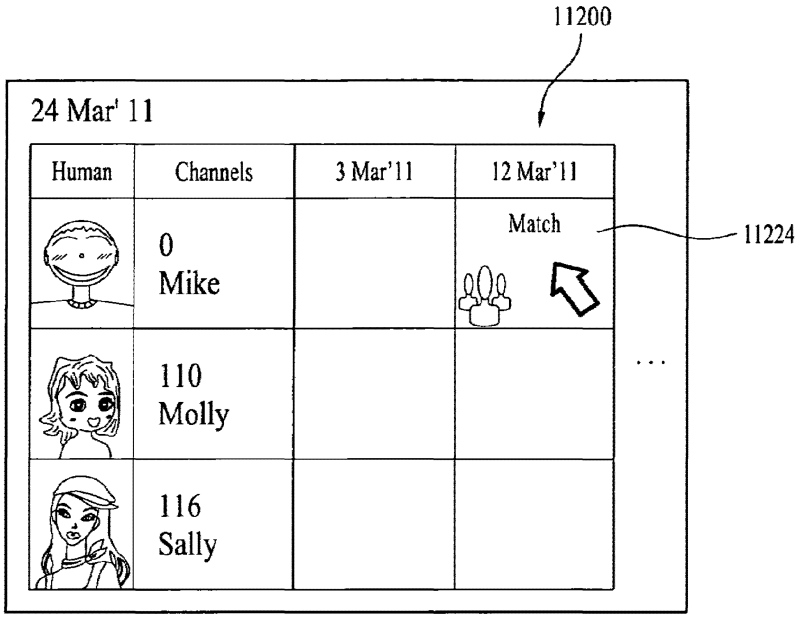


FIG. 112B

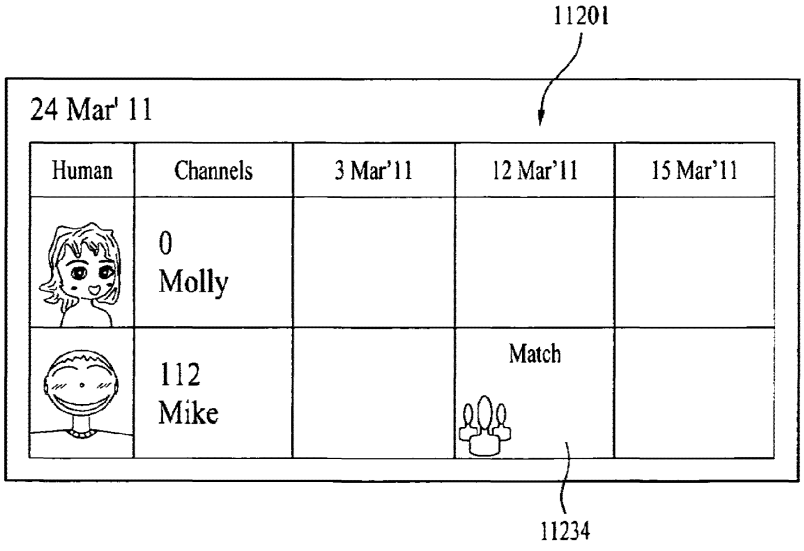


FIG. 113

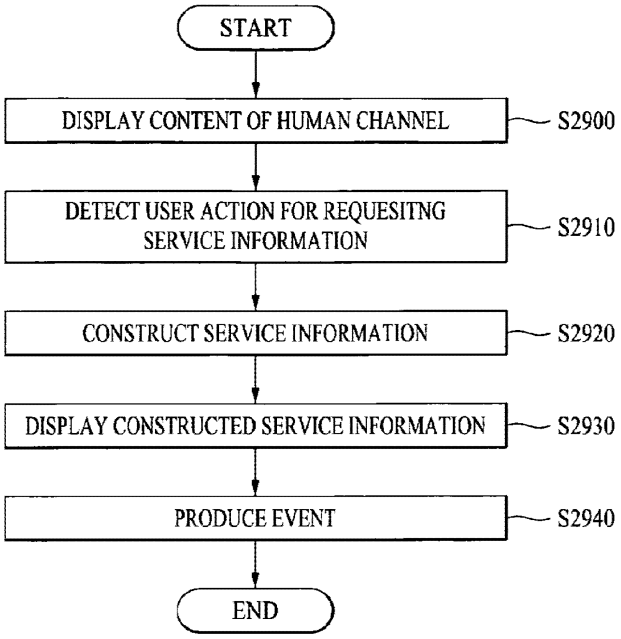
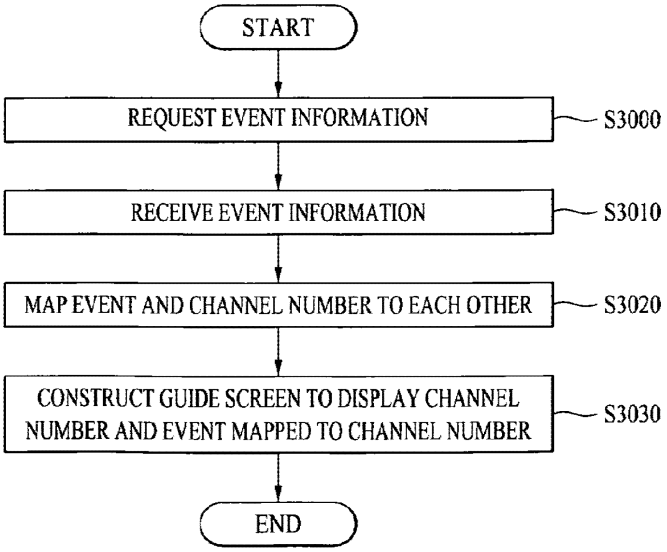


FIG. 114



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LG Electronics, Inc.

FIG. 115

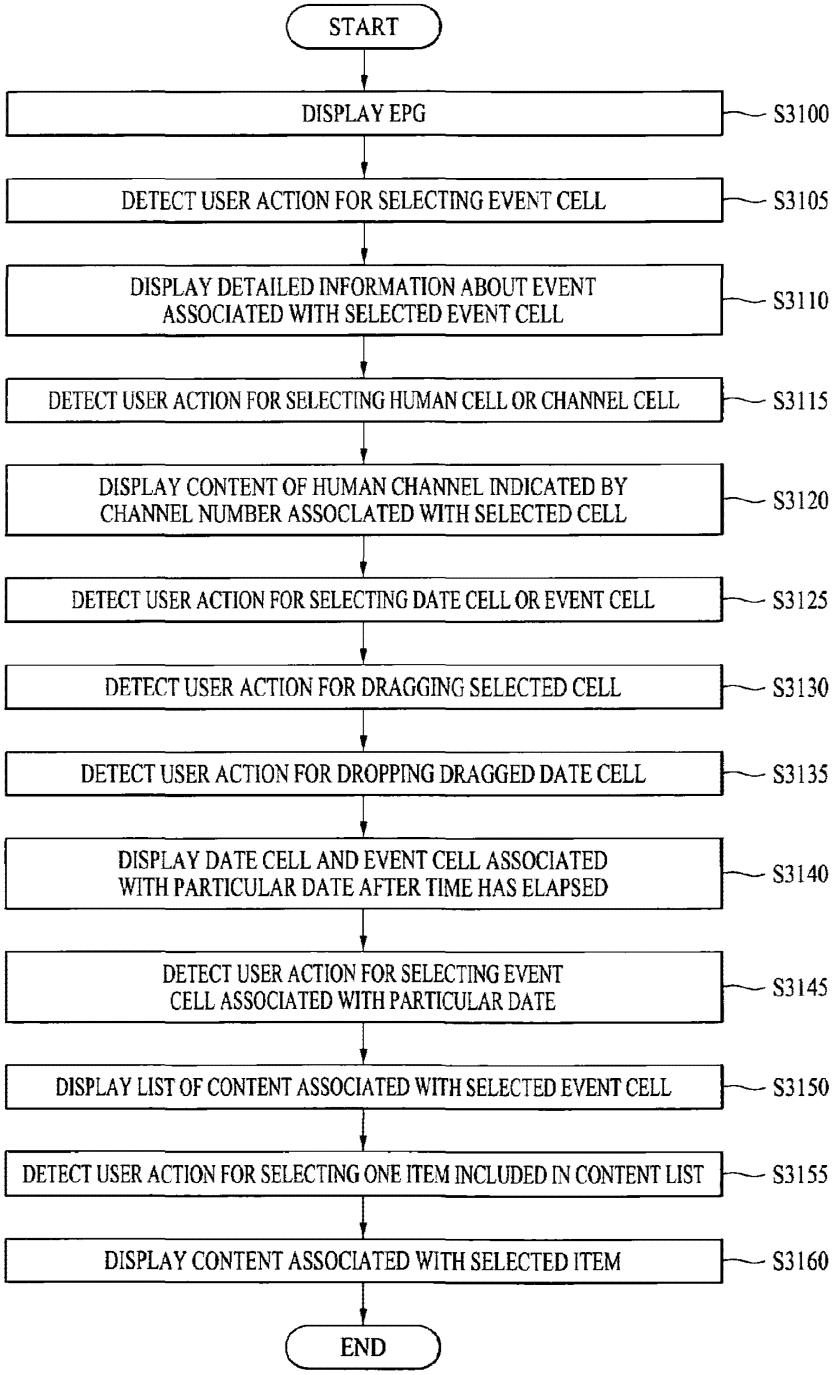
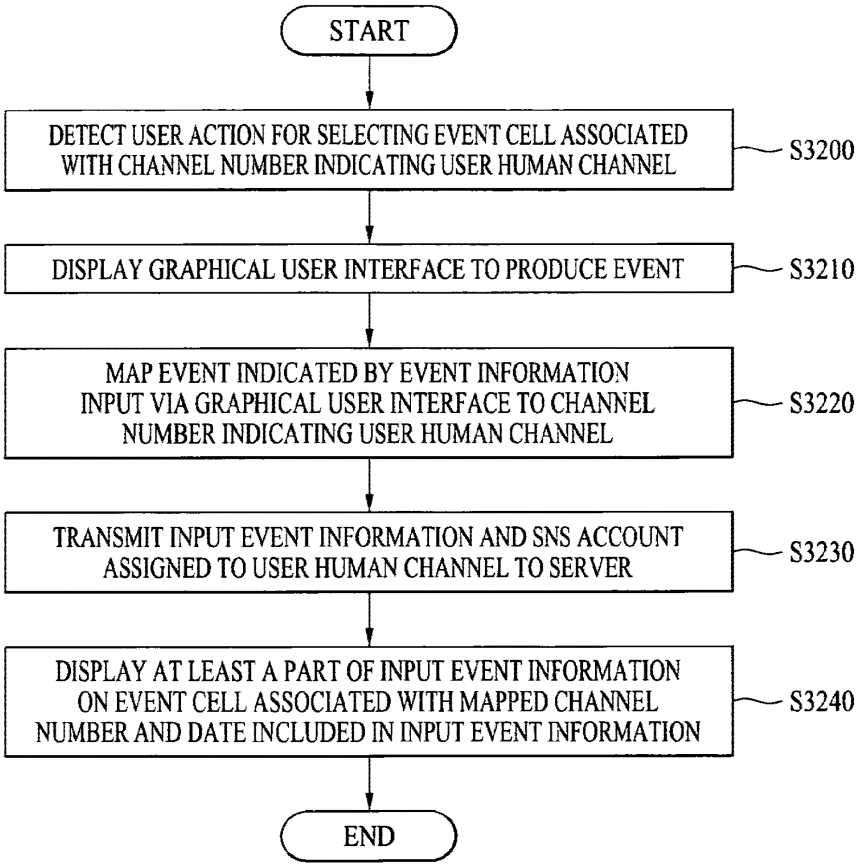

START
DISPLAY EPG
S3100
DETECT USER ACTION FOR SELECTING EVENT CELL
S3105
DISPLAY DETAILED INFORMATION ABOUT EVENT ASSOCIATED WITH SELECTED EVENT CELL
S3110
DETECT USER ACTION FOR SELECTING HUMAN CELL OR CHANNEL CELL
S3115
DISPLAY CONTENT OF HUMAN CHANNEL INDICATED BY CHANNEL NUMBER ASSOCLATED WITH SELECTED CELL
S3120
DETECT USER ACTION FOR SELECTING DATE CELL OR EVENT CELL
S3125
DETECT USER ACTION FOR DRAGGING SELECTED CELL
S3130
DETECT USER ACTION FOR DROPPING DRAGGED DATE CELL
S3135
DISPLAY DATE CELL AND EVENT CELL ASSOCIATED WITH PARTICULAR DATE AFTER TIME HAS ELAPSED
S3140
DETECT USER ACTION FOR SELECTING EVENT CELL ASSOCIATED WITH PARTICULAR DATE
S3145
DISPLAY LIST OF CONTENT ASSOCIATED WITH SELECTED EVENT CELL
S3150
DETECT USER ACTION FOR SELECTING ONE ITEM INCLUDED IN CONTENT LIST
S3155
DISPLAY CONTENT ASSOCIATED WITH SELECTED ITEM
S3160
END

FIG. 116


START
DETECT USER ACTION FOR SELECTING EVENT CELL ASSOCIATED WITH CHANNEL NUMBER INDICATING USER HUMAN CHANNEL
S3200
DISPLAY GRAPHICAL USER INTERFACE TO PRODUCE EVENT
S3210
MAP EVENT INDICATED BY EVENT INFORMATION INPUT VIA GRAPHICAL USER INTERFACE TO CHANNEL NUMBER INDICATING USER HUMAN CHANNEL
S3220
TRANSMIT INPUT EVENT INFORMATION AND SNS ACCOUNT ASSIGNED TO USER HUMAN CHANNEL TO SERVER
S3230
DISPLAY AT LEAST A PART OF INPUT EVENT INFORMATION ON EVENT CELL ASSOCIATED WITH MAPPED CHANNEL NUMBER AND DATE INCLUDED IN INPUT EVENT INFORMATION
S3240
END

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)

Date of mailing *(day/month/year)*	19 DEC 2013
Applicant's or agent's file reference: 6583-436-PCT	**FOR FURTHER ACTION** See paragraphs 1 and 4 below
International application No.: PCT/US13/55589	International filing date *(day/month/year)*: 19 August 2013 (19.08.2013)
Applicant: Flextronics AP, LLC	

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

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

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

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

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

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

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

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

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

4. **Reminders**

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

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

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

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

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

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

Form PCT/ISA/220 (July 2010)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference 6583-436-PCT	**FOR FURTHER ACTION**	see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. PCT/US13/55589	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	(Earliest) Priority Date *(day/month/year)* 17 August 2012 (17.08.2012)
Applicant Flextronics AP, LLC		

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

This international search report consists of a total of 4 sheets.

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

1. **Basis of the report**

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

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

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

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

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

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

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

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

☒ the text is approved as submitted by the applicant.

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

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

☒ the text is approved as submitted by the applicant.

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

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

a. the figure of the **drawings** to be published with the abstract is Figure No. 16

☐ as suggested by the applicant.

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

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

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55589

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

Group I: Claims 1, 2; Group II: Claims 3, 4; Group III: Claims 5, 6; Group IV: Claims 7, 8; Group V: Claims 9, 10; Group VI: Claims 11, 12; Group VII: Claims 13, 14; Group VIII: Claims 15, 16

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1 and 2 are directed toward a method for providing video-on-demand in an intelligent television including determining metadata characteristics for a content and providing a first view of the VOD content.

Group II: Claims 3 and 4 are directed toward a method for providing video-on-demand in an intelligent television including a first, second and third selections and provide different views of the VOD content.

-***-Continued Within the Extra Page-***-

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:
Claims 1 and 2

Remark on Protest

☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.

☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.

☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55589

A. CLASSIFICATION OF SUBJECT MATTER
IPC(8) - G06F 3/0 (2013.01)
USPC - 725/46
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC(8): G06F 3/00, 3/048; H04N 7/00 (2013.01)
USPC: 715/854; 725/46, 55, 141

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2008/0141307 A1 (WHITEHEAD S) June 12, 2008, paragraphs [0012], [0016], [0022], [0023], [0026], [0029] and [0097]	1 and 2

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

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

Date of the actual completion of the international search	Date of mailing of the international search report
26 November 2013 (26.11.2013)	19 DEC 2013
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	Authorized officer: Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US13/55589

-Continued from Box No. III: Observations where unity of invention is lacking-

Group III: Claims 5 and 6 are directed toward a method for providing video-on-demand in an intelligent television including determining whether a second selection is for showcase content, movie content, television content, or variety content and provide a second user interface having content associated.

Group IV: Claims 7 and 8 are directed toward a method for providing video-on-demand in an intelligent television including receiving a first selection to filter the VOD content and providing a second collection view of the filtered content.

Group V: Claims 9 and 10 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection of a television series from the catalog view and if there is only one season, providing a first digest view of the season.

Group VI: Claims 11 and 12 are directed toward a method for providing one of two types of user interfaces in an intelligent television including receiving a second selection of an episode and playing the episode in a series player.

Group VII: Claims 13 and 14 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection to sort the items of content based on a watched status.

Group VIII: Claims 15 and 16 are directed toward a method for providing video-on-demand in an intelligent television including if the user has previously watched the content, prompting the user if the user desires to resume watching the content.

The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The common technical feature shared by Groups I-VIII are a method for providing video-on-demand in an intelligent television including sorting the contents. However, this common feature is previously disclosed by US 2006/0031875 A1 (YU). Yu discloses a method for providing video-on-demand in an intelligent television including sorting the contents (an apparatus and method for supplying electronic programs for video on demand services including sorting the received service data according to a predetermined sorting condition and display through a predetermined graphical user interface, abstract).

Since the common technical feature is previously disclosed by the Yu reference, this common feature is not special and so Groups I-VIII lack unity.

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

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

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	19 DEC 2013
Applicant's or agent's file reference 6583-436-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55589	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/0 (2013.01)
USPC - 725/46

Applicant Flextronics AP, LLC

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

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

2. **FURTHER ACTION**

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

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

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

Name and mailing address of the ISA/US	Date of completion of this opinion	Authorized officer:
Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201	26 November 2013 (26.11.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55589

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55589

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the appicable time limit:
   - ☐ paid additional fees
   - ☐ paid additional fees under protest and, where applicable, the protest fee
   - ☐ paid additional fees under protest but the applicable protest fee was not paid
   - ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
   - ☐ complied with
   - ☒ not complied with for the following reasons:

Group I: Claims 1, 2; Group II: Claims 3, 4; Group III: Claims 5, 6; Group IV: Claims 7, 8; Group V: Claims 9, 10; Group VI: Claims 11, 12; Group VII: Claims 13, 14; Group VIII: Claims 15, 16

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1 and 2 are directed toward a method for providing video-on-demand in an intelligent television including determining metadata characteristics for a content and providing a first view of the VOD content.

Group II: Claims 3 and 4 are directed toward a method for providing video-on-demand in an intelligent television including a first, second and third selections and provide different views of the VOD content.

Group III: Claims 5 and 6 are directed toward a method for providing video-on-demand in an intelligent television including determining whether a second selection is for showcase content, movie content, television content, or variety content and provide a second user interface having content associated.

Group IV: Claims 7 and 8 are directed toward a method for providing video-on-demand in an intelligent television including receiving a first selection to filter the VOD content and providing a second collection view of the filtered content.

Group V: Claims 9 and 10 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection of a television series from the catalog view and if there is only one season, providing a first digest view of the season.

Group VI: Claims 11 and 12 are directed toward a method for providing one of two types of user interfaces in an intelligent television including receiving a second selection of an episode and playing the episode in a series player.

Group VII: Claims 13 and 14 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection to sort the items of content based on a watched status.

Group VIII: Claims 15 and 16 are directed toward a method for providing video-on-demand in an intelligent television including if the user has previously watched the content, prompting the user if the user desires to resume watching the content.

The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The common technical feature shared by Groups I-VIII are a method for providing video-on-demand in an intelligent television including sorting the contents. However, this common feature is previously disclosed by US 2006/0031875 A1 (YU). Yu discloses a method for providing video-on-demand in an intelligent television including sorting the contents (an apparatus and method for supplying electronic programs for video on demand services including sorting the received service data according to a predetermined sorting condition and display through a predetermined graphical user interface, abstract).

Since the common technical feature is previously disclosed by the Yu reference, this common feature is not special and so Groups I-VIII lack unity.

4. Consequently, this opinion has been established in respect of the following parts of the international application:
   - ☐ all parts
   - ☒ the parts relating to claims Nos. 1 and 2

Form PCT/ISA/237 (Box No. IV) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55589

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

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1 and 2	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1 and 2	NO
Industrial applicability (IA)	Claims	1 and 2	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1 and 2 lack novelty under PCT Article 33(2) as being anticipated by US 2008/0141307 A1 (Whitehead).

As per claim 1, Whitehead discloses a method for providing video-on-demand (VOD) in an intelligent television (providing VOD in a media player 115 such as a HDTV, figure 1 and paragraphs [0012], [0016], [0022] and [0023]), the method comprising: receiving, by a processor of the intelligent television, content for VOD (receiving by the HDTV processor content of the VOD, figure 1 and paragraphs [0012], [0016], [0022] and [0023]); determining metadata characteristics for the content (determining certain content characteristics/profile of metadata such as advertising content or media content, paragraphs [0025] and [0097]); storing the metadata characteristics with the content in a database for VOD content (advertising metadata 141 is stored in an advertising database 142 and media metadata 150 is stored in a media database 156, paragraphs [0027] and [0029]); and providing a first view of the VOD content based on the metadata characteristics (providing VOD content to be viewed on the HDTV based on whether the content is media or advertisements, paragraphs [0016], [0025], [0026] and [0097]).

As per claim 2, Whitehead discloses an intelligent television system (a HDTV system, figure 1 and paragraphs [0012] and [0016]) comprising: a memory operable to store video-on-demand (VOD) content (a database for storing VOD content, paragraph [0022]); a processor in communication with the memory (a processing device 110 interact with a recording memory 112, figure 1 and paragraph [0012]), the processor operable to: execute a VOD data service (the processing device 110 can execute the VOD, paragraph [0022]) operable to: receive content for VOD (receiving content for the VOD, figure 1 and paragraphs [0012], [0016], [0022] and [0023]); determine metadata characteristics for the content (determining certain content characteristics/profile of metadata such as advertising content or media content, paragraphs [0025] and [0097]); store the metadata characteristics with the content in a database for VOD content (advertising metadata 141 is stored in an advertising database 142 and media metadata 150 is stored in a media database 156, paragraphs [0027] and [0029]); and execute a user interface application in communication with the VOD data service (a user interface (TV screen) application is implemented using the VOD content, paragraph [0088]), the user interface application operable to provide a first view of the VOD content based on the metadata characteristics (providing VOD content to be viewed on the HDTV based on whether the content is media or advertisements, paragraphs [0016], [0025], [0026] and [0097]).

Claims 1 and 2 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

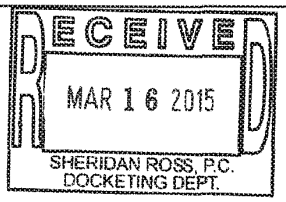
PATENT COOPERATION TREATY

From the INTERNATIONAL 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	IMPORTANT NOTICE
6583-436-PCT	

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US2013/055589	19 August 2013 (19.08.2013)	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)

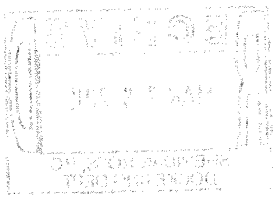
The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No. +41 22 338 82 70

Authorized officer
Kihwan Moon

e-mail: pt01.pct@wipo.int

Form PCT/IB/326 (January 2004)



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 6583-436-PCT	**FOR FURTHER ACTION**	See item 4 below
International application No. PCT/US2013/055589	International filing date *(day/month/year)* 19 August 2013 (19.08.2013)	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)*	19 DEC 2013
Applicant's or agent's file reference 6583-436-PCT	**FOR FURTHER ACTION** See paragraph 2 below

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/US13/55589	19 August 2013 (19.08.2013)	17 August 2012 (17.08.2012)

International Patent Classification (IPC) or both national classification and IPC
IPC(8) - G06F 3/0 (2013.01) -
USPC - 725/46

Applicant Flextronics AP, LLC

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

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

2. **FURTHER ACTION**

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

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to 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	26 November 2013 (26.11.2013)	Shane Thomas PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774

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

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55589

Box No. I Basis of this opinion

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

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

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

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

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

   a. (means)

      ☐ on paper

      ☐ in electronic form

   b. (time)

      ☐ in the international application as filed

      ☐ together with the international application in electronic form

      ☐ subsequently to this Authority for the purposes of search

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

5. Additional comments:

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55589

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has, within the appicable time limit:
   - ☐ paid additional fees
   - ☐ paid additional fees under protest and, where applicable, the protest fee
   - ☐ paid additional fees under protest but the applicable protest fee was not paid
   - ☒ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rule 13.1, 13.2 and 13.3 is
   - ☐ complied with
   - ☒ not complied with for the following reasons:

Group I: Claims 1, 2; Group II: Claims 3, 4; Group III: Claims 5, 6; Group IV: Claims 7, 8; Group V: Claims 9, 10; Group VI: Claims 11, 12; Group VII: Claims 13, 14; Group VIII: Claims 15, 16

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1. In order for all inventions to be examined, the appropriate additional examination fee must be paid.

Group I: Claims 1 and 2 are directed toward a method for providing video-on-demand in an intelligent television including determining metadata characteristics for a content and providing a first view of the VOD content.

Group II: Claims 3 and 4 are directed toward a method for providing video-on-demand in an intelligent television including a first, second and third selections and provide different views of the VOD content.

Group III: Claims 5 and 6 are directed toward a method for providing video-on-demand in an intelligent television including determining whether a second selection is for showcase content, movie content, television content, or variety content and provide a second user interface having content associated.

Group IV: Claims 7 and 8 are directed toward a method for providing video-on-demand in an intelligent television including receiving a first selection to filter the VOD content and providing a second collection view of the filtered content.

Group V: Claims 9 and 10 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection of a television series from the catalog view and if there is only one season, providing a first digest view of the season.

Group VI: Claims 11 and 12 are directed toward a method for providing one of two types of user interfaces in an intelligent television including receiving a second selection of an episode and playing the episode in a series player.

Group VII: Claims 13 and 14 are directed toward a method for providing video-on-demand in an intelligent television including receiving a selection to sort the items of content based on a watched status.

Group VIII: Claims 15 and 16 are directed toward a method for providing video-on-demand in an intelligent television including if the user has previously watched the content, prompting the user if the user desires to resume watching the content.

The inventions listed as Groups I-VIII do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The common technical feature shared by Groups I-VIII are a method for providing video-on-demand in an intelligent television including sorting the contents. However, this common feature is previously disclosed by US 2006/0031875 A1 (YU). Yu discloses a method for providing video-on-demand in an intelligent television including sorting the contents (an apparatus and method for supplying electronic programs for video on demand services including sorting the received service data according to a predetermined sorting condition and display through a predetermined graphical user interface, abstract).

Since the common technical feature is previously disclosed by the Yu reference, this common feature is not special and so Groups I-VIII lack unity.

4. Consequently, this opinion has been established in respect of the following parts of the international application:
   - ☐ all parts
   - ☒ the parts relating to claims Nos. 1 and 2

Form PCT/ISA/237 (Box No. IV) (July 2011)

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/US13/55589

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

1. Statement

Novelty (N)	Claims	NONE	YES
	Claims	1 and 2	NO
Inventive step (IS)	Claims	NONE	YES
	Claims	1 and 2	NO
Industrial applicability (IA)	Claims	1 and 2	YES
	Claims	NONE	NO

2. Citations and explanations:

Claims 1 and 2 lack novelty under PCT Article 33(2) as being anticipated by US 2008/0141307 A1 (Whitehead).

As per claim 1, Whitehead discloses a method for providing video-on-demand (VOD) in an intelligent television (providing VOD in a media player 115 such as a HDTV, figure 1 and paragraphs [0012], [0016], [0022] and [0023]), the method comprising: receiving, by a processor of the intelligent television, content for VOD (receiving by the HDTV processor content of the VOD, figure 1 and paragraphs [0012], [0016], [0022] and [0023]); determining metadata characteristics for the content (determining certain content characteristics/profile of metadata such as advertising content or media content, paragraphs [0025] and [0097]); storing the metadata characteristics with the content in a database for VOD content (advertising metadata 141 is stored in an advertising database 142 and media metadata 150 is stored in a media database 156, paragraphs [0027] and [0029]); and providing a first view of the VOD content based on the metadata characteristics (providing VOD content to be viewed on the HDTV based on whether the content is media or advertisements, paragraphs [0016], [0025], [0026] and [0097]).

As per claim 2, Whitehead discloses an intelligent television system (a HDTV system, figure 1 and paragraphs [0012] and [0016]) comprising: a memory operable to store video-on-demand (VOD) content (a database for storing VOD content, paragraph [0022]); a processor in communication with the memory (a processing device 110 interact with a recording memory 112, figure 1 and paragraph [0012]), the processor operable to: execute a VOD data service (the processing device 110 can execute the VOD, paragraph [0022]) operable to: receive content for VOD (receiving content for the VOD, figure 1 and paragraphs [0012], [0016], [0022] and [0023]); determine metadata characteristics for the content (determining certain content characteristics/profile of metadata such as advertising content or media content, paragraphs [0025] and [0097]); store the metadata characteristics with the content in a database for VOD content (advertising metadata 141 is stored in an advertising database 142 and media metadata 150 is stored in a media database 156, paragraphs [0027] and [0029]); and execute a user interface application in communication with the VOD data service (a user interface (TV screen) application is implemented using the VOD content, paragraph [0088]), the user interface application operable to provide a first view of the VOD content based on the metadata characteristics (providing VOD content to be viewed on the HDTV based on whether the content is media or advertisements, paragraphs [0016], [0025], [0026] and [0097]).

Claims 1 and 2 have industrial applicability as defined by PCT Article 33(4) because the subject matter can be made or used in industry.

Electronic Patent Application Fee Transmittal

Application Number:	14847537
Filing Date:	08-Sep-2015
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Mohammed Selim
Filer:	Douglas W. Swartz/Amy Duarte
Attorney Docket Number:	6583-440-CON

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Submission- Information Disclosure Stmt	1806	1	180	180
		Total in USD ($)		**180**

Electronic Acknowledgement Receipt

EFS ID:	26886086
Application Number:	14847537
International Application Number:	
Confirmation Number:	3161
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Mohammed Selim
Customer Number:	111285
Filer:	Douglas W. Swartz/Amy Duarte
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-440-CON
Receipt Date:	09-SEP-2016
Filing Date:	08-SEP-2015
Time Stamp:	17:36:11
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$180
RAM confirmation Number	091216INTEFSW00005001191970
Deposit Account	191970
Authorized User	Amy Duarte
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		6583-440-CON_IDS_01.pdf	320013 a9c4772cc7872f7958144a1ea094f0f2fe530e2a	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:					
Information:					
2	Foreign Reference	EP2328346.pdf	4264682 15e2ef3dfb6462b5fa38ab4ecd228f6f8f97c19f	no	84
Warnings:					
Information:					
3	Foreign Reference	EP2487922.pdf	6993060 a893123170fb9600e0dfc0c33d8b057fe5f303b9	no	165
Warnings:					
Information:					
4	Other Reference-Patent/App/Search documents	6583-436-PCT_ISR-WO_12-19-2013.pdf	460416 dc3fc0b237484355882433 4faf0684d6e50ac9f5	no	9
Warnings:					
Information:					
5	Other Reference-Patent/App/Search documents	6583-436-PCT_IPRP_02-26-2015.pdf	970373 3ed83dffd1d8d61578a94697d00582b75086de2a	no	8
Warnings:					
Information:					

6	Other Reference-Patent/App/Search documents	6583-436_OA_09-04-2014.pdf	409918 0587ac5de8a03e52acb8dabfd88b9f23088e7e1e	no	14
Warnings:					
Information:					
7	Other Reference-Patent/App/Search documents	6583-436_OA_01-22-2015.pdf	366463 be12d9ed7e8a090bc69ece8280741a4de277d466	no	12
Warnings:					
Information:					
8	Other Reference-Patent/App/Search documents	6583-436_OA_07-08-2015.pdf	355195 7b7e01b7f808d74d93010b850531c8c3cd2617d1	no	12
Warnings:					
Information:					
9	Other Reference-Patent/App/Search documents	6583-436_OA_03-03-2016.pdf	397361 42aa29311f6e51a47537a658f4759c923825129a	no	13
Warnings:					
Information:					
10	Other Reference-Patent/App/Search documents	6583-437_OA_09-02-2014.pdf	418309 4fd2175e3fdb93d51d00ab528332d8950119dabe	no	14
Warnings:					
Information:					
11	Other Reference-Patent/App/Search documents	6583-437_NOA_02-02-2015.pdf	667980 ca471ee7063cac8d89601eda483df83478bcb12f	no	14
Warnings:					
Information:					
12	Other Reference-Patent/App/Search documents	6583-438_OA_07-21-2014.pdf	899367 864425482fb539c890a1ab1ac9d9fb7c90d97380	no	21
Warnings:					
Information:					

13	Other Reference-Patent/App/Search documents	6583-438_OA_02-11-2015.pdf	1087475 42bedd02805cdbcebb452c98f48be064c09962e6	no	25
Warnings:					
Information:					
14	Other Reference-Patent/App/Search documents	6583-438_OA_06-17-2015.pdf	2851543 cb460609950b2694f280c78f68297c7252355a17	no	26
Warnings:					
Information:					
15	Other Reference-Patent/App/Search documents	6583-439_OA_10-09-2014.pdf	456496 49809533e987cb9dd39dc0696ff83ec9e566ba0d	no	15
Warnings:					
Information:					
16	Other Reference-Patent/App/Search documents	6583-439_OA_02-10-2015.pdf	384604 6c1806f65d3b47b5eeecde692cccf71b751f5c31	no	13
Warnings:					
Information:					
17	Other Reference-Patent/App/Search documents	6583-439_OA_08-06-2015.pdf	388367 8cca11e99befe268fe68239d7f677c41b12c1e36	no	13
Warnings:					
Information:					
18	Other Reference-Patent/App/Search documents	6583-439_NOA_03-17-2016.pdf	440493 6aff3e5530211b6883c71f23d718fa9344cdc0b1	no	8
Warnings:					
Information:					
19	Other Reference-Patent/App/Search documents	6583-440_OA_09-30-2014.pdf	804315 c02257970a3f750812e45fa9f82114be9e7c16c6	no	24
Warnings:					
Information:					

20	Other Reference-Patent/App/Search documents	6583-440_FOA_05-08-2015.pdf	2321570 5975e79bee7357c7f6909b8b47e86670422c3484	no	26
Warnings:					
Information:					
21	Other Reference-Patent/App/Search documents	6583-441_OA_06-04-2014.pdf	310886 3a209fee0a15e8a406179f7de94c68e461f4e71e	no	10
Warnings:					
Information:					
22	Other Reference-Patent/App/Search documents	6583-441_OA_10-07-2014.pdf	311743 97fa18e8dd147a13bb0845fd65842a4eecf5f60a	no	10
Warnings:					
Information:					
23	Other Reference-Patent/App/Search documents	6583-441_OA_02-26-2015.pdf	904822 432aeddf15ef8f6683774afabbe8206f259f6b75	no	10
Warnings:					
Information:					
24	Other Reference-Patent/App/Search documents	6583-441_NOA_07-02-2015.pdf	1047331 4db1254fb4829794620651 4567b6aa5488f90b01	no	8
Warnings:					
Information:					
25	Other Reference-Patent/App/Search documents	6583-442_OA_07-09-2014.pdf	521185 dfd876c0126ad1bd89bd4b648d044412796f117b	no	17
Warnings:					
Information:					
26	Other Reference-Patent/App/Search documents	6583-442_OA_11-19-2014.pdf	348816 3667611b165b16ab284bdd46d0cb8d807ef5a95a	no	12
Warnings:					
Information:					

27	Other Reference-Patent/App/Search documents	6583-442_NOA_05-19-2015.pdf	1567973 cd2d242b188bc1cc3216a7546c1ad6e8b77c296b	no	14
Warnings:					
Information:					
28	Fee Worksheet (SB06)	fee-info.pdf	30849 07098e92ae243dc65c73de7e209b4c19b183de98	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	30301605		

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
SELIM et al.	Confirmation No.: 3161
Serial No.: 14/847,537	Examiner: SAINT CYR, JEAN D
Filed: September 8, 2015	
Atty. File No.: 6583-440-CON	*Submitted via EFS-Web*
Entitled: "SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION"	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

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. 13/970,388 filed 08/19/2013 (Attorney Ref. No. 6583-436)
Serial No. 13/970,398 filed 08/19/2013 (Attorney Ref. No. 6583-437)
Serial No. 13/970,409 filed 08/19/2013 (Attorney Ref. No. 6583-438)
Serial No. 13/970,420 filed 08/19/2013 (Attorney Ref. No. 6583-439)
Serial No. 13/970,427 filed 08/19/2013 (Attorney Ref. No. 6583-440)

Serial No. 13/970,442 filed 08/19/2013 (Attorney Ref. No. 6583-441)

Serial No. 13/970,450 filed 08/19/2013 (Attorney Ref. No. 6583-442)

☐ Other:_____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☐	**37 CFR 1.97(b)**: No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☐ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☒	**37 CFR 1.97(c)**: The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☒ Please charge Deposit Account 19-1970 in the amount of $180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	**37 CFR 1.97(d)**: This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of $180.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

Certification (37 C.F.R. 1.97(e))
(Applicable only if checked)

☐ The undersigned certifies that:

☐ Each item of information contained in the Information Disclosure Statement submitted herewith was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(1).

☐ A copy of the communication from the foreign patent office is enclosed.

OR

☐ No item of information contained in the Information Disclosure Statement submitted herewith was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in the Information Disclosure Statement was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement. 37 C.F.R. 1.97(e)(2).

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /Douglas W. Swartz/
Douglas W. Swartz
Registration No. 37,739
1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: September 9, 2016

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

NOTICE OF ALLOWANCE AND FEE(S) DUE

111285 7590 09/28/2016

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

EXAMINER
SAINT CYR, JEAN D

ART UNIT	PAPER NUMBER
2425	

DATE MAILED: 09/28/2016

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/847,537	09/08/2015	Mohammed Selim	6583-440-CON	3161

TITLE OF INVENTION: SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	12/28/2016

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the ENTITY STATUS shown above. If the ENTITY STATUS is shown as SMALL or MICRO, verify whether entitlement to that entity status still applies.

If the ENTITY STATUS is the same as shown above, pay the TOTAL FEE(S) DUE shown above.

If the ENTITY STATUS is changed from that shown above, on PART B - FEE(S) TRANSMITTAL, complete section number 5 titled "Change in Entity Status (from status indicated above)".

For purposes of this notice, small entity fees are 1/2 the amount of undiscounted fees, and micro entity fees are 1/2 the amount of small entity fees.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 02/11)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

111285 7590 09/28/2016
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/847,537	09/08/2015	Mohammed Selim	6583-440-CON	3161

TITLE OF INVENTION: SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	12/28/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
SAINT CYR, JEAN D	2425	725-087000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
❑ Issue Fee
❑ Publication Fee (No small entity discount permitted)
❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)
❑ A check is enclosed.
❑ Payment by credit card. Form PTO-2038 is attached.
❑ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
❑ Applicant certifying micro entity status. See 37 CFR 1.29
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
❑ Applicant asserting small entity status. See 37 CFR 1.27
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
❑ Applicant changing to regular undiscounted fee status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/847,537	09/08/2015	Mohammed Selim	6583-440-CON	3161

111285 7590 09/28/2016
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

EXAMINER	
SAINT CYR, JEAN D	

ART UNIT	PAPER NUMBER
2425	

DATE MAILED: 09/28/2016

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(Applications filed on or after May 29, 2000)

The Office has discontinued providing a Patent Term Adjustment (PTA) calculation with the Notice of Allowance.

Section 1(h)(2) of the AIA Technical Corrections Act amended 35 U.S.C. 154(b)(3)(B)(i) to eliminate the requirement that the Office provide a patent term adjustment determination with the notice of allowance. See Revisions to Patent Term Adjustment, 78 Fed. Reg. 19416, 19417 (Apr. 1, 2013). Therefore, the Office is no longer providing an initial patent term adjustment determination with the notice of allowance. The Office will continue to provide a patent term adjustment determination with the Issue Notification Letter that is mailed to applicant approximately three weeks prior to the issue date of the patent, and will include the patent term adjustment on the patent. Any request for reconsideration of the patent term adjustment determination (or reinstatement of patent term adjustment) should follow the process outlined in 37 CFR 1.705.

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 02/11)

OMB Clearance and PRA Burden Statement for PTOL-85 Part B

The Paperwork Reduction Act (PRA) of 1995 requires Federal agencies to obtain Office of Management and Budget approval before requesting most types of information from the public. When OMB approves an agency request to collect information from the public, OMB (i) provides a valid OMB Control Number and expiration date for the agency to display on the instrument that will be used to collect the information and (ii) requires the agency to inform the public about the OMB Control Number's legal significance in accordance with 5 CFR 1320.5(b).

The information collected by PTOL-85 Part B is required by 37 CFR 1.311. 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 12 minutes to complete, including gathering, preparing, and submitting the completed application 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, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450. Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Privacy Act Statement

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 disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
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.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
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 Cooperation 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 inspection 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.

Notice of Allowability	Application No. 14/847,537	Applicant(s) SELIM ET AL.	
	Examiner JEAN D. SAINT CYR	Art Unit 2425	AIA (First Inventor to File) Status Yes

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *09/16/2016*.
   ☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on_____.
2. ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.
3. ☒ The allowed claim(s) is/are *17-18; 20-22; 24-27; 31-32; 36*. As a result of the allowed claim(s), you may be eligible to benefit from the **Patent Prosecution Highway** program at a participating intellectual property office for the corresponding application. For more information, please see http://www.uspto.gov/patents/init_events/pph/index.jsp or send an inquiry to PPHfeedback@uspto.gov.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   Certified copies:

   a) ☒ All b) ☐ Some *c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
3. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
4. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
5. ☒ Examiner's Amendment/Comment
6. ☒ Examiner's Statement of Reasons for Allowance
7. ☐ Other _____.

Detailed Action

The present application, filed on or after March 16, 2013, is being examined under the first inventor to file provisions of the AIA.

Examiner's Amendment

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a communication with Tadd F. Wilson on 09/16/2016.

Regarding Claims

17. (Currently amended) A method for providing video-on-demand (VOD) in an intelligent television, the method comprising:

receiving, by a processor of the intelligent television, a first selection for a VOD content;

in response to the first selection, providing a master view of the VOD content, wherein the master view presents two or more collections of the VOD content organized by a characteristic of the VOD content;

receiving a second selection for a VOD content; in response to the second selection, providing a collection view of ~~the~~ VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

receiving a third selection for a VOD content; in response to the third selection, providing either a detail view or a digest view of ~~the~~ VOD content, wherein the detail

view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises determine if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series;

if the selection in the collection view is for one of a movie or single show, provide a detail view; wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a

top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

18. (Currently amended) An intelligent television system comprising: a memory operable to store video-on-demand (VOD) content;

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

execute a user interface application operable to: receive a first selection for a VOD content; in response to the first selection, provide a master view of the VOD content, wherein the master view presents two or more collections of the VOD content organized by a characteristic of the VOD content;

receive a second selection for a VOD content;

in response to the second selection, provide a collection view of ~~the~~ VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

receive a third selection for a VOD content; in response to the third selection, provide either a detail view or a digest view of ~~the~~ VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises determine if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series;

if the selection in the collection view is for one of a movie or single show, provide a detail view; receiving a fourth selection of an episode in the digest view; and in response to the fourth selection, providing a player to present the episode to the user; receiving a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, providing a player to present the movie or single show to the user; wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a

top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

32. (Currently amended) A non-transitory computer readable medium having stored thereon processor executable instructions that cause a computing system to execute a method, the instructions comprising:

instructions to receive a first selection for a video on demand(VOD) content; in response to the first selection, instructions to provide a master view of the VOD content, wherein the master view presents two or more collections of the VOD content organized by a characteristic of the VOD content;

instructions to receive a second selection for a VOD content; in response to the second selection, instructions to provide a collection view of ~~the~~ VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

instructions to receive a third selection for VOD content; and

in response to the third selection, instructions to provide either a detail view or a digest view of ~~the~~ VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set

of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises; determine if the selection in the collection view is for a series or one of a movie or single show;
if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series;
if the selection in the collection view is for one of a movie or single show, provide a detail view; receiving a fourth selection of an episode in the digest view; and in response to the fourth selection, providing a player to present the episode to the user; receiving a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, providing a player to present the movie or single show to the user; wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

Allowable Subject Matter

Claims 1, 3-5, 7, 9-11; 13-14; 16; 18-25 are allowed over prior art of record. The following is an examiner's statement of reasons for allowance:
The art of record did not teach or suggest the claim taken as a whole and particular the limitation pertaining to:

For claim 17: "receiving a third selection for a VOD content; in response to the third selection, providing either a detail view or a digest view of the VOD content, wherein the

detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises determine if the selection in the collection view is for a series or one of a movie or single show; if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series; if the selection in the collection view is for one of a movie or single show, provide a detail view; wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level".

For claim 18: "receive a third selection for a VOD content; in response to the third selection, provide either a detail view or a digest view of the VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises determine if the selection in the collection view is for a series or one of a movie or single show;
if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series;
if the selection in the collection view is for one of a movie or single show, provide a

detail view; receiving a fourth selection of an episode in the digest view; and in response to the fourth selection, providing a player to present the episode to the user; receiving a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, providing a player to present the movie or single show to the user; wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level".

For claim 32: "instructions to receive a third selection for VOD content; and in response to the third selection, instructions to provide either a detail view or a digest view of the VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises; determine if the selection in the collection view is for a series or one of a movie or single show; if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series; if the selection in the collection view is for one of a movie or single show, provide a detail view; receiving a fourth selection of an episode in the digest view; and in response to the fourth selection, providing a player to present the episode to the user; receiving a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection,

providing a player to present the movie or single show to the user; wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level".

The dependent 20-22; 27-27; 31; 36 claims are allowed because they further limit independent/parents claims.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Duclos Saintcyr whose phone number is 571-270-3224. The examiner can normally reach on M-F 7:30-5:00 PM EST.If attempts to reach the examiner by telephone are not successful, his supervisor, Brian Pendleton, can be reach on 571-272-7527. The fax number for the organization where the application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Retrieval (PAIR) system. Status information for published applications may be obtained from either private PAIR or Public PAIR. Status information for unpublished applications is available through

Private PAIR only. For more information about the PAIR system, see htpp://pair-direct.uspto.gov. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197(toll free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, dial 800-786-9199(IN USA OR CANADA) or 571-272-1000.

Notice of References Cited	Application/Control No. 14/847,537	Applicant(s)/Patent Under Reexamination SELIM ET AL.	
	Examiner JEAN D. SAINT CYR	Art Unit 2425	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	CPC Classification	US Classification
*	A	US-2011/0167452 A1	07-2011	Baumgartner; Joseph P.	H04N5/44543	725/44
*	B	US-2006/0117365 A1	06-2006	Ueda; Toru	G11B27/031	725/112
	C	US-				
	D	US-				
	E	US-				
	F	US-				
	G	US-				
	H	US-				
	I	US-				
	J	US-				
	K	US-				
	L	US-				
	M	US-				

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	CPC Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.S./

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	Group Art Unit: 2425
SELIM et al.	Confirmation No.: 3161
Serial No.: 14/847,537	Examiner: SAINT CYR, JEAN D
Filed: September 8, 2015	
Atty. File No.: 6583-440-CON	*Submitted via EFS-Web*
Entitled: "SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION"	

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

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. 13/970,388 filed 08/19/2013 (Attorney Ref. No. 6583-436)
Serial No. 13/970,398 filed 08/19/2013 (Attorney Ref. No. 6583-437)
Serial No. 13/970,409 filed 08/19/2013 (Attorney Ref. No. 6583-438)
Serial No. 13/970,420 filed 08/19/2013 (Attorney Ref. No. 6583-439)
Serial No. 13/970,427 filed 08/19/2013 (Attorney Ref. No. 6583-440)

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.S./

Serial No. 13/970,442 filed 08/19/2013 (Attorney Ref. No. 6583-441)

Serial No. 13/970,450 filed 08/19/2013 (Attorney Ref. No. 6583-442)

☐ Other:_____

Submission of the above information is not intended as an admission that any item is citable under the statutes or rules to support a rejection, that any item disclosed represents analogous art, or that those skilled in the art would refer to or recognize the pertinence of any reference without the benefit of hindsight, nor should an inference be drawn as to the pertinence of the references based on the order in which they are presented. Submission of this statement should not be taken as an indication that a search has been conducted, or that no better art exists.

It is respectfully requested that the cited information be expressly considered during the prosecution of this application and the references made of record therein.

FEES

☐	**37 CFR 1.97(b)**: No fee is believed due in connection with this submission, because the information disclosure statement submitted herewith is satisfied by one of the following conditions ("X" indicates satisfaction): ☐ Within three months of the filing date of a national application other than a continued prosecution application under 37 CFR 1.53(d), or ☐ Within three months of the date of entry of the national stage as set forth in § 1.491 in an international application, or ☐ Before the mailing date of a first Office Action on the merits, or ☐ Before the mailing of a first Office action after the filing of a request for continued examination under 37 CFR 1.114. Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970.
☒	**37 CFR 1.97(c)**: The information disclosure statement transmitted herewith is being filed after all the above conditions (37 CFR 1.97(b)), but before the mailing date of any one of the following conditions: (1) a final action under 37 C.F.R. 1.113, or (2) a notice of allowance under 37 C.F.R. 1.311, or (3) an action that otherwise closes prosecution in the application. This Information Disclosure Statement is accompanied by: ☐ A Certification (below) as specified by 37 C.F.R. 1.97(e). Although no fee is believed due, if any fee is deemed due in connection with this submission, please charge such fee to Deposit Account 19-1970. OR ☒ Please charge Deposit Account 19-1970 in the amount of $180.00 for the fee set forth in 37 C.F.R. 1.17(p) for submission of an information disclosure statement. Please credit any overpayment or charge any underpayment to Deposit Account 19-1970.
☐	**37 CFR 1.97(d)**: This Information Disclosure Statement is being submitted after the period specified in 37 CFR 1.97(c). ☐ This information Disclosure Statement includes a Certification (below) as specified by 37 C.F.R. 1.97(e) AND ☐ Applicants hereby requests consideration of the reference(s) disclosed herein. Please charge Deposit Account 19-1970 in the amount of $180.00 under 37 C.F.R. 1.17(p). Please credit any overpayment or charge any underpayment to Deposit Account 19-1970. Election to pay the fee should not be taken as an indication that applicant(s) cannot execute a certification.

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.S./

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
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1560 Broadway, Suite 1200
Denver, Colorado 80202-5141
(303) 863-9700

Date: September 9, 2016

/Jean Saint Cyr/ 09/16/2016

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.S./

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	14/847,537
				Filing Date	September 8, 2015
(Use as many sheets as necessary)				First Named Inventor	Mohammed Selim
				Art Unit	2425
				Examiner Name	SAINT CYR, JEAN D
Sheet	1	of	5	Attorney Docket Number	6583-440-CON

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	7174126	02/06/2007	McElhatten et al.	
	2	8863198	10/14/2014	Sirpal et al.	
	3	9021517	04/28/2015	Selim	
	4	9066040	06/23/2015	Selim et al.	
	5	9167187	10/20/2015	Dourado et al.	
	6	9185325	11/10/2015	Selim et al.	
	7	9426527	08/23/2016	Selim et al.	
	8	2003/0208763	11/06/2003	McElhatten et al.	
	9	2004/0148362	07/29/2004	Friedman	
	10	2005/0097606	05/05/2005	Scott, III et al.	
	11	2005/0188402	08/25/2005	de Andrade et all.	
	12	2005/0289603	12/29/2005	Cezeaux et al.	
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	14	2006/0031875	02/09/2006	Yu	
	15	2006/0248557	11/02/2006	Stark et al.	
	16	2007/0154163	07/05/2007	Cordray	
	17	2008/0092198	04/17/2008	Hutten	
	18	2008/0114794	05/15/2008	Craner	
	19	2008/0114861	05/15/2008	Gildred	
	20	2008/0133525	06/05/2008	Ott	
	21	2008/0141307	06/12/2008	Whitehead	
	22	2009/0106793	04/23/2009	Tecot et al.	
	23	2009/0160764	06/25/2009	Myllymäki	
	24	2009/0165045	06/25/2009	Stallings et al.	
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Examiner Signature		Date Considered	

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /J.S./

Substitute for form 1449/PTO				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	14/847,537
				Filing Date	September 8, 2015
				First Named Inventor	Mohammed Selim
(Use as many sheets as necessary)				Art Unit	2425
				Examiner Name	SAINT CYR, JEAN D
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	35	2012/0272271	10/25/2012	Nishizawa et al.	
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	50	2014/0053193	02/20/2014	Selim et al.	
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	54	2014/0053197	02/20/2014	Shoykher et al.	
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Examiner Signature	/Jean Saint Cyr/	Date Considered	09/16/2016

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				Filing Date	September 8, 2015
				First Named Inventor	Mohammed Selim
				Art Unit	2425
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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]
	109	EP 2328346	06/01/2011	UNITED VIDEO PROPERTIES, INC.		
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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.
	111	International Search Report and Written Opinion for International (PCT) Patent Application No. PCT/US13/55589, mailed Dec. 19, 2013 (Attorney's Ref. No. 6583-436-PCT) 9 pages
	112	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
	113	Official Action for U.S. Patent Application No. 13/970,388, mailed Sep. 04, 2014 (Attorney's Ref. No. 6583-436) 14 pages
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	116	Official Action for U.S. Patent Application No. 13/970,388, mailed Mar. 3, 2016 (Attorney's Ref. No. 6583-436) 13 pages
	117	Official Action for U.S. Patent Application No. 13/970,398, mailed Sep. 02, 2014 (Attorney's Ref. No. 6583-437) 14 pages
	118	Notice of Allowance for U.S. Patent Application No. 13/970,398, mailed Feb. 02, 2015 (Attorney's Ref. No. 6583-437) 14 pages
	119	Official Action for U.S. Patent Application No. 13/970,409, mailed Jul. 21, 2014 (Attorney's Ref. No. 6583-438) 21 pages

Examiner Signature	/Jean Saint Cyr/	Date Considered	09/16/2016

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT *(Use as many sheets as necessary)*				Application Number	14/847,537
				Filing Date	September 8, 2015
				First Named Inventor	Mohammed Selim
				Art Unit	2425
				Examiner Name	SAINT CYR, JEAN D
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	120	Official Action for U.S. Patent Application No. 13/970,409, mailed Feb. 11, 2015 (Attorney's Ref. No. 6583-438) 25 pages
	121	Official Action for U.S. Patent Application No. 13/970,409, mailed Jun. 17, 2015 (Attorney's Ref. No. 6583-438) 26 pages
	122	Official Action for U.S. Patent Application No. 13/970,409, mailed Apr. 8, 2016 (Attorney's Ref. No. 6583-438) 27 pages
	123	Official Action for U.S. Patent Application No. 13/970,420, mailed Oct. 09, 2014 (Attorney's Ref. No. 6583-439) 15 pages
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	126	Notice of Allowance for U.S. Patent Application No. 13/970,420, mailed Mar. 17, 2016 (Attorney's Ref. No. 6583-439) 8 pages
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	132	Notice of Allowance for U.S. Patent Application No. 13/970,442, mailed Jul. 2, 2015 (Attorney's Ref. No. 6583-441) 8 pages
	133	Official Action for U.S. Patent Application No. 13/970,450 mailed Jul. 09, 2014 (Attorney's Ref. No. 6583-442) 17 pages
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Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14847537	SELIM ET AL.
	Examiner	Art Unit
	JEAN D SAINT CYR	2425

CPC- SEARCHED		
Symbol	Date	Examiner
CPC and keywords search	03/17/2016 to 03/18/2016	JDS
Updated search	09/16/2016	JDS

CPC COMBINATION SETS - SEARCHED		
Symbol	Date	Examiner

US CLASSIFICATION SEARCHED			
Class	Subclass	Date	Examiner

SEARCH NOTES		
Search Notes	Date	Examiner
Keywords search	03/17/2016 to 03/18/2016	JDS
Updated search	09/16/2016	JDS

INTERFERENCE SEARCH			
US Class/ CPC Symbol	US Subclass / CPC Group	Date	Examiner
Search	above	09/16/2016	JDS

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14847537	SELIM ET AL.
	Examiner	Art Unit
	JEAN D SAINT CYR	2425

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	03/18/2016	09/16/2016							
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EAST Search History

EAST Search History (Prior Art)

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S3	2	"20110167452"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/17 10:45
S4	2	"20100153997"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/17 10:46
S5	3	"20080276275"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/17 10:47
S6	4	"20070101375"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/17 10:47
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S30	4	"20130014159"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2014/09/18 14:20
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S37	0	(digest near3(view window))with(series near3(video vod on$demand))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/30 13:14
S38	0	(digest near3(view window))same(series near3(video vod on$demand))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/30 13:14
S39	4	(digest near4(series near3(video vod on$demand)))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/30 13:15
S40	56	(digest near3(view window))same((data information) near3(video vod on$demand))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/30 13:33
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S42	3	"20110167456"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/30 14:50

S43	2	"20110167452"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/30 14:53
S44	6	"20100088724"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/30 17:19
S45	5	"20120033950"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2015/04/30 18:32
S46	5	"20090106793"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2015/04/30 19:39
S47	293692	(H04N21/4788 or H04N21/44222 or H04N21/42684 or H04N21/44204 or H04N21/6582 or H04N21/2187 or H04N21/4415 or H04N21/235 or H04N21/462 or H04N21/25891 or H04N21/441 or H04N21/4756 or H04N21/475 or H04N21/4312 or H04N5/44591 or H04N21/2543 or H04N21/4753 or H04N21/4826 or H04N21/42222 or H04N21/4221 or H04N21/4782 or H04N21/42225 or H04N21/42207 or H04N5/4401 or H04N5/45 or H04N5/44 or G06F3/04883 or G06F3/017 or H04N21/4532 or H04N21/25808 or H04L51/32 or H04N21/42204 or H04N21/442 or H04N21/432 or H04N21/8126 or H04N21/47 or H04N21/4396 or H04N21/4858 or H04N21/8133 or H04N5/445 or H04N21/433 or H04N21/6125 or H04N21/47202 or H04N21/4882 or H04N21/435 or H04N21/4316 or G06F3/0481 or H04N21/488 or H04N21/6175 or H04N21/8173 or H04N21/4821 or H04N21/478 or H04N21/84 or H04N21/482 or H04N5/50 or H04N21/4755 or H04N21/8166 or H04N21/4307 or H04N21/4823 or H04N21/4622 or H04N21/8358 or H04N21/26291 or H04N17/04 or H04N21/485 or H04N21/472 or H04N21/4828 or H04N21/44213 or H04N21/437 or H04N5/4403 or H04N2005/4432 or H04N2005/4407 or	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 11:51

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S48	4527	S47 and ((intelligent smart) near3(tv television))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 11:53
S49	1229	S48 and (vod On$demand)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 11:54
S50	259	S48 and ((input$4 select$3) near3(vod On$demand))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 11:56
S51	252	S50 and (CPU processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 11:57
S52	188	S51 and (series collection)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 11:58
S53	15	S52 and ((detail digest) near3 (view vindow))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 11:59
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S55	107474	S47 and ((tv television))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 12:21
S56	14058	S55 and (vod On$demand)	US-PGPUB; USPAT; USOCR;	OR	OFF	2016/03/18 12:22

			FPRS; EPO; JPO; DERWENT; IBM_TDB			
S57	1911	S56 and ((input$4 select$3) near3(vod On$demand))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 12:22
S58	1522	S57 and (CPU processor)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 12:22
S59	1067	S58 and (series collection)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 12:23
S60	24	S59 and ((detail digest) near3 (view vindow))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 12:23
S61	23	S60 and ((@ad<="20120817") (@rlad<="20120817") (@prad<="20120817"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/18 12:23
S62	101	((select$3 choss$3 input$4) near3 series near4(vod video program on$demand))same(digest summary description details)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/03/18 12:51
S63	71	S62 and ((@ad<="20120817") (@rlad<="20120817") (@prad<="20120817"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/18 12:52
S64	67	((select$3 choss$3 input$4) near3 series near4(vod video program on$demand))with(digest summary description details)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/03/18 13:57
S65	56	S64 and ((@ad<="20120817")	US-PGPUB;	OR	ON	2016/03/18

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S66	40557	(H04N21/43615 or H04N21/64784 or H04N21/6118 or H04N21/6143 or H04L12/2838 or H04L12/2898 or H04L12/2801).cpc.	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/09/16 14:08
S67	2485	((select$3 choss$3 input$4) near3 series near4(vod video program on$demand))and(digest summary description details)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/09/16 14:09
S68	223	S67 and (vod On$demand)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/09/16 14:10
S69	59	S66 and S67	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/09/16 14:10
S70	20	S68 and S69	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2016/09/16 14:10
S71	186	((select$3 choos$3 input$4) near3 series near4(vod video program on$demand))same(digest summary description details)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/09/16 14:20
S72	140	S71 and ((@ad<="20120817") (@rlad<="20120817") (@prad<="20120817"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/09/16 14:21
S73	14	S72 and ((input$4 select$3) near3(vod On$demand))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT;	OR	OFF	2016/09/16 14:21

			IBM_TDB			
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S75	186	((select$3 choos$3 input$4) near3 series near4(vod video program on$demand))same(digest summary description details)	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/09/16 14:36
S76	65	(digest near3(view window))same((data information) near3(video vod on$demand))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/09/16 14:37
S77	65	S76 and ((@ad<="20120817") (@rlad<="20120817") (@prad<="20120817"))	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/09/16 14:37
S78	3	"20080141307"	US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2016/09/16 14:42

9/16/2016 6:33:27 PM
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Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14847537	SELIM ET AL.
	Examiner	**Art Unit**
	JEAN D SAINT CYR	2425

CPC							
Symbol						**Type**	**Version**
H04N		21	/	4823		F	2013-01-01
H04N		21	/	42207		I	2013-01-01
H04N		21	/	4332		A	2013-01-01
H04N		21	/	42219		A	2013-01-01
H04N		21	/	462		I	2013-01-01
H04N		1	/	00448		I	2013-01-01
H04N		17	/	04		I	2013-01-01
H04N		5	/	4403		I	2013-01-01
H04N		5	/	50		I	2013-01-01
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H04N		21	/	26291		I	2013-01-01
H04N		21	/	437		I	2013-01-01
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H04N		5	/	445		I	2013-01-01
G06F		3	/	0481		I	2013-01-01
H04N		21	/	442		I	2013-01-01

/JEAN D SAINT CYR/ Examiner.Art Unit 2425	09/16/2016	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	12	
/BRIAN T PENDLETON/ Supervisory Patent Examiner.Art Unit 2425	09/19/2016	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	Claim 1	Fig.16

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14847537	SELIM ET AL.
	Examiner	**Art Unit**
	JEAN D SAINT CYR	2425

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H04N		21	/	6175	I	2013-01-01
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H04N		2005	/	4432	A	2013-01-01
H04N		21	/	2543	I	2013-01-01
H04N		21	/	4753	I	2013-01-01

/JEAN D SAINT CYR/ Examiner.Art Unit 2425	09/16/2016	**Total Claims Allowed:**	
(Assistant Examiner)	(Date)	12	
/BRIAN T PENDLETON/ Supervisory Patent Examiner.Art Unit 2425	09/19/2016	O.G. Print Claim(s)	O.G. Print Figure
(Primary Examiner)	(Date)	Claim 1	Fig.16

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14847537	SELIM ET AL.
	Examiner	**Art Unit**
	JEAN D SAINT CYR	2425

H04N		21	/ 4826	I	2013-01-01
H04N		5	/ 44591	I	2013-01-01
H04N		21	/ 25891	I	2013-01-01
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H04N		21	/ 6582	I	2013-01-01
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H04N		21	/ 42684	I	2013-01-01
G06F		3	/ 04817	I	2013-01-01
G06F		3	/ 04842	I	2013-01-01
H04N		21	/ 47205	I	2013-01-01
H04N		21	/ 414	I	2013-01-01

CPC Combination Sets					
Symbol			**Type**	**Set**	**Ranking**	**Version**
		/				
		/				

/JEAN D SAINT CYR/ Examiner.Art Unit 2425 (Assistant Examiner)	09/16/2016 (Date)	**Total Claims Allowed:** 12	
/BRIAN T PENDLETON/ Supervisory Patent Examiner.Art Unit 2425 (Primary Examiner)	09/19/2016 (Date)	O.G. Print Claim(s) Claim 1	O.G. Print Figure Fig.16

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14847537	SELIM ET AL.
	Examiner	**Art Unit**
	JEAN D SAINT CYR	2425

US ORIGINAL CLASSIFICATION		INTERNATIONAL CLASSIFICATION										
CLASS	SUBCLASS	CLAIMED					NON-CLAIMED					
		H	0	4	N	21 / 2543 (2011.01.01)						
CROSS REFERENCE(S)		H	0	4	N	21 / 262 (2011.01.01)						
		H	0	4	N	21 / 266 (2011.01.01)						
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)	H	0	4	N	21 / 431 (2011.01.01)						
		H	0	4	N	21 / 47 (2011.01.01)						
		H	0	4	N	21 / 472 (2011.01.01)						

/JEAN D SAINT CYR/ Examiner.Art Unit 2425 (Assistant Examiner)	09/16/2016 (Date)	**Total Claims Allowed:** 12
/BRIAN T PENDLETON/ Supervisory Patent Examiner.Art Unit 2425 (Primary Examiner)	09/19/2016 (Date)	O.G. Print Claim(s) Claim 1 O.G. Print Figure Fig.16

U.S. Patent and Trademark Office

Part of Paper No. 20160916

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	14847537	SELIM ET AL.
	Examiner	**Art Unit**
	JEAN D SAINT CYR	2425

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
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/JEAN D SAINT CYR/ Examiner.Art Unit 2425 (Assistant Examiner)	09/16/2016 (Date)	**Total Claims Allowed:** 12	
/BRIAN T PENDLETON/ Supervisory Patent Examiner.Art Unit 2425 (Primary Examiner)	09/19/2016 (Date)	O.G. Print Claim(s) Claim 1	O.G. Print Figure Fig.16

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	Group Art Unit: 2425
SELIM et al.	Confirmation No.: 3161
Serial No.: 14/847,537	Examiner: SAINT CYR, JEAN D
Filed: September 8, 2015	
Atty. File No.: 6583-481-CON	
Entitled: "SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION"	***Submitted Via EFS-Web***

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REQUEST FOR CORRECTION OF INVENTORSHOP IN NONPROVISIONAL APPLICATION PURSUANT TO 37 C.F.R. § 1.48(a)

Dear Sir/Madam:

Applicant hereby requests a correction of inventorship by removing Sanjiv Sirpal as an inventor of the above-identified application pursuant to 37 C.F.R. § 1.48(a). The correct inventors are Mohammed Selim and Saulo Correia Dourado. Executed Declarations were previously submitted on September 8, 2015, and a corrected Application Data Sheet is filed herewith.

The processing fee in the amount of $600.00 is submitted herewith via EFS-Web in accordance with 37 C.F.R. § 1.17(d). Please credit any overpayment or debit any underpayment 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
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Date: November 2, 2016

PTO/AIA/14 (07-14)
Approved for use through 04/30/2017. OMB 0651-0032
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	6583-440-CON
	Application Number	14/847,537
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND 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
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Residence Information (Select One) ○ US Residency ◉ Non US Residency ○ Active US Military Service

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Inventor 2 Remove

Legal Name

Prefix	Given Name	Middle Name	Family Name	Suffix
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Address 2			
City	Oakville	State/Province	ON
Postal Code	L6H 6Y2	Country [i]	CA

~~**Inventor 3**~~ Remove

~~**Legal Name**~~

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

~~Prefix~~	~~Given Name~~	~~Middle Name~~	~~Family Name~~	~~Suffix~~
	~~Sanjiv~~		~~Sirpal~~	

~~Residence Information (Select One)~~ ○ ~~US Residency~~ ◉ ~~Non US Residency~~ ○ ~~Active US Military Service~~

~~City~~	~~Oakville~~	~~Country of Residence~~	~~CA~~

~~Mailing Address of Inventor:~~

~~Address 1~~	~~3264 Stocksbridge Avenue~~		
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~~City~~	~~Oakville~~	~~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 VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION		
Attorney Docket Number	6583-440-CON	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Total Number of Drawing Sheets (if any)	47	Suggested Figure for Publication (if any)	

Filing By Reference :

Only complete this section when filing an application by reference under 35 U.S.C. 111(c) and 37 CFR 1.57(a). Do not complete this section if application papers including a specification and any drawings are being filed. Any domestic benefit or foreign priority information must be provided in the appropriate section(s) below (i.e., "Domestic Benefit/National Stage Information" and "Foreign Priority Information").

For the purposes of a filing date under 37 CFR 1.53(b), the description and any drawings of the present application are replaced by this reference to the previously filed application, subject to conditions and requirements of 37 CFR 1.57(a).

Application number of the previously filed application	Filing date (YYYY-MM-DD)	Intellectual Property Authority or Country

PTO/AIA/14 (07-14)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND 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, 365(c), or 386(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.
When referring to the current application, please leave the application number blank.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13/970427	2013-08-19
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/684672	2012-08-17
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/702650	2012-09-18
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/697710	2012-09-06
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/700182	2012-09-12

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/736692	2012-12-13
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/798821	2013-03-15
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/804942	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/804998	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/804971	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/804990	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/805003	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/805053	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/805030	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/805027	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/805042	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970427	Claims benefit of provisional	61/805038	2013-03-25

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13/970388	2013-08-19
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/684672	2012-08-17
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/702650	2012-09-18
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/697710	2012-09-06
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/700182	2012-09-12
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/736692	2012-12-13
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/798821	2013-03-15
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/804942	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/804998	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/804971	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/804990	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/805003	2013-03-25

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/805053	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/805030	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/805027	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/805042	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970388	Claims benefit of provisional	61/805038	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13/970409	2013-08-19
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/684672	2012-08-17
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/702650	2012-09-18
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/697710	2012-09-06
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/700182	2012-09-12
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/736692	2012-12-13
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/798821	2013-03-15

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/804942	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/804998	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/804971	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/804990	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/805003	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/805053	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/805030	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/805027	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/805042	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970409	Claims benefit of provisional	61/805038	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13/970420	2013-08-19
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/684672	2012-08-17

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/702650	2012-09-18
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/697710	2012-09-06
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/700182	2012-09-12
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/736692	2012-12-13
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/798821	2013-03-15
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/804942	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/804998	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/804971	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/804990	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/805003	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/805053	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/805030	2013-03-25

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/805027	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/805042	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970420	Claims benefit of provisional	61/805038	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13/970442	2013-08-19
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/684672	2012-08-17
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/702650	2012-09-18
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/697710	2012-09-06
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/700182	2012-09-12
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/736692	2012-12-13
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/798821	2013-03-15
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/804942	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/804998	2013-03-25

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/804971	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/804990	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/805003	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/805053	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/805030	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/805027	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/805042	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970442	Claims benefit of provisional	61/805038	2013-03-25
Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	13/970450	2013-08-19
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/684672	2012-08-17
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/702650	2012-09-18
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/697710	2012-09-06

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/700182	2012-09-12
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/736692	2012-12-13
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/798821	2013-03-15
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/804942	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/804998	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/804971	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/804990	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/805003	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/805053	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/805030	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/805027	2013-03-25
Prior Application Status	Expired		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	61/805042	2013-03-25

PTO/AIA/14 (07-14)
Approved for use through 04/30/2017. OMB 0651-0032
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	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Prior Application Status	Expired	Remove	
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
13/970450	Claims benefit of provisional	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:

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. 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(i)(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.
NOTE: By providing this statement under 37 CFR 1.55 or 1.78, this application, with a filing date on or after March 16, 2013, will be examined under the first inventor to file provisions of the AIA.

Authorization to Permit Access:

☐ Authorization to Permit Access to the Instant Application by the Participating Offices

PTO/AIA/14 (07-14)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

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.

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	95002
Phone Number		Fax Number	

PTO/AIA/14 (07-14)
Approved for use through 04/30/2017. OMB 0651-0032
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	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

Email Address	

Additional Applicant Data may be generated within this form by selecting the Add button.

Assignee Information including 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.

Assignee 1

Complete this section if assignee information, including non-applicant assignee information, is desired to be included on the patent application publication . An assignee-applicant identified in the "Applicant Information" section will appear on the patent application publication as an applicant. For an assignee-applicant, complete this section only if identification as an assignee is also desired on the patent application publication.

If the Assignee or Non-Applicant Assignee is an Organization check here. ☐

Prefix	**Given Name**	Middle Name	**Family Name**	Suffix

Mailing Address Information For Assignee including Non-Applicant Assignee:

Address 1			
Address 2			
City		**State/Province**	
Country i		Postal Code	
Phone Number		Fax Number	
Email Address			

Additional Assignee or Non-Applicant 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)	2016-11-02
First Name	Tadd F.	Last Name	Wilson	Registration Number	54544

Additional Signature may be generated within this form by selecting the Add button.

PTO/AIA/14 (07-14)
Approved for use through 04/30/2017. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Application Data Sheet 37 CFR 1.76	Attorney Docket Number	6583-440-CON
	Application Number	
Title of Invention	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION	

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.**

Privacy Act Statement

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.

2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.

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.

4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).

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 C o 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.

Electronic Patent Application Fee Transmittal

Application Number:	14847537
Filing Date:	08-Sep-2015
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Mohammed Selim
Filer:	Tadd Fjelp Wilson/Amy Duarte
Attorney Docket Number:	6583-440-CON

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
CORRECTION OF INVENTORSHIP ON MERITS	1819	1	600	600
		Total in USD ($)		**600**

Electronic Acknowledgement Receipt

EFS ID:	27398981
Application Number:	14847537
International Application Number:	
Confirmation Number:	3161
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Mohammed Selim
Customer Number:	111285
Filer:	Tadd Fjelp Wilson/Amy Duarte
Filer Authorized By:	Tadd Fjelp Wilson
Attorney Docket Number:	6583-440-CON
Receipt Date:	02-NOV-2016
Filing Date:	08-SEP-2015
Time Stamp:	15:32:29
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$600
RAM confirmation Number	110316INTEFSW00002050191970
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Request under Rule 48 correcting inventorship	6583-440-CON_Request-Correct-Inventorship.pdf	131215 7b454969177811d61cf081e65b098d331e4a0b4a	no	1
Warnings:					
Information:					
2	Application Data Sheet	6583-440-CON_ADS-Corrected3.pdf	701349 034a9000f5f5800b502be32e36cfd3c110abf102	no	16
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3	Fee Worksheet (SB06)	fee-info.pdf	30597 ae6b7c2e326fda061539e66ce9eced1f5b6aab00	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	863161		

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.

Document code: WFEE

United States Patent and Trademark Office
Sales Receipt for Accounting Date: 11/14/2016

CVORACHA SALE #00000011 Mailroom Dt: 11/02/2016 191970 14847537
01 FC : 1830 140.00 DA

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
14/847,537	09/08/2015	Mohammed Selim	6583-440-CON

CONFIRMATION NO. 3161

111285
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

37 CFR 1.48 ACKNOWLEDGEMENT LETTER

OC000000087065385

Date Mailed: 11/15/2016

NOTICE OF ACCEPTANCE OF REQUEST UNDER 37 CFR 1.48(a)

This is in response to the applicant's request under 37 CFR 1.48(a) submitted on 11/02/2016.

The request under 37 CFR 1.48(a) to correct the inventorship, to correct or update the name of an inventor, or to correct the order of names of joint inventors is accepted.

Questions about the contents of this notice and the requirements it sets forth should be directed to the Office of Data Management, Application Assistance Unit, at **(571) 272-4000** or **(571) 272-4200** or **1-888-786-0101**.

/mmasfaw/

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
14/847,537	09/08/2015	2425	1740	6583-440-CON	20	3

CONFIRMATION NO. 3161

UPDATED FILING RECEIPT

111285
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

OC000000087085384

Date Mailed: 11/15/2016

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)

Mohammed Selim, Oakville, CANADA;
Saulo Correia Dourado, Oakville, CANADA;

Applicant(s)

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 application is a CON of 13/970,427 08/19/2013 ABN
which 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
This application 14/847,537

is a CON of 13/970,388 08/19/2013 ABN
which 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
This application 14/847,537
is a CON of 13/970,409 08/19/2013 ABN
which 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
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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 said 13/970,409
claims benefit of 61/805,038 03/25/2013
This application 14/847,537
is a CON of 13/970,420 08/19/2013 PAT 9426527
which 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
This application 14/847,537
is a CON of 13/970,442 08/19/2013 PAT 9185325
which 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
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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
This application 14/847,537
is a CON of 13/970,450 08/19/2013 PAT 9167187
which 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
(*)Data provided by applicant is not consistent with PTO records.
and said 13/970,450
claims benefit of 61/805,042 03/25/2013
and claims benefit of 61/805,038 03/25/2013

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.

Permission to Access Application via Priority Document Exchange: No

Permission to Access Search Results: No

Applicant may provide or rescind an authorization for access using Form PTO/SB/39 or Form PTO/SB/69 as appropriate.

If Required, Foreign Filing License Granted:

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 14/847,537**

Projected Publication Date: Not Applicable

Non-Publication Request: No

Early Publication Request: No

Title

SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND 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

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

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.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific

countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4258).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

SelectUSA

The United States represents the largest, most dynamic marketplace in the world and is an unparalleled location for business investment, innovation, and commercialization of new technologies. The U.S. offers tremendous resources and advantages for those who invest and manufacture goods here. Through SelectUSA, our nation works to promote and facilitate business investment. SelectUSA provides information assistance to the international investor community; serves as an ombudsman for existing and potential investors; advocates on behalf of U.S. cities, states, and regions competing for global investment; and counsels U.S. economic development organizations on investment attraction best practices. To learn more about why the United States is the best country in the world to develop

technology, manufacture products, deliver services, and grow your business, visit http://www.SelectUSA.gov or call +1-202-482-6800.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re the Application of:	Group Art Unit: 2425
Mohammed Selim	Confirmation No.: 3161
Serial No.: 14/847,537	Examiner: SAINT CYR, JEAN D
Filed: September 8, 2015	
Atty. File No.: 6583-440-CON	***Submitted via EFS-Web***
Entitled: "SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION"	

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Dear Commissioner:

Applicant submits these Comments on Statement of Reasons for Allowance to address further the Notice of Allowability ("Notice") having a mailing date of September 28, 2016.

In the Notice, the Examiner's stated reasons for allowance were that:

> The art of record did not teach or suggest the claim taken as a whole and particular the limitation pertaining to:
>
> For claim 17: "receiving a third selection for a VOD content; in response to the third selection, providing either a detail view or a digest view of the VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises determine if the selection in the collection view is for a series or one of a movie or single show; if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series; if the selection in the collection view is for one of a movie or single show, provide a detail view; wherein a navigation to view VOD content is an ordered set

of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level".

For claim 18: "receive a third selection for a VOD content; in response to the third selection, provide either a detail view or a digest view of the VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises determine if the selection in the collection view is for a series or one of a movie or single show; if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series; if the selection in the collection view is for one of a movie or single show, provide a detail view; receiving a fourth selection of an episode in the digest view; and in response to the fourth selection, providing a player to present the episode to the user; receiving a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, providing a player to present the movie or single show to the user; wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level".

For claim 32: "instructions to receive a third selection for VOD content; and in response to the third selection, instructions to provide either a detail view or a digest view of the VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises; determine if the selection in the collection view is for a series or one of a movie or single show; if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series; if the selection in the collection view is for one of a movie or single show, provide a detail view; receiving a fourth selection of an episode in the digest view; and in response to the fourth selection, providing a player to present the episode to the user; receiving a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, providing a player to present the movie or single show to the user; wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level".

> The dependent 20-22; 27-27; 31; 36 claims are allowed because they further limit independent/parents claims.

Based on the Notice, the patentability of all independent and dependent claims is assumed to be based upon the elements as set forth in such claims and that such claims meet all criteria for patentability under §101, §102, §103 and §112.

As is clear from MPEP 1302.14:

> The statement [of reasons for allowance] is not intended to necessarily state all the reasons for allowance or all the details why claims are allowed and should not be written to specifically or impliedly state that all the reasons for allowance are set forth.

While the above-stated may be a stated reason for allowing some claims, Applicant submits that some other claims may have a different reason for allowance and/or that some claims may have other additional reasons for allowance.

Specifically, the prior art fails to teach the following features of Claims 17, 18 and 32:

> 17. A method for providing video-on-demand (VOD) in an intelligent television, the method comprising:
>
> receiving, by a processor of the intelligent television, a first selection for a VOD content;
>
> in response to the first selection, providing a master view of the VOD content, wherein the master view presents two or more collections of the VOD content organized by a characteristic of the VOD content;
>
> receiving a second selection for a VOD content;
>
> in response to the second selection, providing a collection view of VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;
>
> receiving a third selection for a VOD content;
>
> in response to the third selection, providing either a detail view or a digest view of VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series, wherein providing either a detail view or a digest view of the VOD content comprises:
>
> determining if the selection in the collection view is for a series or one of a movie or single show;
>
> if the selection in the collection view is for a series, providing the digest view; and
>
> if the selection in the collection view is for one of a movie or single show, providing a detail view, wherein a navigation to view VOD content

is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

18. An intelligent television system comprising: a memory operable to store video-on-demand (VOD) content;

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

execute a user interface application operable to:

receive a first selection for a VOD content;

in response to the first selection, provide a master view of the VOD content, wherein the master view presents two or more collections of VOD content organized by a characteristic of the VOD content;

receive a second selection for a VOD content;

in response to the second selection, provide a collection view of VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

receive a third selection for a VOD content;

in response to the third selection, provide either a detail view or a digest view of VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series, wherein providing either a detail view or a digest view of the VOD content comprises:

determine if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series;

if the selection in the collection view is for one of a movie or single show, provide a detail view;

receive a fourth selection of an episode in the digest view;

in response to the fourth selection, provide a player to present the episode to the user; and

receive a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, provide a player to present the movie or single show to the user, wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

32. A non-transitory computer readable medium having stored thereon processor executable instructions that cause a computing system to execute a method, the instructions comprising:

instructions to receive a first selection for a video on demand (VOD) content;

in response to the first selection, instructions to provide a master view of the VOD content, wherein the master view presents two or more collections of the VOD content organized by a characteristic of the VOD content;

instructions to receive a second selection for a VOD content;

in response to the second selection, instructions to provide a collection view of VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

instructions to receive a third selection for VOD content; and

in response to the third selection, instructions to provide either a detail view or a digest view of VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises;

determine if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, provide the digest view, wherein the

digest view provides a listing of two or more episodes associated with the series;

if the selection in the collection view is for one of a movie or single show, provide a detail view;

receive a fourth selection of an episode in the digest view; and

in response to the fourth selection, provide a player to present the episode to the user;

receive a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, provide a player to present the movie or single show to the user, wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

Although the Applicant believes that no fees are due for filing these Comments on Statement of Reasons for Allowance, please charge any fees deemed necessary to Deposit Account No. 19-1970.

Respectfully submitted,

SHERIDAN ROSS P.C.

DWS

By: /Douglas W. Swartz/
Douglas W. Swartz
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Date: Dec. 27 2016

Electronic Acknowledgement Receipt

EFS ID:	27907348
Application Number:	14847537
International Application Number:	
Confirmation Number:	3161
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Mohammed Selim
Customer Number:	111285
Filer:	Douglas W. Swartz/Theresa Brown
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-440-CON
Receipt Date:	27-DEC-2016
Filing Date:	08-SEP-2015
Time Stamp:	16:08:08
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Post Allowance Communication - Incoming	Comments_on_Reasons_for_Allowance.pdf	266846 554b6e7a1efd3da0255b2fc906d33643bfe9822c	no	6

Warnings:

Information:	
Total Files Size (in bytes):	266846

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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
SELIM et al.	Confirmation No.: 3161
Serial No.: 14/847,537	Examiner: SAINT CYR, JEAN D
Filed: September 8, 2015	
Atty. File No.: 6583-440-CON	
Entitled: "SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION"	***Submitted Via EFS-Web***

Mail Stop Issue Fee
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AFTER ALLOWANCE PURSUANT TO 37 CFR § 1.312

Dear Sir/Madam:

Applicants submit this Amendment After Allowance pursuant to 37 CFR § 1.312 in response to the Notice of Allowance and Fee(s) Due having a mailing date of September 28, 2016. An amendment may be entered after the mailing of a Notice of Allowance but prior to payment of the issue fee upon the recommendation of the primary examiner. Therefore, it is respectfully requested that the above-referenced application be amended as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page **2** of this paper.

Remarks/Arguments begin on page **8** of this paper.

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-16. (Canceled)

17. (Currently Amended) A method for providing video-on-demand (VOD) in an intelligent television, the method comprising:

receiving, by a processor of the intelligent television, a first selection for a VOD content;

in response to the first selection, providing, by the processor, a master view of the VOD content, wherein the master view presents two or more collections of the VOD content organized by a characteristic of the VOD content;

receiving, by the processor, a second selection for a VOD content;

in response to the second selection, providing, by the processor, a collection view of VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

receiving, by the processor, a third selection for a VOD content;

in response to the third selection, providing, by the processor, either a detail view or a digest view of VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series, wherein providing either a detail view or a digest view of the VOD content comprises:

determining, by the processor, if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, providing, by the processor, the digest view; and

if the selection in the collection view is for one of a movie or single show, providing, by the processor, a detail view, wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a

collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

18. (Previously Presented) An intelligent television system comprising: a memory operable to store video-on-demand (VOD) content;

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

execute a user interface application operable to:

receive a first selection for a VOD content;

in response to the first selection, provide a master view of the VOD content, wherein the master view presents two or more collections of VOD content organized by a characteristic of the VOD content;

receive a second selection for a VOD content;

in response to the second selection, provide a collection view of VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

receive a third selection for a VOD content;

in response to the third selection, provide either a detail view or a digest view of VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series, wherein providing either a detail view or a digest view of the VOD content comprises:

determine if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series;

if the selection in the collection view is for one of a movie or single show, provide a detail view;

receive a fourth selection of an episode in the digest view;

in response to the fourth selection, provide a player to present the episode to the user; and

receive a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, provide a player to present the movie or single

show to the user, wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

19. Cancelled

20. (Previously Presented) The method as defined in claim 17, wherein the digest view provides a listing of two or more episodes associated with the series.

21. (Previously Presented) The method as defined in claim 20, further comprising:

receiving a fourth selection of an episode in the digest view; and

in response to the fourth selection, providing a player to present the episode to the user.

22. (Previously Presented) The method as defined in claim 21, further comprising:

receiving a fifth selection of a user interface device to play the movie or single show; and

in response to the fifth selection, providing a player to present the movie or single show to the user.

23. Cancelled

24. (Previously Presented) The method as defined in claim 17, wherein a master view includes at least two user-selectable devices to view a collection view based on one of two or more criteria.

25. (Previously Presented) The method as defined in claim 24, wherein the master view includes a navigation bar to select between types of content.

26. (Previously Presented) The method as defined in claim 25, wherein the types of content include showcase content, movies content, television series content, or variety content.

27. (Previously Presented) The method as defined in claim 26, wherein the master layout includes user-selectable devices for viewing a collection of content based on special topics, newest content, top watched content, recommended content, or favorites content.

28. Cancelled

29. Cancelled

30. Cancelled

31. (Previously Presented) The intelligent television system as defined in claim 18, wherein a master view includes at least two user-selectable devices to view a collection view based on one of two or more criteria, wherein the master view includes a navigation bar to select between types of content, wherein the types of content include showcase content, movies content, television series content, or variety content, and wherein the master layout includes user-selectable devices for viewing a collection of content based on special topics, newest content, top watched content, recommended content, or favorites content.

32. (Previously Presented) A non-transitory computer readable medium having stored thereon processor executable instructions that cause a computing system to execute a method, the instructions comprising:

instructions to receive a first selection for a video on demand (VOD) content;

in response to the first selection, instructions to provide a master view of the VOD content, wherein the master view presents two or more collections of the VOD content organized by a characteristic of the VOD content;

instructions to receive a second selection for a VOD content;

in response to the second selection, instructions to provide a collection view of VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

instructions to receive a third selection for VOD content; and

in response to the third selection, instructions to provide either a detail view or a digest view of VOD content, wherein the detail view presents information about a selected item of the

VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises;

determine if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, provide the digest view, wherein the

digest view provides a listing of two or more episodes associated with the series;

if the selection in the collection view is for one of a movie or single show, provide a detail view;

receive a fourth selection of an episode in the digest view; and

in response to the fourth selection, provide a player to present the episode to the user;

receive a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, provide a player to present the movie or single show to the user, wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

33. Cancelled

34. Cancelled

35. Cancelled

36. (Previously Presented) The computer readable medium as defined in claim 32, wherein a master view includes at least two user-selectable devices to view a collection view based on one of two or more criteria, wherein the master view includes a navigation bar to select between types of content, wherein the types of content include showcase content, movies content, television series content, or variety content, and wherein the master layout

includes user-selectable devices for viewing a collection of content based on special topics, newest content, top watched content, recommended content, or favorites content.

REMARKS/ARGUMENTS

The amendments to claim 17 does not require an additional search or examination, and the amendments are requested to further clarify any potential ambiguity in the claims. The claim had not been earlier amended as the need for the amendments was not appreciated when the Amendment and Response was filed.

Accordingly, Applicant believes that the requirements of 37CFR§1.312 and MPEP§714.16 have been satisfied and entry of this amendment is respectfully requested. Although no fees are believed to be due with the filing of this paper, please charge any deficiency or credit any overpayment to Deposit Account 19-1970.

Respectfully submitted,

SHERIDAN ROSS P.C.

By: /Douglas W. Swartz/
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Date: December 28, 2016

Electronic Acknowledgement Receipt

EFS ID:	27921871
Application Number:	14847537
International Application Number:	
Confirmation Number:	3161
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Mohammed Selim
Customer Number:	111285
Filer:	Douglas W. Swartz/Amy Duarte
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-440-CON
Receipt Date:	28-DEC-2016
Filing Date:	08-SEP-2015
Time Stamp:	18:19:58
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	no

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1		6583-440-CON_Rule-312-Amendment.pdf	195994 aea47503e1a5d787aead5b04aaccc017d9c25e3f	yes	8

	Multipart Description/PDF files in .zip description		
	Document Description	**Start**	**End**
	Amendment after Notice of Allowance (Rule 312)	1	1
	Claims	2	7
	Applicant Arguments/Remarks Made in an Amendment	8	8
Warnings:			
Information:			
	Total Files Size (in bytes):	195994	

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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.

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

111285 7590 09/28/2016
Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/847,537	09/08/2015	Mohammed Selim	6583-440-CON	3161

TITLE OF INVENTION: SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION

APPLN. TYPE	ENTITY STATUS	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	UNDISCOUNTED	$960	$0	$0	$960	12/28/2016

EXAMINER	ART UNIT	CLASS-SUBCLASS
SAINT CYR, JEAN D	2425	725-087000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) The names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) The name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 Sheridan Ross P.C.
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: Flextronics AP, LLC
(B) RESIDENCE: (CITY and STATE OR COUNTRY): San Jose, CA

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
☒ Issue Fee
☐ Publication Fee (No small entity discount permitted)
☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): (**Please first reapply any previously paid issue fee shown above**)
☐ A check is enclosed.
☐ Payment by credit card. Form PTO-2038 is attached.
☒ The director is hereby authorized to charge the required fee(s), any deficiency, or credits any overpayment, to Deposit Account Number 19-1970 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
☐ Applicant certifying micro entity status. See 37 CFR 1.29
NOTE: Absent a valid certification of Micro Entity Status (see forms PTO/SB/15A and 15B), issue fee payment in the micro entity amount will not be accepted at the risk of application abandonment.
☐ Applicant asserting small entity status. See 37 CFR 1.27
NOTE: If the application was previously under micro entity status, checking this box will be taken to be a notification of loss of entitlement to micro entity status.
☐ Applicant changing to regular undiscounted fee status.
NOTE: Checking this box will be taken to be a notification of loss of entitlement to small or micro entity status, as applicable.

NOTE: This form must be signed in accordance with 37 CFR 1.31 and 1.33. See 37 CFR 1.4 for signature requirements and certifications.

Authorized Signature /Douglas W. Swartz/ Date December 28, 2016
Typed or printed name Douglas W. Swartz Registration No. 37,739

PTOL-85 Part B (10-13) Approved for use through 10/31/2013. OMB 0651-0033 U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Electronic Patent Application Fee Transmittal

Application Number:	14847537
Filing Date:	08-Sep-2015
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Mohammed Selim
Filer:	Douglas W. Swartz/Amy Duarte
Attorney Docket Number:	6583-440-CON

Filed as Large Entity

Filing Fees for Utility under 35 USC 111(a)

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
UTILITY APPL ISSUE FEE	1501	1	960	960

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
			Total in USD ($)	**960**

Electronic Acknowledgement Receipt

EFS ID:	27921967
Application Number:	14847537
International Application Number:	
Confirmation Number:	3161
Title of Invention:	SYSTEMS AND METHODS FOR PROVIDING VIDEO ON DEMAND IN AN INTELLIGENT TELEVISION
First Named Inventor/Applicant Name:	Mohammed Selim
Customer Number:	111285
Filer:	Douglas W. Swartz/Amy Duarte
Filer Authorized By:	Douglas W. Swartz
Attorney Docket Number:	6583-440-CON
Receipt Date:	28-DEC-2016
Filing Date:	08-SEP-2015
Time Stamp:	18:28:04
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	DA
Payment was successfully received in RAM	$960
RAM confirmation Number	122916INTEFSW00007281191970
Deposit Account	
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows:	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Issue Fee Payment (PTO-85B)	6583-440-CON_Issue-fee-transmittal.pdf	98754 3bea41babe17dee6a4a4dd28fede51e1c1224b0f	no	1
Warnings:					
Information:					
2	Fee Worksheet (SB06)	fee-info.pdf	30881 28973eaad0a5e278886557ad8224fb179b45eb5f	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	129635		

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.

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United States Patent and Trademark Office
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P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/847,537	09/08/2015	Mohammed Selim	6583-440-CON	3161

111285 7590 01/17/2017

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

EXAMINER
SAINT CYR, JEAN D

ART UNIT	PAPER NUMBER
2425	

NOTIFICATION DATE	DELIVERY MODE
01/17/2017	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

edocket@sheridanross.com
flexpatents-sr@sheridanross.com

Response to Rule 312 Communication	Application No.	Applicant(s)
	14/847,537	SELIM ET AL.
	Examiner	Art Unit
	JEAN D. SAINT CYR	2425

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

1. ☒ The amendment filed on *28 December 2016* under 37 CFR 1.312 has been considered, and has been:

a) ☒ entered.

b) ☐ entered as directed to matters of form not affecting the scope of the invention.

c) ☐ disapproved because the amendment was filed after the payment of the issue fee.
Any amendment filed after the date the issue fee is paid must be accompanied by a petition under 37 CFR 1.313(c)(1) and the required fee to withdraw the application from issue.

d) ☐ disapproved. See explanation below.

e) ☐ entered in part. See explanation below.

/Brian T Pendleton/ Supervisory Patent Examiner, Art Unit 2425	/JEAN D SAINT CYR/ Examiner, Art Unit 2425

OK TO ENTER: /J.D.S/

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1-16. (Canceled)

17. (Currently Amended) A method for providing video-on-demand (VOD) in an intelligent television, the method comprising:

receiving, by a processor of the intelligent television, a first selection for a VOD content;

in response to the first selection, providing, by the processor, a master view of the VOD content, wherein the master view presents two or more collections of the VOD content organized by a characteristic of the VOD content;

receiving, by the processor, a second selection for a VOD content;

in response to the second selection, providing, by the processor, a collection view of VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

receiving, by the processor, a third selection for a VOD content;

in response to the third selection, providing, by the processor, either a detail view or a digest view of VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series, wherein providing either a detail view or a digest view of the VOD content comprises:

determining, by the processor, if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, providing, by the processor, the digest view; and

if the selection in the collection view is for one of a movie or single show, providing, by the processor, a detail view, wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a

collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

18. (Previously Presented) An intelligent television system comprising: a memory operable to store video-on-demand (VOD) content;

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

execute a user interface application operable to:

receive a first selection for a VOD content;

in response to the first selection, provide a master view of the VOD content, wherein the master view presents two or more collections of VOD content organized by a characteristic of the VOD content;

receive a second selection for a VOD content;

in response to the second selection, provide a collection view of VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

receive a third selection for a VOD content;

in response to the third selection, provide either a detail view or a digest view of VOD content, wherein the detail view presents information about a selected item of the VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series, wherein providing either a detail view or a digest view of the VOD content comprises:

determine if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, provide the digest view, wherein the digest view provides a listing of two or more episodes associated with the series;

if the selection in the collection view is for one of a movie or single show, provide a detail view;

receive a fourth selection of an episode in the digest view;

in response to the fourth selection, provide a player to present the episode to the user; and

receive a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, provide a player to present the movie or single

show to the user, wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

19. Cancelled

20. (Previously Presented) The method as defined in claim 17, wherein the digest view provides a listing of two or more episodes associated with the series.

21. (Previously Presented) The method as defined in claim 20, further comprising:

receiving a fourth selection of an episode in the digest view; and

in response to the fourth selection, providing a player to present the episode to the user.

22. (Previously Presented) The method as defined in claim 21, further comprising:

receiving a fifth selection of a user interface device to play the movie or single show; and

in response to the fifth selection, providing a player to present the movie or single show to the user.

23. Cancelled

24. (Previously Presented) The method as defined in claim 17, wherein a master view includes at least two user-selectable devices to view a collection view based on one of two or more criteria.

25. (Previously Presented) The method as defined in claim 24, wherein the master view includes a navigation bar to select between types of content.

26. (Previously Presented) The method as defined in claim 25, wherein the types of content include showcase content, movies content, television series content, or variety content.

27. (Previously Presented) The method as defined in claim 26, wherein the master layout includes user-selectable devices for viewing a collection of content based on special topics, newest content, top watched content, recommended content, or favorites content.

28. Cancelled

29. Cancelled

30. Cancelled

31. (Previously Presented) The intelligent television system as defined in claim 18, wherein a master view includes at least two user-selectable devices to view a collection view based on one of two or more criteria, wherein the master view includes a navigation bar to select between types of content, wherein the types of content include showcase content, movies content, television series content, or variety content, and wherein the master layout includes user-selectable devices for viewing a collection of content based on special topics, newest content, top watched content, recommended content, or favorites content.

32. (Previously Presented) A non-transitory computer readable medium having stored thereon processor executable instructions that cause a computing system to execute a method, the instructions comprising:

instructions to receive a first selection for a video on demand (VOD) content;

in response to the first selection, instructions to provide a master view of the VOD content, wherein the master view presents two or more collections of the VOD content organized by a characteristic of the VOD content;

instructions to receive a second selection for a VOD content;

in response to the second selection, instructions to provide a collection view of VOD content, wherein the collection view presents two or more items of the VOD content having the characteristic;

instructions to receive a third selection for VOD content; and

in response to the third selection, instructions to provide either a detail view or a digest view of VOD content, wherein the detail view presents information about a selected item of the

VOD content, and wherein the digest view presents information about a set of the VOD content that are associated with a series; wherein providing either a detail view or a digest view of the VOD content comprises;

determine if the selection in the collection view is for a series or one of a movie or single show;

if the selection in the collection view is for a series, provide the digest view, wherein the

digest view provides a listing of two or more episodes associated with the series;

if the selection in the collection view is for one of a movie or single show, provide a detail view;

receive a fourth selection of an episode in the digest view; and

in response to the fourth selection, provide a player to present the episode to the user;

receive a fifth selection of a user interface device to play the movie or single show; and in response to the fifth selection, provide a player to present the movie or single show to the user, wherein a navigation to view VOD content is an ordered set of user interfaces, and wherein the order includes a master view at a top level, a collection view at a second level, either a digest view or detail view at a third level, and a player view at a fourth and bottom level.

33. Cancelled

34. Cancelled

35. Cancelled

36. (Previously Presented) The computer readable medium as defined in claim 32, wherein a master view includes at least two user-selectable devices to view a collection view based on one of two or more criteria, wherein the master view includes a navigation bar to select between types of content, wherein the types of content include showcase content, movies content, television series content, or variety content, and wherein the master layout

includes user-selectable devices for viewing a collection of content based on special topics, newest content, top watched content, recommended content, or favorites content.

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
14/847,537	02/21/2017	9578384	6583-440-CON	3161

111285 7590 02/01/2017

Sheridan Ross P.C.
1560 Broadway
Suite 1200
Denver, CO 80202

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Mohammed Selim, Oakville, CANADA;
Flextronics AP, LLC, San Jose, CA;
Saulo Correia Dourado, Oakville, CANADA;

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AO 120 (Rev. 08/10)

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In Compliance with 35 U.S.C. § 290 and/or 15 U.S.C. § 1116 you are hereby advised that a court action has been filed in the U.S. District Court FOR THE EASTERN DISTRICT OF TEXAS on the following

☐ Trademarks or ☑ Patents. (☐ the patent action involves 35 U.S.C. § 292.):

DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
23-cv-00060	2/17/2023	FOR THE EASTERN DISTRICT OF TEXAS

PLAINTIFF	DEFENDANT
Touchstream Technologies, Inc.	Altice USA, Inc.; Cequel Communications, LLC; CSC Holdings, LLC; and Friendship Cable of Texas, Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	8,356,251	1/15/2013	Touchstream Technologies, Inc.
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
2:22-cv-367	3/13/2023	Eastern District of Texas, Marshall Division

PLAINTIFF	DEFENDANT
Seungman Kim	Samsung Electronics Co., Ltd., Samsung Electronics America, Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	US 11,553,072	1/10/2023	Seungman Kim
2			
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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Continued from page 1:

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
6. 10,419,805	11/14/2017	Multimedia Technologies Pte. Ltd.
7. 9,215,393	12/15/2015	Multimedia Technologies Pte. Ltd.
8. 9,426,527	08/23/2016	Multimedia Technologies Pte. Ltd.
9. 9,077,928	7/7/2015	Multimedia Technologies Pte. Ltd.
10. 9,185,325	11/10/2015	Multimedia Technologies Pte. Ltd.

AO 120 (Rev. 08/10)

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DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
2:23-cv-124	3/24/2023	Eastern District of Texas - Marshall Division

PLAINTIFF	DEFENDANT
Multimedia Technologies Pte. Ltd.	Vizio Inc.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	9,055,255	6/9/2015	Multimedia Technologies Pte. Ltd.
2	9,232,168	1/5/2016	Multimedia Technologies Pte. Ltd.
3	9,247,174	1/26/2016	Multimedia Technologies Pte. Ltd.
4	9,510,040	11/29/2016	Multimedia Technologies Pte. Ltd.
5	9,578,384	2/21/2017	Multimedia Technologies Pte. Ltd.

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DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:23-cv-249	4/5/2023	Western District of Texas

PLAINTIFF	DEFENDANT
Ozmo Licensing LLC	TCL Electronics Holdings Ltd. and TCL Industries Holdings Co., Ltd.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	9,264,991	2/16/2016	Ozmo Licensing LLC
2	10,873,906	12/22/2020	Ozmo Licensing LLC
3	8,599,814	12/3/2013	Ozmo Licensing LLC
4	11,012,934	5/18/2021	Ozmo Licensing LLC
5	11,122,504	9/14/2021	Ozmo Licensing LLC

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

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DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
6:23-cv-249	4/5/2023	Western District of Texas

PLAINTIFF	DEFENDANT
Ozmo Licensing LLC	TCL Electronics Holdings Ltd. and TCL Industries Holdings Co., Ltd.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	9,264,991	2/16/2016	Ozmo Licensing LLC
2	10,873,906	12/22/2020	Ozmo Licensing LLC
3	8,599,814	12/3/2013	Ozmo Licensing LLC
4	11,012,934	5/18/2021	Ozmo Licensing LLC
5	11,122,504	9/14/2021	Ozmo Licensing LLC

In the above—entitled case, the following patent(s)/ trademark(s) have been included:

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DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
5:23-cv-387	3/29/2023	for the Western District of Texas

PLAINTIFF	DEFENDANT
RFC Lenders of Texas, LLC	Global-View.net

PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1 7,430,471	9/30/2008	RFC Lenders of Texas, LLC
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
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DOCKET NO.	DATE FILED	U.S. DISTRICT COURT
TBD	4/3/2023	FOR THE DISTRICT OF DELAWARE

PLAINTIFF	DEFENDANT
INGENUS PHARMACEUTICALS, LLC, and LEIUTIS PHARMACEUTICALS LLP	ACCORD HEALTHCARE, INC.

	PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1	10,993,952	5/4/2021	Leiutis Pharmaceuticals Pvt. Ltd.
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In the above—entitled case, the following patent(s)/ trademark(s) have been included:

DATE INCLUDED	INCLUDED BY ☐ Amendment ☐ Answer ☐ Cross Bill ☐ Other Pleading	
PATENT OR TRADEMARK NO.	DATE OF PATENT OR TRADEMARK	HOLDER OF PATENT OR TRADEMARK
1		
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In the above—entitled case, the following decision has been rendered or judgement issued:

DECISION/JUDGEMENT

CLERK	(BY) DEPUTY CLERK	DATE

Copy 1—Upon initiation of action, mail this copy to Director Copy 3—Upon termination of action, mail this copy to Director
Copy 2—Upon filing document adding patent(s), mail this copy to Director Copy 4—Case file copy