

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CHARTER COMMUNICATIONS, INC.,
Petitioner,
v.
TOUCHSTREAM TECHNOLOGIES, INC.,
Patent Owner.

Patent No. 11,048,751
Filing Date: August 25, 2017
Issue Date: June 29, 2021
Title: PLAY CONTROL OF CONTENT ON A DISPLAY DEVICE

Inter Partes Review No.: IPR2024-01232

**PETITION FOR *INTER PARTES* REVIEW UNDER 35 U.S.C. §§
311-319 AND 37 C.F.R. § 42.100 *et seq.***

TABLE OF CONTENTS

MANDATORY NOTICES	ix
I. INTRODUCTION.....	1
II. SUMMARY OF ARGUMENT	1
I. OVERVIEW OF THE '751 PATENT	2
A. Brief Description	2
B. Prosecution History.....	4
C. Earliest Priority Date for the Claims.....	5
II. OVERVIEW OF PRIOR ART.....	6
A. Danciu.....	6
1. Danciu is Entitled to a Priority Date of November 8, 2010	10
B. Mahajan	11
C. Calvert.....	13
D. Aldrey	15
III. IDENTIFICATION OF CHALLENGE PURSUANT TO 37 C.F.R. § 42.104(b)	18
A. Claims for Which Review is Requested and Grounds on Which Challenge Is Based.....	18
B. 314(a) Discretion Does Not Apply	18
C. 325(d) Discretion Does Not Apply	19
D. Level of Ordinary Skill	19
E. Claim Construction.....	20
IV. SPECIFIC GROUNDS FOR UNPATENTABILITY.....	21
A. Grounds A and B: Claims 1-20 are Rendered Obvious by Danciu- Mahajan or Danciu-Mahajan-Calvert.....	21
1. Independent Claim 1.....	21
2. Dependent Claim 2	39

3.	Dependent Claim 3	39
4.	Dependent Claim 4	40
5.	Dependent Claim 5	41
6.	Dependent Claim 6	43
7.	Dependent Claim 7	45
8.	Dependent Claim 8	46
9.	Dependent Claim 9	46
10.	Dependent Claim 10	47
11.	Dependent Claim 11	47
12.	Independent Claim 12.....	49
13.	Dependent Claim 13	51
14.	Dependent Claim 14	51
15.	Dependent Claim 15	51
16.	Dependent Claim 16	52
17.	Independent Claim 17.....	53
18.	Dependent Claim 18	56
19.	Dependent Claim 19	57
20.	Dependent Claim 20	57
B.	Ground C: Claims 1-20 are Rendered Obvious by Aldrey in view of Mahajan.....	57
1.	Independent Claim 1.....	57
2.	Dependent Claim 2	69
3.	Dependent Claim 3	70
4.	Dependent Claim 4	70
5.	Dependent Claim 5	71
6.	Dependent Claim 6	73
7.	Dependent Claim 7	73
8.	Dependent Claim 8	74
9.	Dependent Claim 9	74

10.	Dependent Claim 10	75
11.	Dependent Claim 11	75
12.	Independent Claim 12.....	76
13.	Dependent Claim 13	78
14.	Dependent Claim 14	78
15.	Dependent Claim 15	78
16.	Dependent Claim 16	79
17.	Independent Claim 17.....	79
18.	Dependent Claim 18	82
19.	Dependent Claim 19	82
20.	Dependent Claim 20	83
III.	GROUNDS FOR STANDING & FEE PAYMENT.....	83
IV.	CONCLUSION	84
	CERTIFICATION UNDER 37 CFR § 42.24(d).....	85
	CERTIFICATE OF SERVICE	86
	CLAIM LISTING APPENDIX.....	88

EXHIBITS

Ex. 1101:	U.S. Patent No. 11,048,751 (“the ’751 Patent”)
Ex. 1102:	Expert Declaration of David B. Lett
Ex. 1103:	Curriculum Vitae of David B. Lett
Ex. 1104:	Certified Prosecution History of the ’751 Patent
Ex. 1105-1110:	Reserved
Ex. 1111:	U.S. Pub. No. 2004/0078812 (“Calvert”)
Ex. 1112:	U.S. Pat. No. 9,490,998 (“Danciu”)
Ex. 1113:	U.S. Prov. App. No. 61/411,386 (“Danciu Provisional”)
Ex. 1114:	U.S. Pub. No. 2009/0248802 (“Mahajan”)
Ex. 1115:	U.S. Pub. No. 2009/0172757 (“Aldrey”)
Ex. 1116-1119:	Reserved
Ex. 1120:	Joint Claim Construction Statement, <i>Touchstream Technologies, Inc. v. Google LLC</i> , 6:21-cv-00569-ADA (WDTX) (Feb. 8, 2022)
Ex. 1121:	Exhibit 1 to Joint Disputed Claim Terms Charts, <i>Touchstream Technologies, Inc. v. Vizbee, Inc.</i> , 1:17-cv-06247-PGG-KNF (SDNY) (Aug. 6, 2018)
Ex. 1122:	Jury Instructions, <i>Touchstream Technologies, Inc. v. Google LLC</i> , 6:21-cv-00569-ADA (WDTX) (July 21, 2023)
Ex. 1123-29:	Reserved
Ex. 1130:	U.S. Pub. No. 2002/0104096 (“Cramer”)
Ex. 1131:	U.S. Pat. No. 7,356,575 (“Shapiro”)

- Ex. 1132: U.S. Pat. No. 7,269,842 (“Estipona”)
- Ex. 1133: U.S. Pub. No. 2004/0267899 (“Rahman”)
- Ex. 1134: U.S. Pub. No. 2004/0098533 (“Henshaw”)
- Ex. 1135: U.S. Pub. No. 2004/0172656 (“Kim”)
- Ex. 1136: Reserved
- Ex. 1137: U.S. Pat. No. 7,343,419 (“Robinson”)
- Ex. 1138-40: Reserved
- Ex. 1141: CODING OF MOVING PICTURES AND AUDIO, *MPEG-4 Overview* (Int’l Org. Standardisation 2002)
- Ex. 1142: ROBERT GODWIN-JONES, DIGITAL VIDEO UPDATE: YOUTUBE, FLASH, HIJJGH-DEFINITION, 11 LANGUAGE LEARNING & TECH. 16, 17 (2007)
- Ex. 1143: John C. Paolillo et al., *A Network View of Social Media Platform History: Social Structure, Dynamics and Content on YouTube*, PROC. 52ND HAWAII INT’L CONF. ON SYS. SCIS., 1, (2019)
- Ex. 1144: *YouTube Opens Internet Video to Masses; Serving 3 Million Videos Daily and Growing, YouTube Unveils a Fast, Fun, and Easy Service for Consumers to Broadcast Original Video*, MARKET WIRE, Dec. 15, 2005
- Ex. 1145: *Hulu Debuts via Private Beta and on Distribution Partners AOL, Comcast, MSN, MySpace and Yahoo!; Company Announces Major Licensing Deals with Metro-Goldwyn-Mayer Studios Inc. and Sony Pictures Television; Providence Equity Partners Makes Strategic Investment in News Corporation/NBC Universal Online Video Joint Venture*, BUS. WIRE, Oct. 29, 2007

- Ex. 1146: *Blockbuster Offers Cheaper Online Rental*, ASSOCIATED PRESS, Jun. 13, 2007
- Ex. 1147: *Adobe Delivers Flash Player 9 With H.264 Video Support; HD Quality Web Video and Audio Now Available With Adobe Flash Player Update*, BUS. WIRE, Dec. 4, 2007
- Ex. 1148: *Microsoft Unveils Silverlight to Power the Next Generation of Media Experiences on the Web; Leading Media Companies and Solution Providers Announce Support for New Solution for Video and Interactivity on Mac- and Windows-Based Web Browsers*, PR NEWSWIRE US, Apr. 16, 2007
- Ex. 1149: *Former Apple Multimedia Pioneers Unveil WebTV; New Company Brings Internet to Television Viewers*, PR NEWSWIRE, Jun. 12, 1996
- Ex. 1150: *Netflix, TiVo Team Up After 4-Year Courtship*, ASSOCIATED PRESS, Oct. 30, 2008
- Ex. 1151: *TiVo and Amazon.com Announce New Service Enabling Amazon Unbox Video Download to TiVo; TiVo Subscribers Will Soon Be Able to Watch Amazon Unbox Movies and TV Shows on Their TVs*, BUS. WIRE, Feb. 7, 2007
- Ex. 1152: *Wall Crumbling Between Televisions and Computers*, AGENCE FRANCE PRESSE – ENGLISH, Jan. 8, 2009
- Ex. 1153: ENHANCED TV BINARY INTERCHANGE FORMAT 1.0, ETV (OpenCable Specifications, Nov. 25, 2009)
- Ex. 1154: *Award-Winning Sonos™ Digital Music System Begins Shipping to Customers*, PR NEWSWIRE US, Jan. 27, 2005
- Ex. 1155: *Sonos Introduces the Sonos™ ZonePlayer ZP80*, PR NEWSWIRE, Jan. 4, 2006
- Ex. 1156: *Sonos Introduces the Sonos Controller for iPhone; Free Application Lets Music Lovers Control Leading Multi-Room Music System from Their iPhone*, PR NEWSWIRE, Oct. 28,

2008

- Ex. 1157: *AT&T Opens R&D Lab in Cambridge, England*, BUS. WIRE, Feb. 10, 1999
- Ex. 1158: *Microsoft Releases Windows NT 4.0 Terminal Server Edition*, M2 PRESSWIRE, Jun 16, 1998
- Ex. 1159: *TeamViewer: TeamViewer 3.0 Beta Published; Next Generation of the Popular Remote Support Software*, M2 PRESSWIRE, Aug. 27, 2007
- Ex. 1160: *3am Labs Announces \$10 Million Series A Financing; McNamee Lawrence & Co. Acts as Exclusive Financial Advisor to 3am Labs*, BUS. WIRE, Nov. 16, 2004
- Ex. 1161: *Expertcity's GoToMyPC Product Wins A People's Choice Award At Upside Events' Showcase 2001*, INTERNET WIRE, Feb. 1, 2001
- Ex. 1162: *TV2Me(R) Goes Global By Partnering With Leading Asian Online Entertainment Company; Manila-Based ESL Adds Sales and Marketing Muscle to Bring Pioneering Place Shifting Technology to Wider Market*, PR NEWSWIRE US, May 16, 2006
- Ex. 1163: *CES Innovations 2005 Award and Red Herring Finalist for 100 Most Innovative Companies are Latest Commendations for Sling Media*, BUS. WIRE, Nov. 11, 2004
- Ex. 1164: Final Written Decision, IPR2022-00795 (Sep. 27, 2023)
- Ex. 1165: Patent Owner Response, IPR2022-00795 (Jan. 13, 2023)
- Ex. 1166: Reserved
- Ex. 1167: *Progressive Networks Launches the First Commercial Audio-On-Demand System Over the Internet*, BUS. WIRE, Apr. 10, 1995

- Ex. 1168: *Progressive Networks' RealVideo Launched With Wide Industry Support*, PR NEWSWIRE EUROPE, February 10, 1997
- Ex. 1169: Reserved
- Ex. 1170: U.S. Pat. Application No. 61/477,998
- Ex. 1171: U.S. Pat. No. 8,904,289 to Strober (“the ’289 Patent”)
- Ex. 1172: Certified Copy of Prosecution History of U.S. Pat No. 8,904,289
- Ex. 1173: U.S. Pat. No. 9,767,195 (“the ’195 Patent”)
- Ex. 1174: Certified Copy of Prosecution History of U.S. Pat. No. 9,767,195
- Ex. 1175: U.S. Pat. No. 11,048,751 to Strober (“the ’751 Patent”)
- Ex. 1176: Certified Copy of Prosecution History of U.S. Pat. No. 11,048,751
- Ex. 1177: U.S. Pat. No. 8,356,251 to Strober (“the ’251 Patent”)
- Ex. 1178: Certified Copy of Prosecution History of U.S. Pat. No. 8,356,251
- Ex. 1179: Reserved
- Ex. 1180: Lett analysis of Danciu Claim 1 in view of Danciu Provisional
- Ex. 1181: Annotated Copy of Danciu Provisional in view of Danciu
- Ex. 1182: Reserved
- Ex. 1183: Claim Construction Order, *Touchstream Technologies, Inc. v. Charter Communications, Inc. et al*, 2-23-cv-00059-RJG (E.D. Tex.) (July 9, 2024)

MANDATORY NOTICES

Real Parties in Interest (37 C.F.R. § 42.8(b)(1))

The real parties-in-interest for this petition are Charter Communications, Inc., Charter Communications Operating, LLC, Time Warner Cable Enterprises LLC, Spectrum Management Holding Company, LLC, Spectrum Gulf Coast, LLC, and Charter Communications, LLC.

No unnamed entity is funding, controlling, or directing this Petition for *inter partes* review (IPR) of U.S. Patent No. 11,048,751 (“the ’751 Patent”), or otherwise has an opportunity to control or direct this Petition or Petitioner’s participation in any resulting IPR.

Related Matters (37 C.F.R. § 42.8(b)(2))

The ’751 Patent, along with related U.S. Patent Nos. 8,356,251 (“the ’251 Patent”) and 11,086,934 (“the ’934 Patent”), is being asserted against Charter Communications, Inc., Charter Communications Operating, LLC, Time Warner Cable Enterprises LLC, Spectrum Management Holding Company, LLC, Spectrum Gulf Coast, LLC, and Charter Communications, LLC in *Touchstream Technologies, Inc. v. Charter Communications, Inc. et al*, 2-23-cv-00059-RJG (E.D. Tex.) (“EDTX Litigation”). The earliest date of service on any of the Charter entities named in the EDTX Litigation was February 28, 2023, however the ’751 and ’934 Patents were first asserted in a First Amended Complaint served on May 25, 2023.

The '751, '251, and '934 Patents are also presently being asserted against Comcast Cable Communications, LLC, d/b/a Xfinity, Comcast Corp., Comcast Cable Communications Management, LLC, and Comcast of Houston, LLC in the Eastern District of Texas in *Touchstream Technologies, Inc. v. Comcast Cable Communications, LLC d/b/a Xfinity et al.*, 2:23-cv-00062-JRG; and against Altice USA, Inc., Cequel Communications, LLC, CSC Holdings, LLC, and Friendship Cable of Texas, Inc. in *Touchstream Technologies, Inc. v. Altice USA, Inc. et al*, 2:23-cv- 00060-JRG (E.D. Tex.).

The '251 Patent is also presently being asserted against Google LLC in *Touchstream Technologies, Inc. v. Google LLC*, 6:21-cv-00569-ADA (W.D. Tex.) (“Touchstream-Google case”) along with related U.S. Patent Nos. 8,782,528 (“the '528 Patent”) and 8,904,289 (“the '289 Patent”). The '251, '528, and '289 Patents were the subject of requests for *inter partes* review filed by Google LLC in IPR2022-00795, IPR2022-00793, and IPR2022-00794 (presently on appeal). The real parties-in-interest in this Petition are not involved in any of those IPRs. The '251, '528, and '289 Patents were previously asserted against Vizbee, Inc. in *Touchstream Technologies, Inc. v. Vizbee, Inc.*, 1:17-cv-06247-PGG-KNF (S.D.N.Y) (“Touchstream-Vizbee case”) which was terminated by stipulated dismissal on January 24, 2020.

The Board instituted IPR2024-00324 for the ‘751 Patent filed by Comcast Cable Communications, LLC. Concurrently with the filing of the present petition, Petitioners will be filing a motion to join the present proceeding to IPR2024-00324.

The ‘751 Patent was also the subject of request for *inter partes* review filed by Comcast Cable Communications, LLC in IPR2024-00323 which was not instituted. The real parties-in-interest in this Petition are not involved in that IPR.

To Petitioners’ knowledge, no other petitions for *inter partes* review, post-grant review, or covered business method review have been filed against the ‘751 Patent.

The Board instituted IPR2024-00322 for the ‘251 Patent filed by Comcast Cable Communications, LLC. The ‘251 Patent was also the subject of request for *inter partes* review filed by Comcast Cable Communications, LLC in IPR2024-00321 which was not instituted. The real parties-in-interest in this Petition are not involved in those IPRs.

The ‘934 Patent was the subject of two requests for *inter partes* review filed by Comcast Cable Communications, LLC in IPR2024-00325 and IPR2024-00326 which were not instituted. The real parties-in-interest in this Petition are not involved in those IPRs.

Petitioner is also filing a petition for *inter partes* review against the related ‘251 Patent that is a “copycat” petition to IPR2024-00322.

According to the Office's records, the '751 Patent is a continuation of U.S. Pat. App. No. 13/532,546, filed June 25, 2012 (issued as U.S. Pat. No. 9,767,195) which is a continuation-in-part of U.S. Pat. App. No. 13/157,821, filed June 10, 2011 (issued as the '289 Patent), which claims priority to Provisional App. No. 61/477,998, filed April 21, 2011.

Lead and Back-Up Counsel (37 C.F.R. § 42.8(b)(3))

Petitioner designates counsel listed below. A power of attorney for counsel is being concurrently filed.

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Petitioner consents to electronic service by email at the above emails.

I. INTRODUCTION

Charter Communications, Inc. (“Petitioner”) petitions for *inter partes* review and cancellation of claims 1-20 of U.S. Patent No. 11,048,751 (“the ’751 Patent”) (Ex. 1101).

II. SUMMARY OF ARGUMENT

The Board should institute review and, pursuant to the motion for joinder filed with this petition, join the resulting proceeding to previously instituted PR2024-00324 filed by Comcast. As stated in Petitioner’s concurrently motion for joinder, there are no substantive differences between Comcast’s and Petitioner’s Petitions, and the evidence relied on is substantially the same.

The ’751 Patent generally claims computer-implemented methods directed to translating commands among associated devices to control media. The methods use a display device to present video content using one of a plurality of media players controlled via messages transmitted from a computing device to a server, converted into commands appropriate for the selected media player to control playing of the video content, and then transmitted to the display device. The display device is assigned a synchronization code which is used to associate the computing device with the display device and stored in the server.

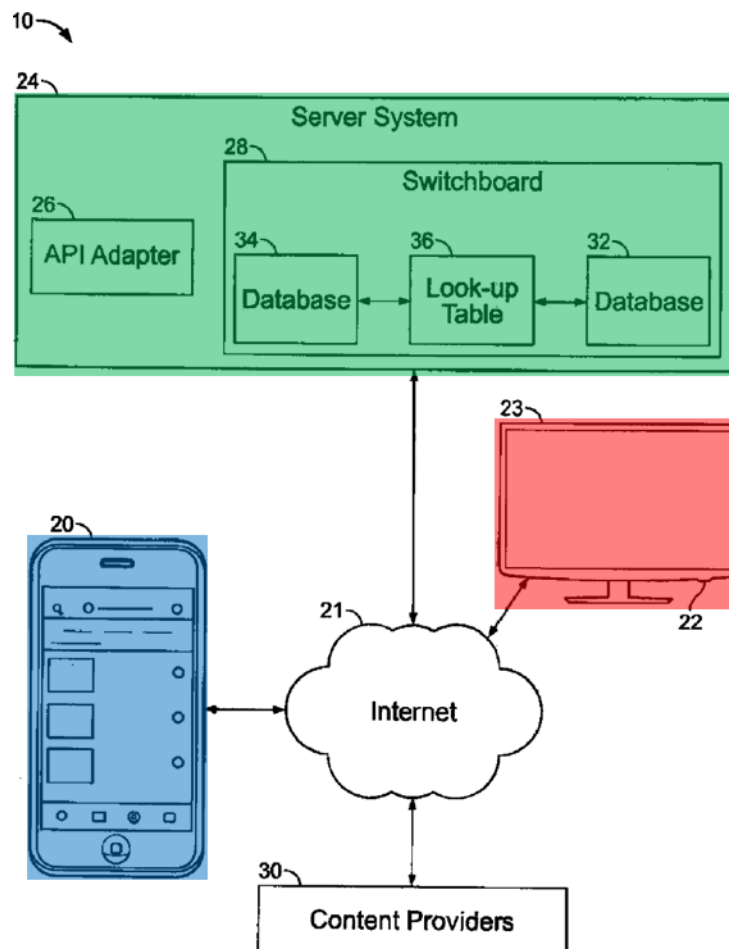
These features and additional features of the ’751 Patent claims are disclosed or rendered obvious by the prior art, e.g., Ex. 1112 and other references relied on

herein. Accordingly, as set forth below and in view of the declaration of Mr. Lett, claims 1-20 of the '751 Patent are unpatentable and should be cancelled. Ex. 1102, ¶¶1-32, 60-77.

I. OVERVIEW OF THE '751 PATENT

A. Brief Description

The '751 Patent describes a system 10 for using a server system 24 (green) to facilitate a connection between a personal computing device 20 (blue) for selecting content, and a television/display device 22 (red) for displaying the selected content. Ex. 1101, 3:13-36; Ex. 1102, ¶¶40-42.



Ex. 1101, Fig. 1 (annotated)

The connection between the personal computing device (e.g., a mobile phone) and the display device may be established by the user selecting from a list of devices displayed on the mobile phone's screen or alternatively the user can enter a synchronization code on the mobile phone that is uniquely associated with the display device. Ex. 1101, 5:25-33. The synchronization code can be obtained from, for example, a text or QR code displayed on the screen of the display device. *Id.*, 5:33-40. The server system may then store the association between the personal computing device and display device in a look-up table. *Id.*, 5:5-5:24, 5:47-58.

When a user selects particular content on the mobile phone, a message is formatted and transmitted to the server which contains information to facilitate the playback of selected video content. *Id.*, 4:39-55. The message is received by the server and the information is stored in a database. *Id.*, 4:56-5:4. The server then confirms a connection between the personal computing device and display device, and copies the message information to a database associated with the display device. *Id.*, 5:59-6:4. The server also identifies the media player requested in the message and converts the commands from the personal computing device into the correct code for use on the display device to control the media player. *Id.*, 6:4-37. The information in the database associated with the display device is then transmitted to, or retrieved by the display device. *Id.*, 6:38-48. The display device then acts on the

message information by, for example, loading the requested media player, obtaining the selected video content file, and playing the video. Ex. 1101, 6:49-7:3. After the video is playing on the display device, the user may further control the playing by entering commands through the mobile phone and transmitted through the server as described above. *Id.*, 7:4-15.

B. Prosecution History

The application that led to the '751 Patent, U.S. Application No. 15/687,249, was filed on August 25, 2017 with 20 claims including independent claims 1, 12, and 17. Ex. 1104, pp. 1–51; Ex. 1102, 54-59; Ex. 1102, ¶¶43-59.

All claims were rejected in an Office Action dated January 8, 2019 as anticipated by U.S. Published Application 2012/0130971 to Morris or as obvious over Morris in view of U.S. Published Application 2009/0248802 to Mahajan. Ex. 1104, pp. 63–74. In a response dated May 9, 2019, Applicant argued that neither Morris nor Mahajan disclose “a first message that includes at least one command in a first format, wherein the first message is received based at least in part on a second message including at least one command in a second format.” *Id.*, pp. 168–173.

In a Final Office Action dated June 12, 2019, the rejections of all claims in view of Morris or Morris-Mahajan was maintained. *Id.*, pp. 176–190. An interview was held on June 25, 2019 but no agreement was reached. *Id.*, pp. 212–216. In an Amendment dated December 12, 2019, Applicant amended the claims to require,

among other things, a synchronization code associating a first and second computing devices, and that the media player be selected from a plurality of media players. Ex. 1104, pp. 234–241.

A Notice of Allowance was issued on April 2, 2020. *Id.*, p. 493. The issue fee was paid on June 30, 2020. *Id.*, pp. 548-553. However, a Petition to Withdraw from Issue was filed July 22, 2020 along with an Information Disclosure Statement (IDS) containing additional prior art. *Id.*, pp. 555–565. Another Notice of Allowance was issued September 3, 2020. *Id.*, p. 684. Another Petition to Withdraw from Issue with an IDS was filed on September 3, 2020. *Id.*, pp. 698–703.

Claims 1, 12 and 17 were rejected in an Office Action dated February 2, 2021 as unpatentable for nonstatutory double patenting over co-pending application 16/917,095 (which eventually issued as the '934 Patent). Ex. 1104, pp. 744-752. Applicant filed a Terminal Disclaimer on March 31, 2021. *Id.*, p. 826. A Notice of Allowance was issued on May 26, 2021. *Id.*, p. 844. The '751 Patent issued on June 29, 2021. Ex. 1101, cover.

C. Earliest Priority Date for the Claims

The earliest possible priority date for the claims of the '751 Patent is April 21, 2011, the filing date of U.S. Provisional Application No. 61/477,998 to which the '751 Patent claims priority. Ex. 1102, ¶¶44-48. Each of the references relied on herein is prior art to that date as explained below.

II. OVERVIEW OF PRIOR ART

A. Danciu

Danciu (Ex. 1112) is a U.S. Patent, No. 9,490,998, filed March 7, 2011, that claims priority to and incorporates by reference U.S. Provisional Application 61/411,386, filed November 8, 2010, in its entirety. Ex. 1112, cover, 1:3-5. Danciu is prior art under 35 U.S.C. § 102(e). Danciu was not considered during prosecution. Ex. 1101, cover; Ex. 1102, ¶¶78-79.

Danciu is directed to techniques for exchanging information to control playback of content on a web-enabled device such as a network-enabled television. Ex. 1112, 1:39-50. Danciu's networked device is disclosed as a controlled device 18 (**red**), which may be a computing device such as an Internet-connected television connected via network 22, including servers 24A-24N (**green**), to a remote control 14 (**blue**), which may be any portable computing device such as a cell phone, tablet, laptop, or even a portable desktop computer. *Id.*, 3:21-28, 5:1-12, 5:42-63, Fig. 1; Ex. 1102, ¶¶80-96.

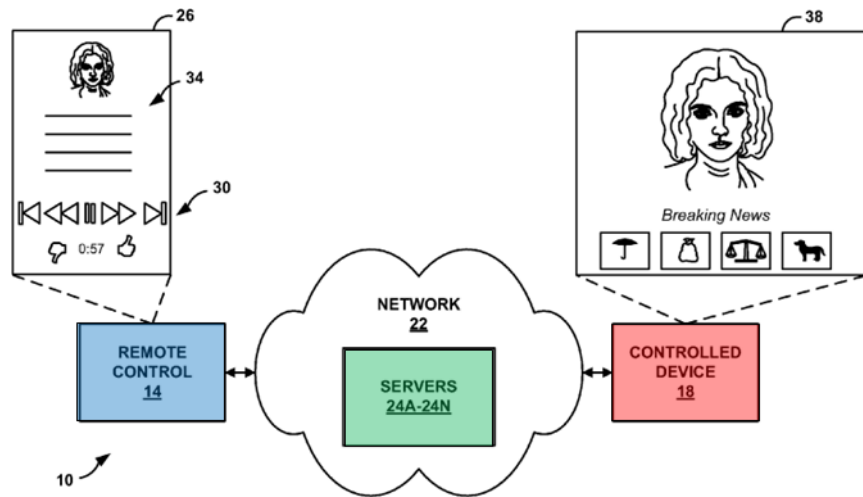


FIG. 1

Ex. 1112, Fig. 1 (annotated)

Danciu contemplates that the network may comprise a large number of devices under control, including multiple remote controls and controlled devices.

Ex. 1112, 7:41-8:58, Fig. 2.

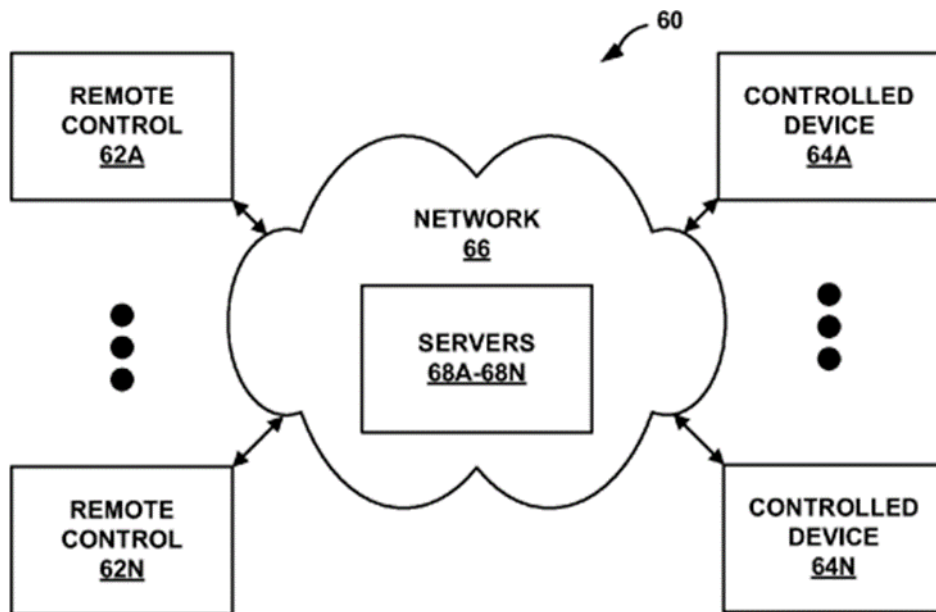
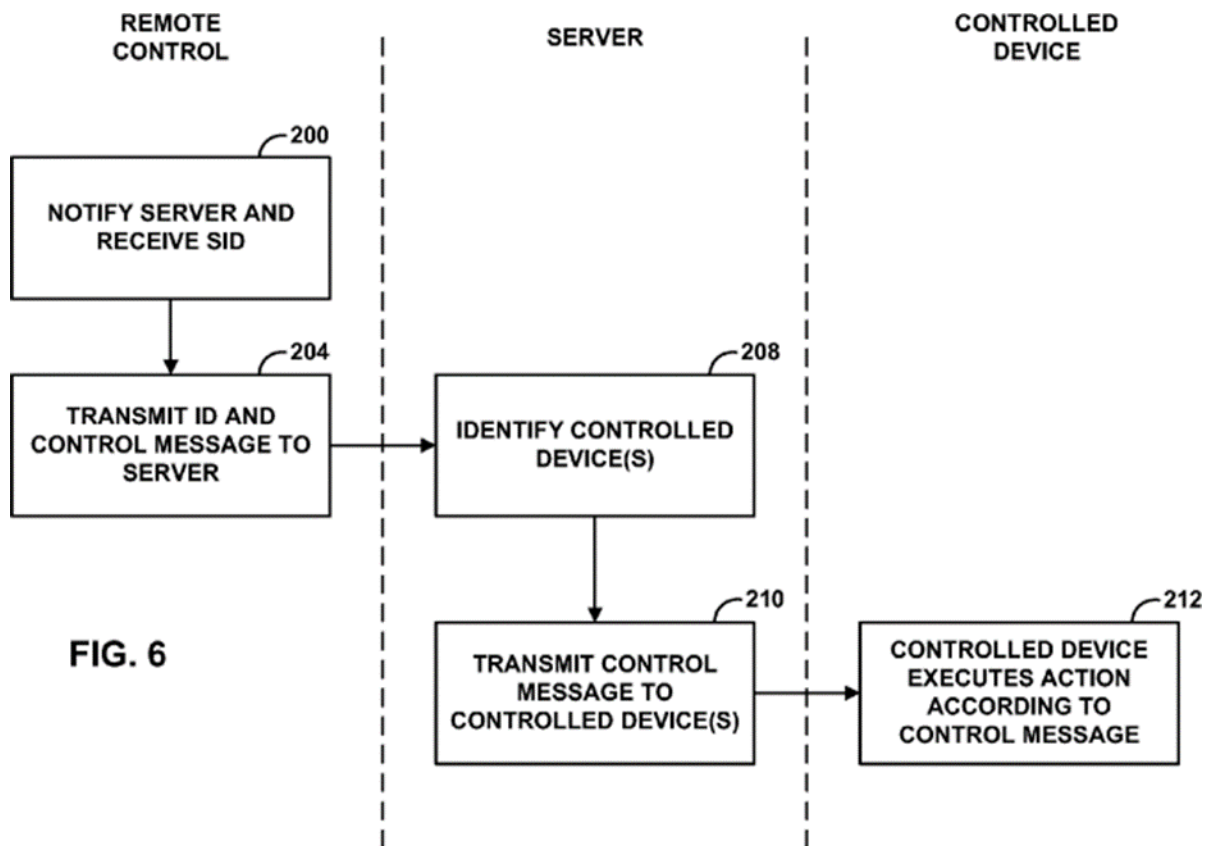


FIG. 2

Ex. 1112, Fig. 2

Danciu discloses that a “network service may assign each remote control and each controlled device a unique identifier” that is used in pairing. Ex. 1112, 4:4-13, 4:36-45, 6:40-7:10, 8:23-49, 13:16-32, 15:28-58. Danciu’s remote control provides commands for content being played on controlled device. *Id.*, 5:29-37. In doing so, the controlled device receives commands from the remote control to alter content displayed on the display of the controlled device. *Id.*, 5:64-6:2, 10:45-53; Ex. 1102, ¶¶86-89.



Ex. 1112, Fig. 6

Danciu teaches that commands received by the controlled device are understood and operated upon. Figure 9 is a flowchart illustrating an example operation of a network server communicating with a controlled device. Ex. 1112, 3:7-8, 5:29-37, 7:17-29, 18:55-19:22, Fig. 9. For example, the controlled device may have the ability to select a program to view content from YouTube, Netflix, or Hulu based on received commands. *Id.*, 11:22-35; 12:32-49, 16:55-67, 17:21-43. Figure 9 depicts a process beginning with the server receiving messages from a controlled device. *Id.*, 18:55-19:22, Fig. 9.

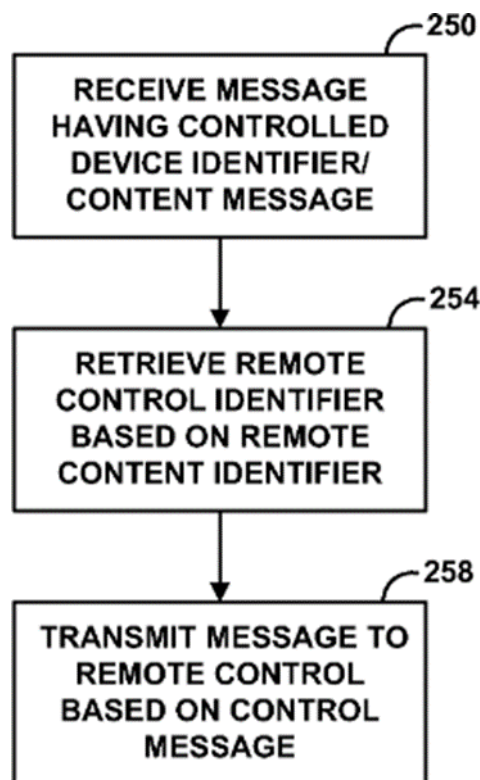


FIG. 9

Ex. 1112, Fig. 9

1. Danciu is Entitled to a Priority Date of November 8, 2010

As shown below, U.S. Provisional Application 61/411,386 (“Danciu Provisional”) provides written description support for at least claim 1 of Danciu. Ex. 1102, ¶78; Ex. 1180. This entitles Danciu to its provisional’s filing date. *Dynamic Drinkware, LLC v. National Graphics, Inc.*, 800 F.3d 1375, 1381 (Fed. Cir. 2015).

Danciu Claim 1	Danciu Provisional
[1 Pre]	Ex. 1113, [0006]
[1a]	Ex. 1113, Claim 13, [0021], [0024], [0038], [0065], [0069], [0073].
[1b]	Ex. 1113, Claim 2, [0005], [0037], [0065], [0069], [0073].
[1c]	Ex. 1113, Claim 2, [0065].
[1d]	Ex. 1113, [0022], [0037], [0065], [0084].
[1e]	Ex. 1113, Claim 1, Claim 2, Claim 16, [0005], [0022], [0065], [0084].
[1f]	Ex. 1113, Claim 2, [0084].
[1g]	Ex. 1113, Abstract, Claims 1, 16, 17, [0005], [0006], [0007], [0074], [0078], Fig. 7.
[1h]	Ex. 1113, Abstract, Claims 1, 16, 17, [0005]-[0007], [0078], Figs. 5, 7.

Danciu Claim 1	Danciu Provisional
[1i]	Ex. 1113, Abstract, Claims 1, 16, 17, [0005],[-0007], [0078], Fig. 7.

B. Mahajan

Mahajan (Ex. 1114) is a U.S. Patent Publication, No. 2009/0248802, that published on October 1, 2009. Ex. 1114, cover. Mahajan is thus prior art under 35 U.S.C. § 102(b). Mahajan was cited during prosecution as a secondary reference, as discussed above. Ex. 1104, pp. 63–74; Ex 1102, ¶¶120-126.

Mahajan discloses a client-server collaboration session wherein a user may enter commands (**orange**) to a server (**blue**) for controlling content (**purple**) that is playing on a client device (**red**). Ex. 1114, [0011]-[0013]; Figs. 1-2, 4. The platform translates generic commands to platform specific media playback commands that can be understood by the client’s media platform. *Id.*, [0012]-[0013], [0022], [0035]-[0036], [0041], Figs. 3, 5.

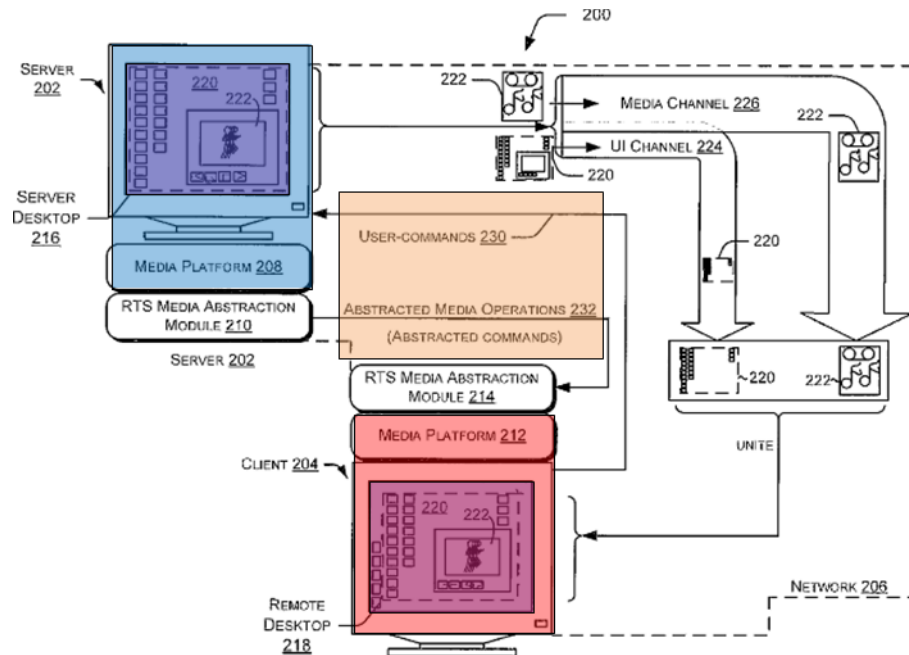


Fig. 2

Ex. 1114, Fig. 2 (annotated)

Mahajan's server translates specific commands of a first type to genericized commands, the genericized commands are transmitted, and then Mahajan's client translates those generic commands to specialized commands of a second type. *Id.*, [0035]-[0036], Figs. 1-2. Command mappings are shown in Figure 3. *Id.*, [0036]-[0043], [0063], Figs. 3, 5.

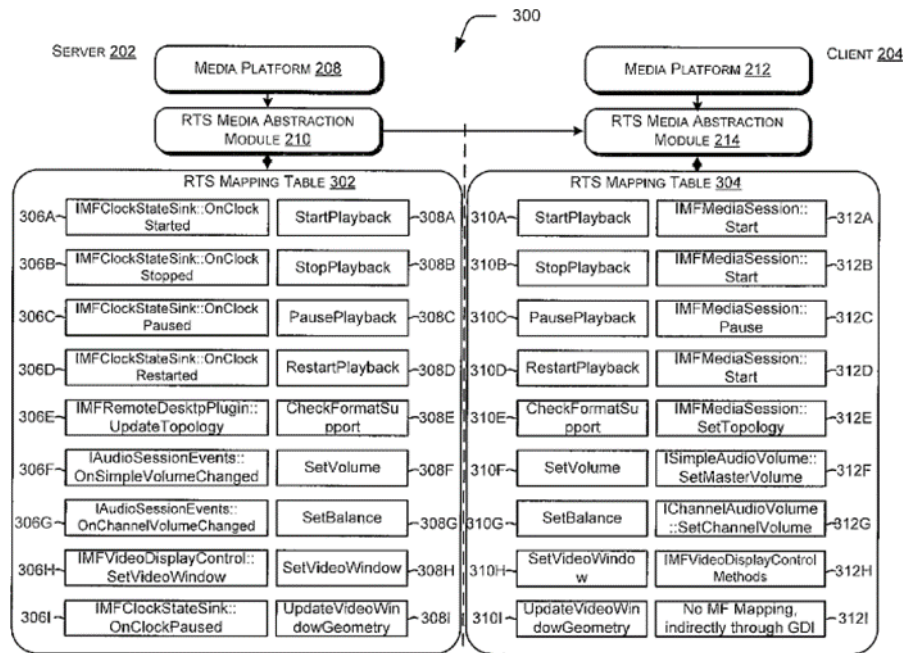


Fig. 3

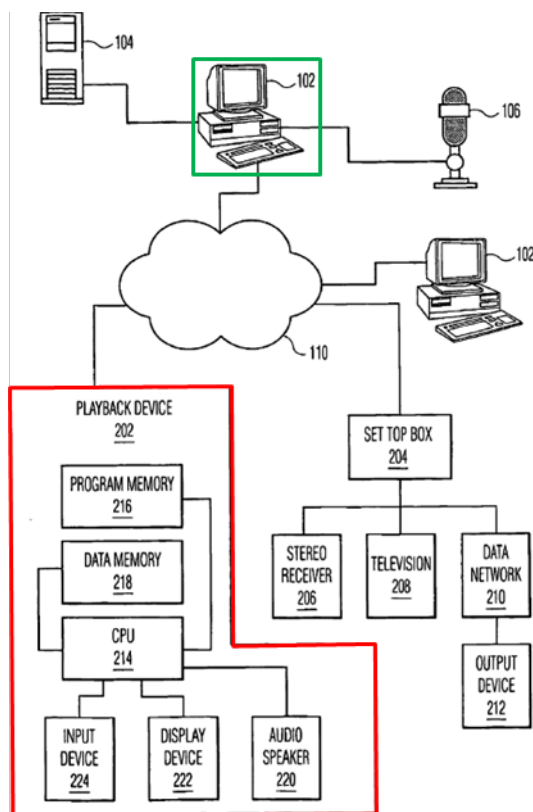
Ex. 1114, Fig. 3

C. Calvert

Calvert (Ex. 1111) is a U.S. Published Application, No. 2004/0078812, published April 22, 2004. Calvert is prior art under pre-AIA 35 U.S.C. § 102(b) and was not considered during prosecution. Ex. 1101, cover; Ex. 1102, ¶107.

Calvert describes a system for aggregating audio and video content from multiple sources into a unified listing for selection and delivery to a playback device. Ex. 1111, [0020]-[0044], Figs. 1-11; Ex. 1102, ¶¶108-114. Content aggregator 102 (green) has multiple media services available to it that include audio and/or video content in various formats. Ex. 1111, [0020]-[0021], [0024]-[0025], Figs. 1-2. Upon request, content aggregator 102 provides a listing of available services to playback device 202 (red) which displays the listing on display device 222. *Id.*, [0025]-

[0027], [0033]-[0038], Figs. 2-4.



Ex. 1111, Fig. 2 (annotated)

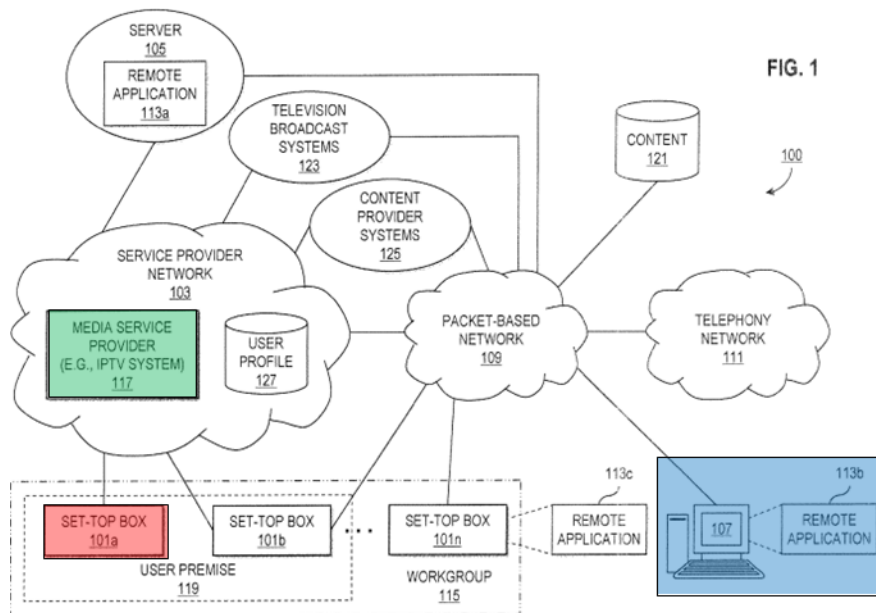
Following selection by a user of a particular media service, device 202 requests the selected service directly from the media service provider, or through content aggregator 102. *Id.*, [0027], [0038]-[0040], Figs. 3-4; Ex. 1102, ¶¶115-119. Device 202 receives the media service in the form of a data transmission which device 202 analyzes to determine its format. *Id.*, [0027], [0040]-[0042], Figs. 3, 6. Based on this determination, the media service data is provided to the appropriate player application (e.g., RealPlayer, QuickTime player, Microsoft Media Player) and output to the user. *Id.*, [0027], [0030]-[0032], [0043], Figs. 3, 6. In the event that a

new media player is needed to playback the media service, device 202 downloads the new media player. Ex. 1111, [0032].

D. Aldrey

Aldrey (Ex. 1115) is a U.S. Published Application, No. 2009/0172757, published July 2, 2009. Aldrey is prior art under pre-AIA 35 U.S.C. § 102(b) and was not considered during prosecution. Ex. 1101, cover; Ex. 1102, ¶97.

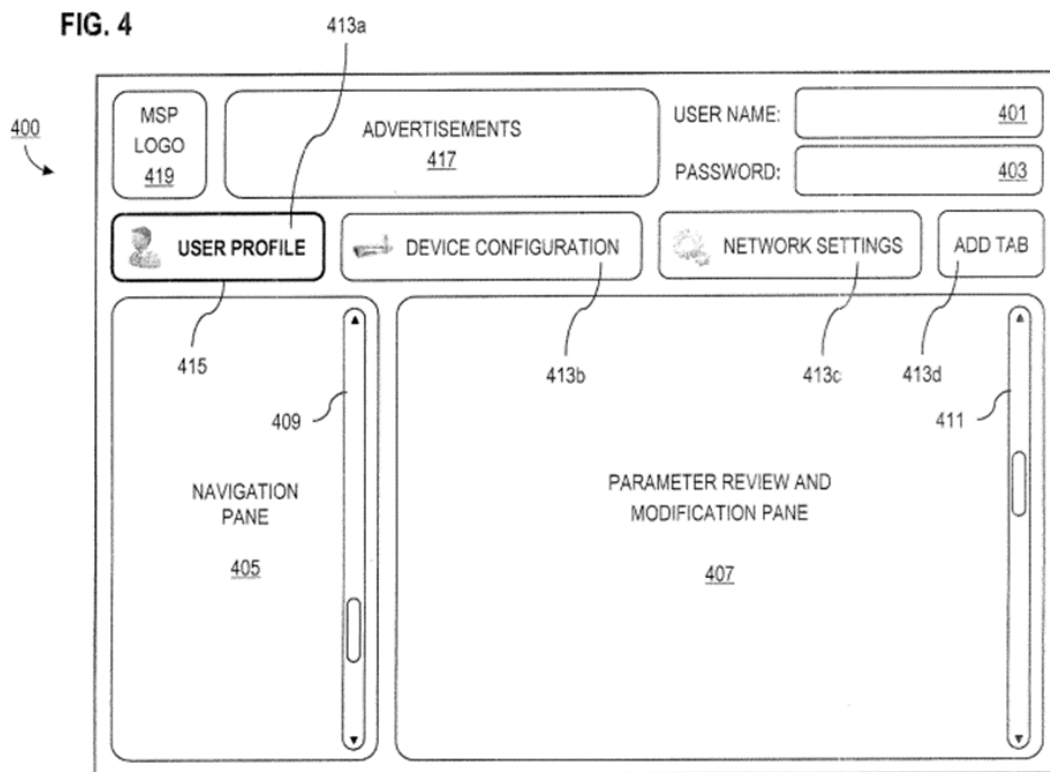
Aldrey is directed to a system that integrates television and other computing devices “thereby broadening the scope of devices available to consumers for remote interaction with STBs 101a-101n.” Ex. 1115, [0018], [0011]-[0015], Fig. 1. For example, a user at an end terminal 107 may be able to remotely access one or more STBs in order to control them. *Id.* For example, Aldrey discloses a STB 101 (**red**) connected via a media service provider (MSP) 117 (**green**) to a remote application running on an end terminal 107 (**blue**). *Id.*, [0018]-[0022], [0025], Fig. 1; Ex. 1102, ¶¶98-106.



Ex. 1115, Fig. 1 (annotated)

An individual may use a web-based application in order to access the STB.

Ex. 1115, [0067]-[0072].



Ex. 1115, Fig. 4

Using the interface, “an individual may generate a command for controlling a plurality of STBs 101a-101n, and transmit that command to the STBs 101a-101n to configure the devices 101a-101n.” *Id.*, [0019], [0073]-[0074], Fig. 4.

FIG. 5a

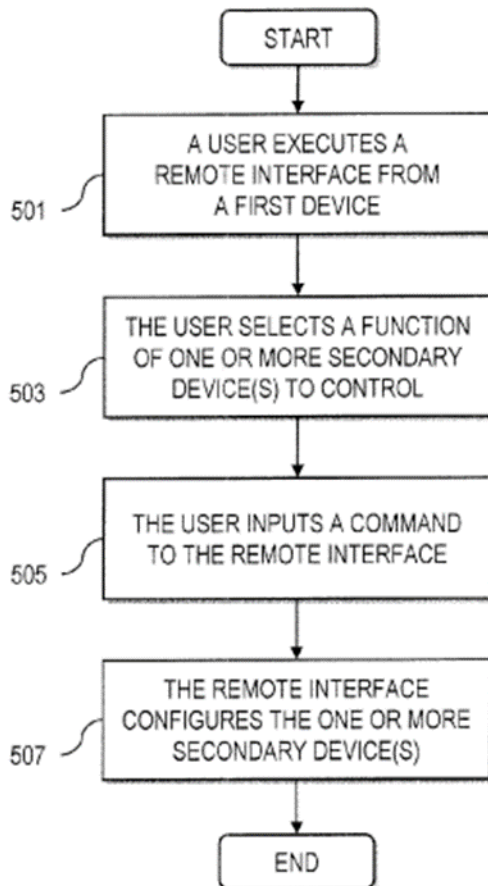
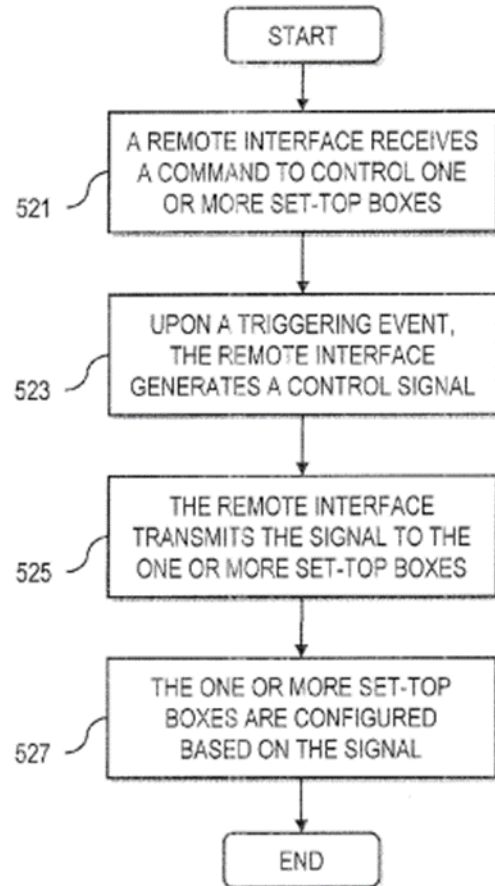


FIG. 5b



Ex. 1115, Fig. 5

This allows the user to control STBs including setting configuration information or playing content. *Id.*, [0020]-[0023]. Thus, using commands comprising metadata, the STB is controlled to display content. *Id.*, [0035]-[0056], [0060].

III. IDENTIFICATION OF CHALLENGE PURSUANT TO 37 C.F.R. § 42.104(b)

A. Claims for Which Review is Requested and Grounds on Which Challenge Is Based

Petitioner requests review of claims 1–20 on the following grounds.

Ground	References	Basis	Claims Challenged
A	Danciu in view of Mahajan	§103	1-20
B	Danciu in view of Mahajan and Calvert	§103	1-20
C	Aldrey in view of Mahajan	§103	1-20

B. 314(a) Discretion Does Not Apply

The Fintiv factors in the Director’s June 21, 2022, Guidance Memorandum do not warrant discretionary denial.

Factor one does not warrant denial. Petitioner has filed this petition and will file a petition challenging the related ’251 Patent also asserted in the District Court.

Factor two does not warrant denial. Petitioner’s District Court case is consolidated with Comcast’s case with Petitioner’s case designated as the lead. Trial in both cases is October 28, 2024; Petitioner’s trial will occur on or after that date.

Factor three does not warrant denial. Opening summary judgment briefs were filed August 5, 2024 and the Pretrial Conference is September 23, 2024.

Factor four favors institution. The petition challenges all claims in the '751 Patent while only claims 12–14 and 16 are asserted in the District Court.

Factor five does not warrant denial as Petitioner is a defendant in the District Court case.

Factor six favors institution. Petitioner presents compelling unpatentability challenges that merit institution as the Board has already instituted IPR2024-00324, which this Petition is essentially the same as.

C. 325(d) Discretion Does Not Apply

Considering the two-part framework discussed in *Advanced Bionics, LLC v. Med-El Elektromedizinische Geräte GMBH*, IPR2019-01469, Paper No. 6, pp. 8-9 (P.T.A.B. Feb. 13, 2020), the Board should not exercise its §325(d) discretion to deny institution. The grounds raised by this Petition are not the same or substantially the same as the art and arguments raised during prosecution, and to the extent that they are, Examiner erred in a manner material to the patentability of the challenged claims.

D. Level of Ordinary Skill

A person of ordinary skill in the art (a “POSITA”) at the time of the alleged invention would have had a degree in computer or electrical engineering, computer science, information systems, or a similar discipline, along with three-to-four years of experience with the design and/or implementation of network-based content

delivery systems, such as video-on-demand cable systems and Internet video streaming. Ex. 1102, ¶¶30-32.

E. Claim Construction

For purposes of this petition only, all claim terms herein should be given their ordinary and customary meaning to a POSITA, consistent with the prosecution history, as they would be given in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b); Ex. 1102, ¶¶33-39. Petitioner does not contend that the claims include any means-plus-function limitations.

In the EDTX Litigation, Patent Owner advocated plain and ordinary meaning for all claim terms, and that position was adopted by the Court. Ex. 1183, 6-33. The Court also found that the term “the first format of the first message” is not indefinite. *Id.* at 30.

In the Touchstream-Google case involving the related ’251, ’528, and ’289 Patents, Patent Owner advocated that plain and ordinary meaning applies for all claim terms¹, and that position was adopted by the Court. Ex. 1120, pp. 2-4; Ex. 1122, p. 22. In the earlier Touchstream-Vizbee case involving the same patents, Patent Owner advocated that plain and ordinary meaning applies for certain claim terms but for other terms proposed constructions which it seems to have now abandoned. Ex. 1121, pp. 1-14.

¹ For some terms, Patent Owner provided its view as to what that meaning is.

In IPR2022-00795, involving the '251 Patent, the Board noted that “the parties agree that the term ‘media player’ refers to software and not to a hardware device” but otherwise did not construe any terms. Ex. 1164, 13. The prior art relied on herein includes software media players.

IV. SPECIFIC GROUNDS FOR UNPATENTABILITY

A. Grounds A and B: Claims 1-20 are Rendered Obvious by Danciu-Mahajan or Danciu-Mahajan-Calvert

1. Independent Claim 1

Elements [1A]-[1F]² are rendered obvious by Danciu in view of Mahajan, and by Danciu in view of Mahajan and Calvert. Ex. 1102, ¶¶127–170.

a. [1A]: “A non-transitory computer storage medium...:”

While the preamble is not limiting, Danciu teaches it. Danciu discloses a controlled device 18 (**red**), which may be a computing device such as an Internet-connected television connected via network 22, including servers 24A-24N (**green**), to a remote control 14 (**blue**). Ex. 1112, 5:42-63, 6:34-49, Fig. 1; Ex. 1102, ¶129.

² The limitations of the claims appear and are labelled in the Claims Listing Appendix.

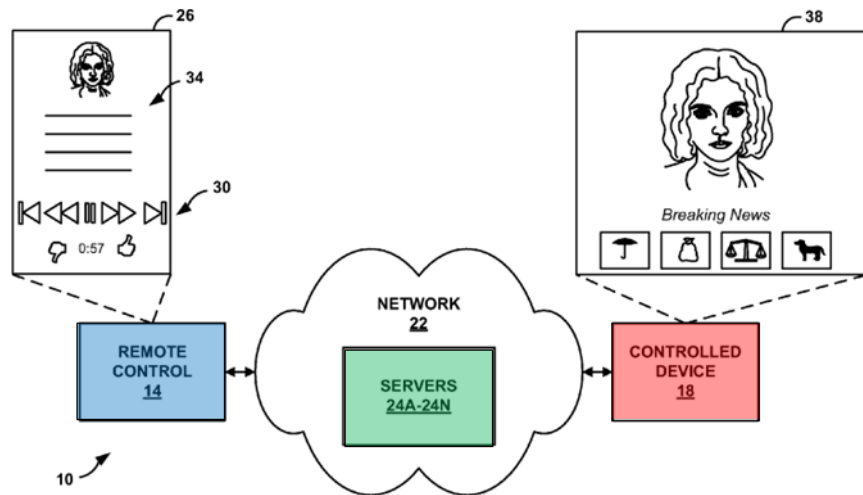


FIG. 1

Ex. 1112, Fig. 1 (annotated)

Controlled device 18 is a computing device that includes processors and memory. Ex. 1112, 11:7-13, 12:1-16, Fig. 4; Ex. 1102, ¶130.

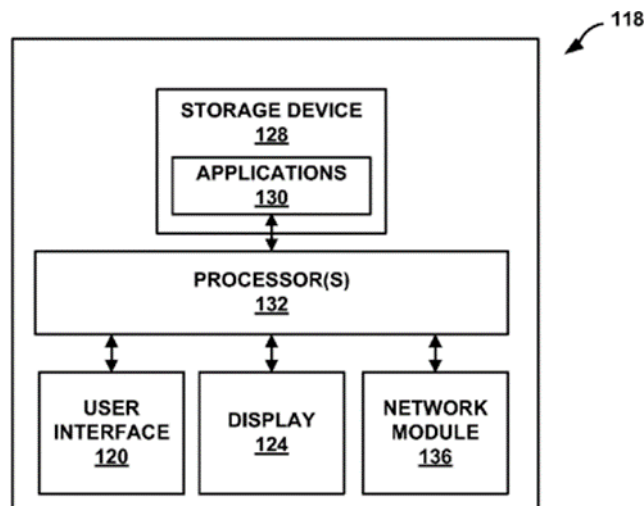


FIG. 4

Ex. 1112, Fig. 4

b. [1B] “obtaining a synchronization ... stored on a remote server device;”

Danciu teaches the elements of limitation [1B]. Danciu discloses that a “network service may assign each remote control and each controlled device a unique identifier” that is used in pairing. Ex. 1112, 4:4-13, 6:40-7:10. In one example, the controlled device may present a user with a QR code, which the user may scan with the remote control. *Id.*, 4:36-45, 8:23-49, 13:16-32, 15:28-58. The remote control 14 may be a mobile device such as a phone, a desktop device, any other suitable device. *Id.*, 5:1-12. The QR code, which is provided by the controlled device (“associated with the first computing device”) to the remote control (“a second computing device”), may be considered as a synchronization code because it synchronizes a session to which the remote control wishes to join. Ex. 1102, ¶132. This is consistent with the ’751 Patent, which states that the synchronization code may be a QR code. Ex. 1101, 5:25-40, Fig. 7A.

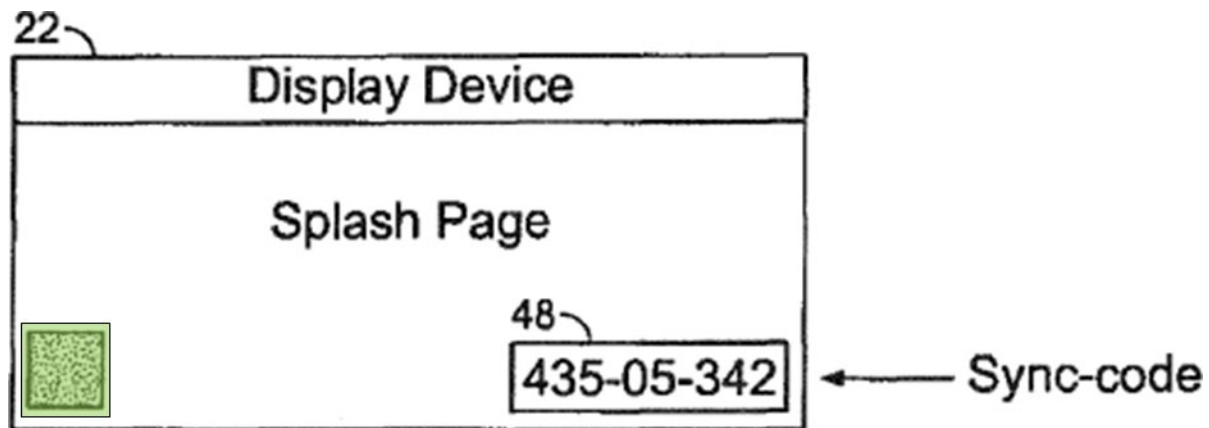


FIG. 7A

Ex. 1101, Fig. 7A (annotated)

Further, the QR code is stored on the server. Danciu teaches that the QR code “identifies a session that has been created by servers 68.” Ex. 1112, 8:26-27. This session is “maintained by the network service.” *Id.*, 4:39-41. Danciu further teaches that the QR code is generated by the device management module, which is stored on the servers. *Id.*, 15:38-58, Fig. 5. A POSITA reading Danciu’s disclosure would have understood that the QR code is generated by the claimed “remote server device”, and would be stored in memory on the remote server device at least during the process of generating the code. Ex. 1102, ¶¶133-134.

- c. **[1C]: “providing the synchronization code to a second computing device ..., ... the remote server device to store an association between the first computing device and the second computing device;”**

As discussed above regarding limitation [1B], Danciu discloses that a “network service may assign each remote device and each controlled device a unique identifier” that is used in pairing. Ex. 1112, 4:4-13, 6:40-7:10; *see* Section VI.A.1.b. By displaying the QR code and scanning it by the remote computing device, the controlled device is “providing” the QR code to the remote control. Ex. 1102, ¶136.

Danciu further teaches “wherein the provided synchronization code causes the remote server device to store an association between the first computing device and the second computing device.” *Id.*, ¶ 137. Danciu teaches that unique ID numbers are sent upon scanning a QR code. Ex. 1112, 8:23-34. This creates a unique session

number for the session between the remote control and the controlled device. *Id.*, 4:4-36, 7:6-10, 8:11-22. The session identifiers and other session information are stored on a data repository of the servers. *Id.*, 6:55-50, 13:62-14:1, 15:28-16:6.

- d. [1D]: “receiving, ... at least one command in a first format, ... received based at least in part on the stored association and on a second message including at least one command in a second format ...;”

Danciu teaches the elements of limitation [1D]. Danciu’s remote control 14 (blue) provides commands (“fast forward, reverse, skip ahead or back, play, stop, move to new content, etc.”) via servers 24 (green) for content being played on controlled device 18 (red). Ex. 1112, 5:29-37, 5:64-6:2, 10:45-53, Fig. 1; Ex. 1102, ¶140.

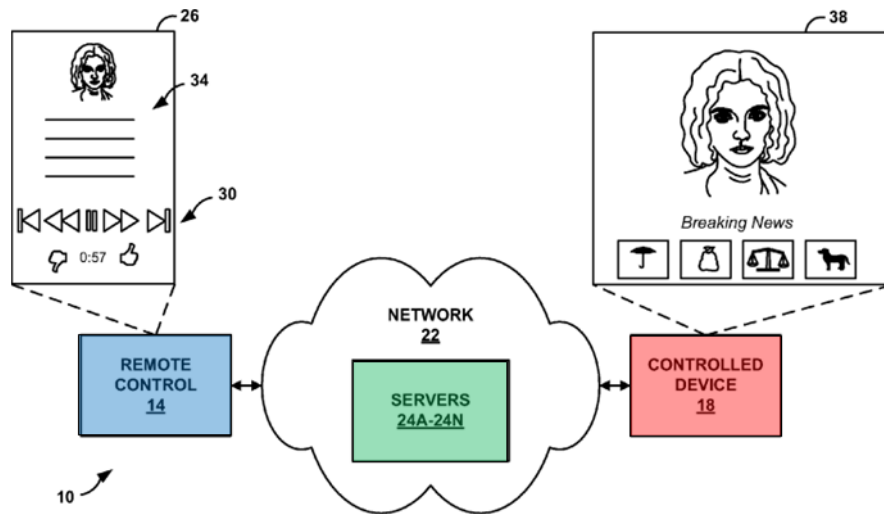


FIG. 1

Ex. 1112, Fig. 1 (annotated)

The received first message is “received based at least in part on the stored

association” because the messages are routed by the servers using the unique identifiers associated with the session information. Ex. 1112, 7:17-29. Danciu teaches that, upon scanning the QR code, the remote control sends a message requesting that the remote control “be included in the session identified in the QR code.” *Id.*, 15:42-58, 8:11-34. The servers then direct the messages in that session from the remote control to the controlled device. *Id.*, 6:50-60, 7:17-29, 10:45-53, 16:24-17:12; Ex. 1102, ¶141.

Danciu teaches “the first message being received based at least in part on the stored association and on a second message including at least one command in a second format having been sent from the associated second computing device.” Ex. 1102, ¶142. Using the session identification numbers, Danciu’s servers “route the messages to other members of the session.” Ex. 1112, 7:17-20. Danciu contemplates that there may be separate messages from the remote control to the server, and from the server to the controlled device. *Id.*, 16:24-17:43. For example, when receiving a message from the remote control intended for the controlled device, “server 24 may process and/or repackage the control information of the message into a new message.” *Id.*, 16:63-67. The message from the remote control to the server is thus “a second message including at least one command in a second format having been sent from the associated second computing device.” Ex. 1102, ¶142. After

reformatting the message, the server then sends the claimed “a first message that includes at least one command in a first format.” *Id.*

To any extent that Patent Owner argues that Danciu does not explicitly disclose implementation details for transmission of commands for controlling a client, this would have been obvious to a POSITA in view of Mahajan. Mahajan discloses a client-server collaboration session wherein a user may enter commands (**orange**) on Mahajan’s server (**blue**) for controlling content (**purple**) that is playing on a client device (**red**). Ex. 1114, [0011]-[0013], Figs. 1, 2, 4.³ The system accomplishes this by translating generic commands to platform-specific media playback commands that can be understood by the client’s media player application. *Id.*, [0012]-[0013], [0022], [0035]-[0036], [0041], Figs. 3, 5; Ex. 1102, ¶140.

³ A POSITA would have understood the disclosure is bidirectional. Ex. 1102, ¶144.

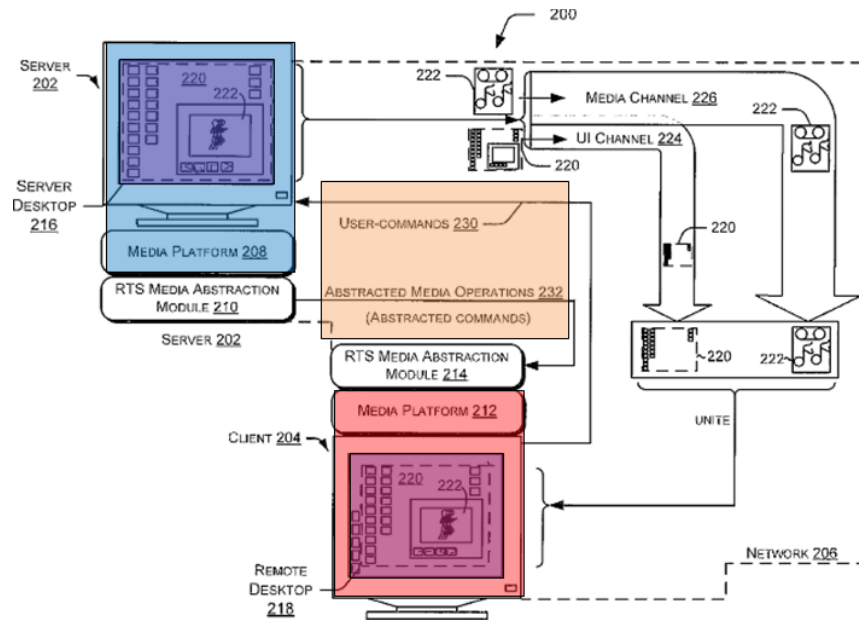
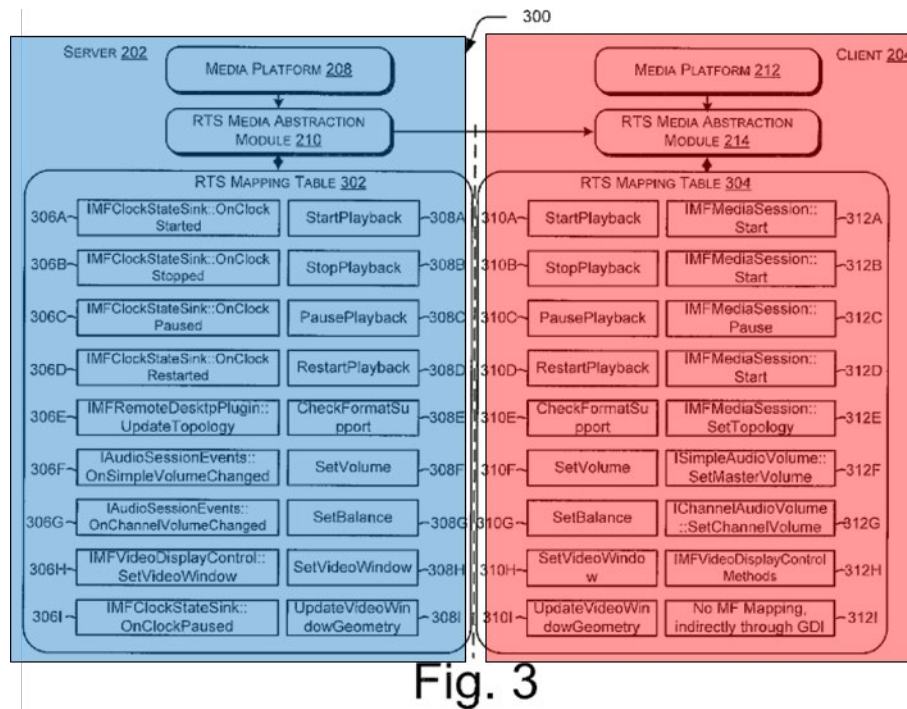


Fig. 2

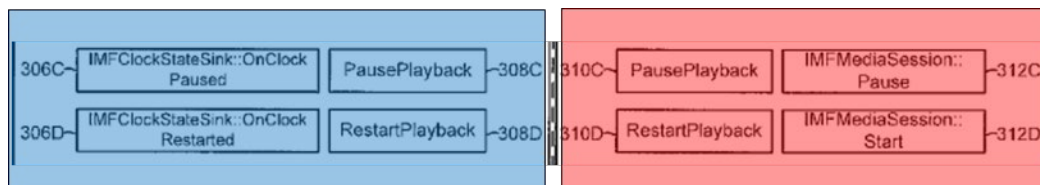
Ex. 1114, Fig. 2 (annotated)

Thus, 1) commands for a type of media playing application on the server are received at Mahajan's server, 2) the commands are translated into a universal command, 3) the universal command is transmitted, 4) the client re-translates the universal command, and 5) the new specific command is executed. Ex. 1114, [0035]-[0036], Figs. 1, 2. Figure 3 depicts an API for translating between commands received at Mahajan's server (**blue**) to a client (**red**):



Ex. 1114, Fig. 3 (annotated)

These commands show how, for example, a “pause” command is translated from a first type of media application command (e.g., a Media Foundation platform command “IMFClockStateSink::OnClockPaused”) to a second type of media application command (e.g., a DShow platform command “IMFMediaSession::Pause”). *Id.*, [0037]-[0043], Fig. 3.



Ex. 1114, Fig. 3 (annotated)

These commands “may be specific to events associated with the playback of media files” such as “when a media file is accessed for playback by one or more users at

the client.” *Id.*, [0037]. The ’751 Patent describes sending a “command (e.g., play, pause, rewind, etc.).” Ex. 1101, 4:47-53, 6:12-15; Ex. 1102, ¶¶145-147. This is consistent with Patent Owner’s argument in the Touchstream-Google case that the plain and ordinary meaning of “universal command” is “a standard command used for controlling playback of media content **such as play or pause.**” Ex. 1120, 3 (emphasis added).

Based on the teachings of Mahajan, a POSITA would have been motivated to implement Danciu’s system, comprising a remote control sending commands to a controlled device via a server, using known techniques for sending commands for media playback between a server and a client, such as is taught by Mahajan. Ex. 1102, ¶148. Mahajan, like Danciu, teaches a system wherein a user can command media on a controlled device. Ex. 1114, [0014]; Ex. 1112, 5:29-41; Ex. 1102, ¶148. A POSITA would have understood that Mahajan’s server-command teachings could be implemented on Danciu’s remote control, particularly because both disclosures reference those respective devices being a mobile phone. Ex. 1112, 5:1-28; Ex. 1114, [0017]; Ex. 1102, ¶148. A POSITA would have been motivated to apply Mahajan’s teachings of command conversion because a POSITA would have understood that Danciu’s remote control, which may be a portable device such as a cell phone, would likely employ different applications than Danciu’s controlled device, which may be a set top box or personal video recorder. Ex. 1112, 5:1-6:13; Ex. 1102, ¶148.

Combining Mahajan with Danciu would have been nothing more than applying a known technique (Mahajan's system for sending commands) to a known device (Danciu's remote control system) ready for improvement to yield predictable results (Danciu's remote control would translate commands associated with a first type of media playing application to a generic format, transmit them to the controlled device, which would translate them to a command associated with a second type of media playing application for execution). Ex. 1102, ¶149. Mahajan teaches a system similar to Danciu wherein commands are sent from a remote device to control media playback on another device. *Id.*

Additionally, a POSITA would have had the skills and knowledge to implement support for sending commands for disparate device in Danciu's system, as taught by Mahajan, by incorporating into Mahajan the ability for a remote control to translate commands from those associated with a first type of media playback application to another type of command such that they can be understood by the controlled device. *Id.*, ¶150. The improvements of Mahajan are directed to the context of a computing environment commonly encountered at that point in time. Ex. 1114, [0016]. Thus, a POSITA would have expected success in applying Mahajan's teaching to the similar Danciu system. Ex. 1102, ¶150.

- e. **[1E]: “selecting a first media player application from a plurality of media player applications based at least in part on the first format ..., ... selected to play a first piece of content referenced in the received first message; and”⁴**

Danciu teaches that commands received by the controlled device are understood and operated upon. Ex. 1112, 5:29-37, 7:17-29. For example, the controlled device may have the ability to select a program to view content from YouTube, Netflix, or Hulu based on received commands. *Id.*, 11:22-35, 12:32-49, 16:55-67, 17:21-43. It would have been obvious to a POSITA that, for a device to playback content on a particular application in response to a command, the device would need to select that application to playback the content. Ex. 1102, ¶¶153-155.

Moreover, Danciu teaches “the first media player application being selected to play a first piece of content referenced in the received first message.” The received messages comprise a session identifier (SID) and control information generated by the remote control for the controlled device. Ex. 1112, 14:13-64. This may control playback using a user interface. *Id.*, 5:31-33, 7:17-29. The types of content that the

⁴ Petitioner does not concede that this limitation (e.g., “the first format of the first message”) is definite. Petitioner notes that the EDTX Court found that the term is not indefinite. *See* Ex. 1183 at 30.

controlled device may display include YouTube, Hulu, Netflix, or other such video content services. *Id.*, 11:31-35, 13:4-15, Fig. 1.

To any extent that Patent Owner argues that Danciu's specification does not explicitly state the remote control and the controlled device display the same content, a POSITA would have understood that this is the same content in view of the depiction in Figure 1 and the context of Danciu as a whole, particularly because Danciu teaches that the "controls 30 and information 34" are "associated with content being played on controlled device 18." *Id.*, 5:29-41; Ex. 1102, ¶156. Further, a POSITA would have understood that when a user "actuate[s] one of controls 30 of remote control 14 to alter the content displayed on display 38 of controlled device 18," as disclosed in Danciu, the controls are for the claimed "first piece of content" that is to be played on the controlled device. Ex. 1112, 7:17-29; Ex. 1102, ¶156. Moreover, Danciu teaches that "[r]emote control 75 may include a remote control application (e.g., a remote control application stored with applications 94 stored in storage device 92) that allows a user to initiate commands being sent to a controlled device, such as controlled device 18 shown in FIG. 1." Ex. 1112, 10:45-49, 16:47-54, 17:21-43, Fig. 3. Thus, a POSITA would also have understood that Danciu teaches "the first media player application being selected to play a first piece of content referenced in the received first message," because the remote device ("the second computing device") sends commands for a video application, which may be

a web browser, presenting the content displayed on the controlled device (“the first computing device”). Ex. 1102, ¶¶156-158.

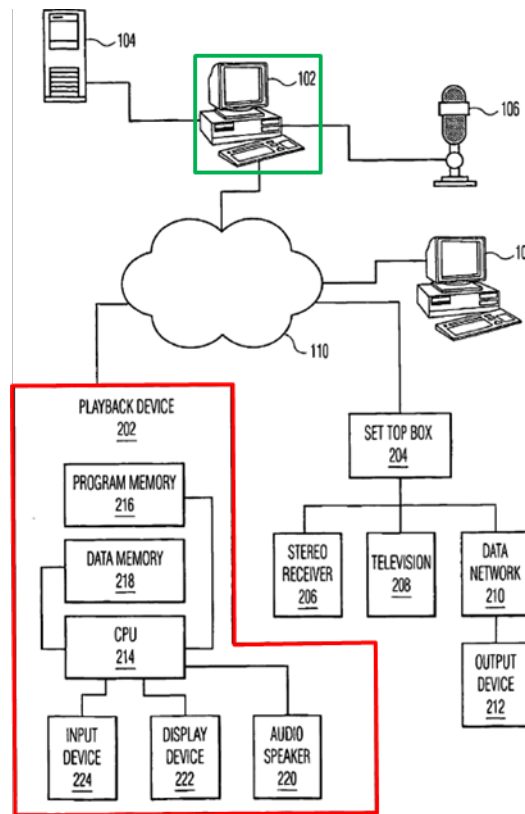
In Danciu-Mahajan, the system selects the first type of media playing application from the plurality of media playing application types based on the data source and the capabilities of the client, as taught by Mahajan. Ex. 1114, [0050].

Once a command is received, those commands “are associated with platform specific commands.” *Id.*, [0063], Fig. 5 (step 508). The system thus selects the first type of media playing application (e.g., Dshow operating on the client) in response to receiving the commands in the received set of messages. *Id.*, [0037]-[0043], [0059]-[0063], Figs. 1, 3, 5. The commands are parsed, at least in part, based on determining that the media platform of the client supports a media format associated with the piece of content. *Id.*, [0050].

Further, to any extent that Patent Owner argues that Danciu-Mahajan does not teach “the first media player application being selected to play a first piece of content referenced in the received first message”, it was known before the priority date of the ’751 Patent to select between a plurality of media players based on messages referencing a piece of content as demonstrated by Calvert. Ex. 1102, ¶¶159-166.

As discussed above in Section IV.C, Calvert discloses a system for making content available from multiple media services via content aggregator 102 (**green**) such that a playback device 202 (**red**) can request, receive, and output the content to

a display device 222 and/or audio speaker 220. Ex. 1111, [0020]-[0021], [0024]-[0027], [0030]-[0044], Figs. 1-4, 6.

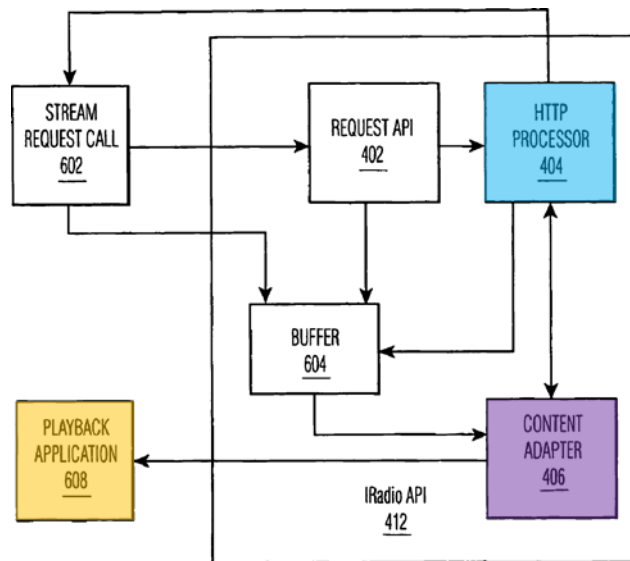


Ex. 1111, Fig. 2 (annotated)

The content in Calvert may be in a variety of media formats (e.g., RealMedia, QuickTime, Windows Media) which may require different media player applications (e.g., RealPlayer, QuickTime player, Microsoft Media Player) to output the content. Ex. 1111, [0021], [0042]-[0043].

Calvert describes selecting from this plurality of media players based on information received in a message from the content aggregator and/or the media service provider. In particular, Calvert describes that when the HTTP processor 404

(light blue) receives a response from the media service provider, it and Content Adapter 406 (purple) analyze the response to determine “the format of the media service, the corresponding playback application 608, [and] output requirements of the media service.” Ex. 1111, [0040]-[0044], Fig 6. Based on that analysis, the media service data is sent to the appropriate player application 608 (orange). *Id.*



Ex. 1111, Fig. 6 (annotated)

Calvert further describes that the content aggregator 102 may transmit data parameters to the playback device 202 indicating the media service formats (e.g., RealAudio, Microsoft Media Player, MP3) available from the various media service providers including before a particular piece of content is selected. Ex. 1111, [0031]-[0032]. Playback device 202 may store this information in a Data Object Model (DOM) from which the playback device may read to determine what media player

is used by a media service (and if the media player is new, request it from the appropriate location). *Id.*

Based on the teachings of Calvert, a POSITA would have understood that a media playing application, such as an application running on controlled device, could include multiple media players and that which media player to use for a particular item of content could be determined based on information included in a message regarding the content from the remote control to the controlled device. Ex. 1102, ¶164. A POSITA would further have understood that information on what media player corresponds to a particular piece of content could be supplied to the controlled device in advance of a user selecting the piece of content, and thus information on the corresponding media player could be included in the message from the remote control to the controlled device. A POSITA would have been motivated to implement Danciu-Mahajan's system in view of Calvert's teachings to support multiple media players and select between them in order to provide more options for playing back content to Danciu-Mahajan's users. *Id.* A POSITA would have been further motivated to support multiple media players in view of Danciu's teaching that multiple media players, including YouTube, Hulu, and Netflix, should be supported. Ex. 1112, 11:22-25, 12:32-49, 16:55-67, 17:21-43; Ex. 1102, ¶164. The routine use of multiple media player applications to support streaming media of

different formats would have provided a POSITA with motivation to employ such players as additional applications in the system of Danciu. Ex. 1102, ¶164.

Combining Calvert with Danciu would be merely using known techniques (supporting multiple media players for streaming content) to improve similar devices (the server-based streaming video systems taught in Danciu-Mahajan and Calvert) in the same way (selecting between media players based on the format of the content). Ex. 1102, ¶165. Calvert teaches a system similar to Danciu where information is received indicating what content is available, a user selects from that content, and a server provides information to the playback device regarding how to access and output the content. *Id.*

Additionally, a POSITA would have had the skills and knowledge to implement support for multiple media players in Danciu's system, as taught by Calvert, by incorporating into Danciu the ability to select between multiple media players based on information received in messages from the server. Ex. 1102, ¶166. Thus, a POSITA would have expected success in applying Calvert's teaching to the similar Danciu system. *Id.*

- f. **[1F]: “controlling how the selected first media player application plays the referenced first piece of content based on a first command ... in the received first message.”**

Danciu in view of Mahajan teaches the elements of limitation [1F]. Danciu teaches that, in response to commands, “Processor 120 then executes the video or

web browser application and causes display 124 to display content to the user.” Ex. 1112, 13:4-32, 5:29-37, 5:64-6:2, 7:17-29, 16:55-67, 17:21-43. And, in view of Mahajan, those commands comprise commands for the first type of media player application that are executed by the receiving device. *Id.*, [0014], [0021]-[0022], [0037]-[0040], [0047]-[0050], [0053], [0063]; Ex. 1102, ¶¶168-170.

Therefore, Danciu-Mahajan and Danciu-Mahajan-Calvert teaches claim 1.

2. Dependent Claim 2

- a. “..., wherein each command of the at least one command in the second format is a universal command.”**

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the elements of claim 2. As discussed above regarding limitation [1D], Danciu-Mahajan and Danciu-Mahajan-Calvert teaches a system wherein commands are translated between universal and platform-specific formats for transmission to a client device. Ex. 1114, [0037]-[0043], [0063], Figs. 2-3, 5; Ex. 1102, ¶¶171-173.

3. Dependent Claim 3

- a. “..., wherein the first format is different than the second format.”**

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the elements of claim 3. Using the session identification numbers, Danciu’s servers “route the messages to other members of the session..” Ex. 1112, 7:17-20. Danciu contemplates that there may be separate messages from the remote control to the server, and from the server

to the controlled device. *Id.*, 16:24-17:43. For example, when receiving a message from the remote control intended for the controlled device, “server 24 may process and/or repackage the control information of the message into a new message.” *Id.*, 16:63-67; Ex. 1102, ¶¶174-176.

4. Dependent Claim 4

- a. “..., wherein the second message is sent from the associated second computing device to the remote server device.”

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the elements of claim 4. As discussed above regarding limitation [1D], Danciu’s remote control 14 (blue) provides commands (“fast forward, reverse, skip ahead or back, play, stop move to new content, etc.”) via servers 24 (green) for content being played on controlled device 18 (red). Ex. 1112, 5:29-37, 5:64-6:2, 10:45-53; Ex. 1102, ¶¶177-178.

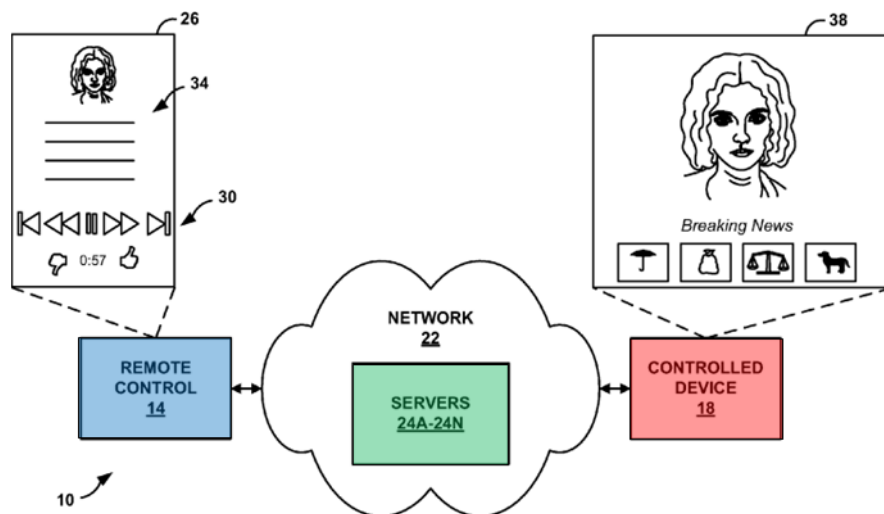


FIG. 1

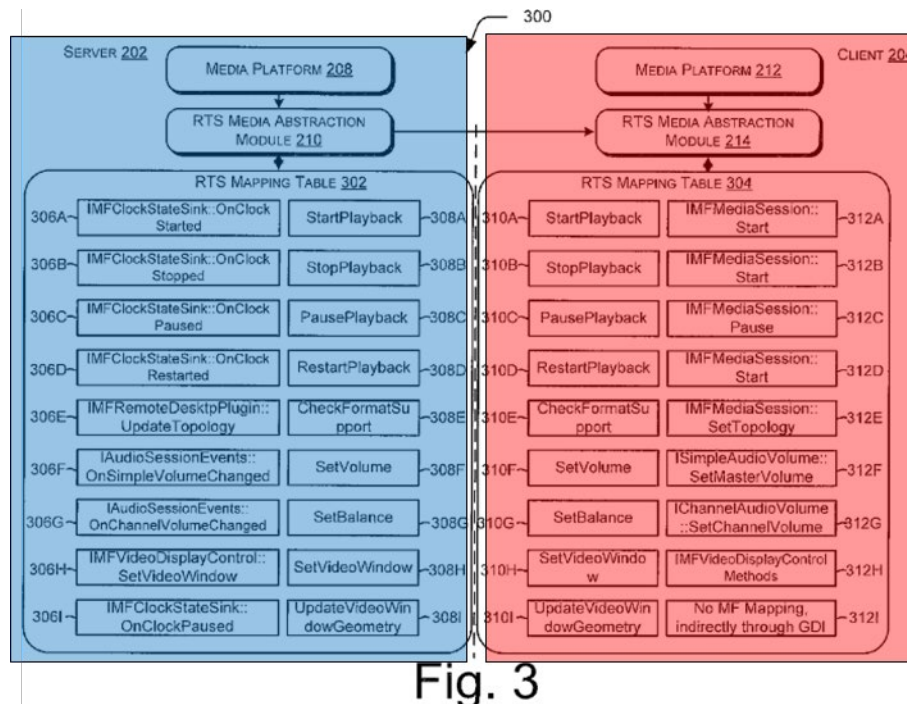
Ex. 1112, Fig. 1 (annotated)

5. Dependent Claim 5

- a. “..., wherein the remote server device is configured to convert the at least one command ... based at least in part on the second message including therein a reference to the first piece of content.”

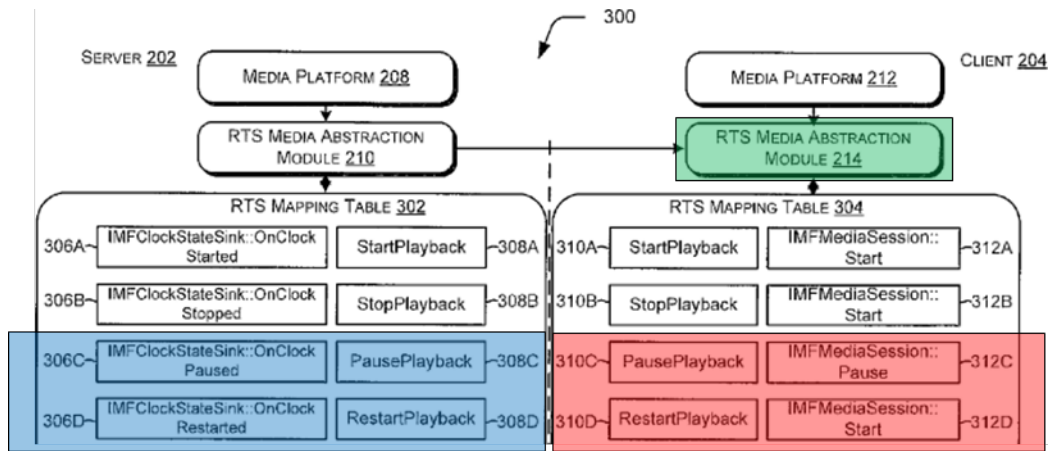
Danciu-Mahajan and Danciu-Mahajan-Calvert teach the elements of claim 5.

Ex. 1102, ¶¶179-186. Mahajan’s Figure 3 depicts an API for translating between commands sent from Mahajan’s server (**blue**) to a client (**red**):



Ex. 1114, Fig. 3 (annotated)

The RTS Media Abstraction module of the client (an API converter, **green**) converts the commands received by the client (**red**) from Mahajan’s server (**blue**). Ex. 1114, [0037]-[0043], [0063], Figs. 3, 5.



Ex. 1114, Fig. 3 (annotated)

A POSITA would have understood that the RTS Media Abstraction Module is a software intermediary that converts commands from one interface (e.g., a genericized interface) into another (e.g., the interface of the first type of media playback application). Ex. 1102, ¶182.

Further, it would have been obvious to a POSITA that the RTS Media Abstraction Module could be located on Mahajan’s client or server, or on an intermediary device. *Id.*, ¶ 183. Mahajan describes its system as operating using a “collaboration media abstraction layer 130” that is responsible for translating commands. Ex. 1114, [0022]-[0023]. Mahajan further states that the distribution manager 418 and multimedia component 446, which comprise the RTS Media Abstraction modules, can make use of a “virtual channel connection” as part of a “distributed topology.” *Id.*, [0051]. Based on Mahajan’s express teachings that its system can operate in a distributed environment, it would have been obvious to a

POSITA that one or more RTS Media Abstraction Modules could operate at a server, such as in Servers 24A-24N. Ex. 1114, [0018], [0058], [0078]; Ex. 1102, ¶183.

These commands “may be specific to events associated with the playback of media files” such as “when a media file is accessed for playback by one or more users at the client.” Ex. 1114, [0037]. Messages containing the commands, which are particular to the media content playing on the type of media playing application of the server, are thus converted “based at least in part on the second message including therein a reference to the first piece of content.” Ex. 1102, ¶184.

Moreover, to any extent that Danciu-Mahajan does not discuss converting a command “based at least in part on the second message including therein a reference to the first piece of content,” this is taught by Calvert. Calvert describes selecting from a plurality of media players based on information received in a message from the content aggregator and/or the media service provider. Ex. 1111, [0030]-[0033], [0040]-[0044], Fig. 6. The selection may be based on metadata, which can include the title of the content to be delivered. Ex. 1111, [0038], [0056].

6. Dependent Claim 6

- a. “..., wherein the remote server device is configured to convert the at least one command ... based at least in part on a reference to the first media player application having been included in the second message.”**

Danciu-Mahajan teaches claim 6. Ex. 1102, ¶¶ 187-191. As discussed above regarding limitation [1E], Danciu in view of Mahajan teaches that the system selects

the first type of media playing application from the plurality of media playing application types based on the data source and the capabilities of the client, as taught by Mahajan. Ex. 1114, [0050]. Accordingly, “the client 404 may determine that it has a media platform, such as media platform 408 that supports the media format.” *Id.*

To the extent that Patent Owner argues that Danciu-Mahajan does not teach dependent claim 6, it is disclosed by Danciu-Mahajan-Calvert. As discussed above regarding limitation [1E], Calvert discloses selecting between multiple media players based on information received in a message regarding the selected content. In particular, Calvert describes information regarding the media player which corresponds to a piece of content being sent in advance of selection of the content. Ex. 1111, [0030]-[0032]. Thus, when a user selects content, information on the corresponding media player may be included with the command selecting the content (“at least one command in the second format”) in the message from remote control to the controlled device (“the second message”), in processing/formulating the command from the remote control by the server into a command to send to the controlled device (“at least one command in the first format”), that command may be selected based on the information about the corresponding media player (“a reference to the first media player application”). Ex. 1102, ¶190.

7. Dependent Claim 7

- a. “..., wherein the first media player application is selected based at least in part on the received first message including therein a reference to the first media player application.”**

Danciu-Mahajan teaches the elements of claim 7. Ex. 1102, ¶¶192-195. As discussed above regarding limitation [1E], Danciu in view of Mahajan teaches that the system selects the first type of media playing application from the plurality of media playing application types based on the data source and the media player application running on the client, as taught by Mahajan. Ex. 1114, [0050].

To the extent that Patent Owner argues that Danciu-Mahajan does not teach dependent claim 7, it is disclosed by Danciu-Mahajan-Calvert. As discussed above regarding limitation [1E] and claim 6, a POSITA would have understood that in Danciu-Mahajan-Calvert, information on the media player corresponding to a selected piece of content may be included in the message from the remote device to the controlled device. Ex. 1102, ¶194. Thus, the controlled device of Danciu-Mahajan-Calvert may select the appropriate media player application based on information in the message received from the server (“the received first message including therein a reference to the first media player application”).

8. Dependent Claim 8

- a. “..., wherein controlling ... includes an execution of the first command.”**

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the elements of claim 8. Ex. 1102, ¶¶ 196-197. As discussed above regarding limitation [1F], Danciu teaches that, in response to commands, “Processor 120 then executes the video or web browser application and causes display 124 to display content to the user.” Ex. 1112, 13:4-32, 5:29-37, 5:64-6:2, 7:17-29, 16:55-67, 17:21-43; *see* VI.A.1.f. And, in view of Mahajan, those commands comprise commands for the first type of media playing application that are executed by the receiving device. *Id.*, [0014], [0021]-[0022], [0037]-[0040], [0047]-[0050], [0053], [0063].

9. Dependent Claim 9

- b. “... further comprising: retrieving the first media player application from a remote content provider based on a determination that the first media player application is not already selected.”**

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the elements of claim 9. Ex. 1102, ¶¶ 198-199. Calvert discloses that when a new media player application that is not already present (and thus not already selected) on the playback device is required to output content, the playback device may request, locate, and store (i.e., install) the required media player on the playback device. Ex. 1111, [0032].

10. Dependent Claim 10

- a. “... claim 9, wherein the remote content provider is associated with the referenced first piece of content.”**

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the elements of claim 10. Ex. 1102, ¶¶200-201. As discussed above regarding claim 9, Calvert discloses retrieving a new media player application. Calvert discloses that the (“remote”) content provider uses a new multimedia player (from the content provider) to play back available media services (“referenced first piece of content”) and playing a media service from content aggregator (“associated with the referenced first piece of content”) in step 310. Ex. 1111, [0032], [0043], Fig. 3. Also, it would have been obvious to a POSITA that the new media player could be retrieved from the provider of the content. Ex. 1102, ¶200. For example, it was well known that providers of media players frequently provide sample content to test or demonstrate the capabilities of their media players. *Id.*

11. Dependent Claim 11

- a. [11A]: “... the operations further comprising:”**

As discussed above in Section VI.A.1, Danciu-Mahajan and Danciu-Mahajan-Calvert teach the limitations of claim 1.

- b. **[11B]: “based on the stored association and while the first media player application is selected, receiving, from the remote server device, a third message that includes at least one command in a third format, ... based at least in part on a fourth message including at least one other command in the second format ...; and”**

Danciu teaches that devices join sessions, such that devices in a session can send multiple messages and commands on an ongoing basis. Upon scanning the QR code, the remote control sends a message requesting that the remote control “be included in the session identified in the QR code.” Ex. 1112, 15:42-58, 8:11-34. The servers then directs further messages in that session (including “a second message including at least one command in a second format”) from the remote control to the controlled device. *Id.*, 6:50-60, 7:17-29, 10:45-53, 16:24-17:12, 17:49-52. A POSITA would have understood that the remote control may send an additional (e.g., “fourth”) message would in the same format as an earlier (e.g., “second”) message. Ex. 1102, ¶204. This message is then repackaged by the server, into a new message with a format corresponding to the command (“a third message that includes at least one command in a third format”). Ex. 1112, 16:63-67; Ex. 1102, ¶¶204-205.

- c. **[11C]: “selecting a second media player application ... based at least in part on the third format of the third message, ... to play a second piece of content referenced in the third message.”**

As discussed above regarding limitation [1E], Danciu-Mahajan and Danciu-Mahajan-Calvert teach selecting a media player application from a plurality of media player applications. A POSITA would have understood that a “second media player” could be selected based on the command and information in the “third message” just as the first media player was selected based on information in the first message. Ex. 1102, ¶¶206-207.

Therefore, Danciu-Mahajan and Danciu-Mahajan-Calvert teach claim 11. Ex. 1102, ¶¶202-207.

12. Independent Claim 12

- a. **[12A]: “A computer-implemented method for remotely presenting various types of content, comprising:”**

Element [12A] is obvious for at least the same reasons as discussed above regarding limitation [1A]. *See* VI.A.1.a; Ex. 1102 ¶¶208-209.

- b. **[12B]: “obtaining, by a content presentation device, a synchronization code ... stored on a remote server device;”**

Element [12B] is obvious for at least the same reasons as discussed above regarding limitation [1B]. *See* VI.A.1.b; Ex. 1102, ¶210.

- c. **[12C]: “providing, ..., the synchronization code to a remote computing device ... to store an association between the content presentation device and the remote computing device;”**

Element [12C] is obvious for at least the same reasons as discussed above regarding limitation [1C]. *See* VI.A.1.c; Ex. 1102, ¶211.

- d. **[12D]: “receiving, ..., a first message that includes at least one command in a first format, ... received based at least in part on the stored association and on a second message ...;”**

Element [12D] is obvious for at least the same reasons as discussed above regarding limitation [1D]. *See* VI.A.1.d; Ex. 1102, ¶212.

- e. **[12E]: “selecting, ..., a first media player application from a plurality of media player applications based at least in part on the first format of the first message, ... to play a first piece of content ...; and”**

Element [12E] is obvious for at least the same reasons as discussed above regarding limitation [1E]. *See* VI.A.1.e; Ex. 1102, ¶213.

- f. **[12F]: “controlling, ..., how the selected first media player application plays the referenced first piece of content based on a first command”**

Element [12F] is obvious for at least the same reasons as discussed above regarding limitation [1F]. *See* VI.A.1.f; Ex. 1102, ¶¶214-215.

Therefore, Danciu-Mahajan and Danciu-Mahajan-Calvert teach claim 12.

13. Dependent Claim 13

- a. **“..., wherein the first media player application is selected based further in part on ... a reference to the first media player application.”**

Dependent claim 13 is rendered obvious by Danciu-Mahajan and Danciu-Mahajan-Calvert for at least the reasons discussed above regarding claim 12 and claim 7. *See* VI.A.7, VI.A.12; Ex. 1102, ¶¶216-217.

14. Dependent Claim 14

- a. **“... further comprising: selecting the first media player application based on a determination that a second media player application is currently selected.”**

Dependent claim 14 is rendered obvious by Danciu-Mahajan and Danciu-Mahajan-Calvert for at least the reasons discussed above regarding claims 12 and 9. *See* VI.A.9, VI.A.12; Ex. 1102, ¶218.

15. Dependent Claim 15

- a. **“..., further comprising: retrieving, by the content presentation device, the selected first media player application from a remote content provider based on the first format of the first message.”**

Calvert discloses that when a new media player application that is not already present on the playback device is required to output content, the playback device may request, locate, and store (i.e., install) the required media player on the playback device. Ex. 1111, [0032]. Calvert further describes that information about where to locate a new media player for installation is contained in Document Object Module

information received from the content aggregator. Ex. 1111, [0030]-[0032]. It would have been obvious to a POSITA that such information could be similarly conveyed to the gateway/STB/DVR 111 in the first message. Ex. 1102, ¶¶219-220.

Therefore, Danciu-Mahajan-Calvert teaches claim 15.

16. Dependent Claim 16

- a. “..., wherein the remote server device is configured to convert ... based at least in part on a reference to the first media player application having been included in the second message, and wherein the first media player application is selected based further on the at least one command in the first format having been converted from the second format.”**

As discussed above in Sections VI.A.1.d and VI.A.1.e, Danciu teaches using session identification numbers to route messages. Ex. 1112, 7:17-20. Danciu contemplates that there may be separate messages from the remote control to the server, and from the server to the controlled device. *Id.*, 16:24-17: 43. The received messages comprise a session identifier (SID) and control information generated by the remote control for the controlled device. *Id.*, 14:13-64; Ex. 1114, [0050]; Ex. 1102, ¶¶221-222.

To the extent that Patent Owner argues that Danciu-Mahajan does not teach the additional features of dependent claim 16, they are taught by Calvert. Ex. 1102, ¶¶223-225. As discussed above in Section VI.A.1.e, Calvert discloses selecting between multiple media players based on information received in a message

regarding the selected content. In particular, Calvert describes information regarding the media player which corresponds to a piece of content being sent in advance of selection of the content. Ex. 1111, [0030]-[0032]. Thus, when a user selects content, information on the corresponding media player may be included with the command selecting the content (“at least one command in the second format”) in the message from remote control to the controlled device (“the second message”), in processing/formulating the command from the remote control by the server into a command to send to the controlled device (“at least one command in the first format”), that command may be selected based on the information about the corresponding media player (“a reference to the first media player application”). Ex. 1102, ¶¶223. Furthermore, as discussed above in Section VI.A.12.e, the media player application is selected based on the command from the remote server that was formulated from the command from the remote device 117.

Therefore, Danciu-Mahajan and Danciu-Mahajan-Calvert teach dependent claim 16. Ex. 1102, ¶¶221-225.

17. Independent Claim 17

a. [17A]: “A content presentation device comprising:”

Element [17A] is obvious for at least the same reasons as discussed above regarding limitation [1A]. *See* VI.A.1.a; Ex. 1102, ¶¶226-227.

b. [17B] “a display;”

Danciu discloses a controlled device 18 (red), which comprises a display 38 (purple). Ex. 1112, 5:42-6:13, 11:7-21, Fig. 1; Ex. 1102, ¶¶228-229.

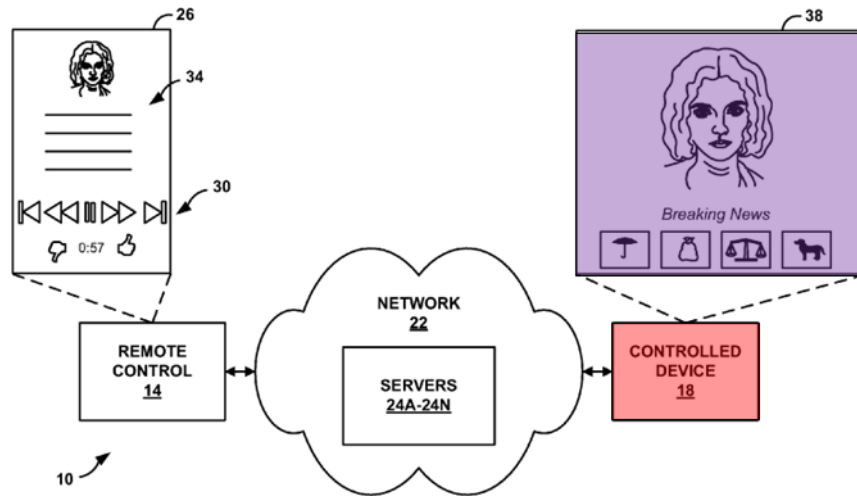


FIG. 1

Ex. 1112, Fig. 1 (annotated)

c. [17C]: “at least one processor; and”

Controlled device 18 is a computing device that includes processors. Ex. 1112, 11:7-13, 12:1-16; Ex. 1102, ¶¶230-231.

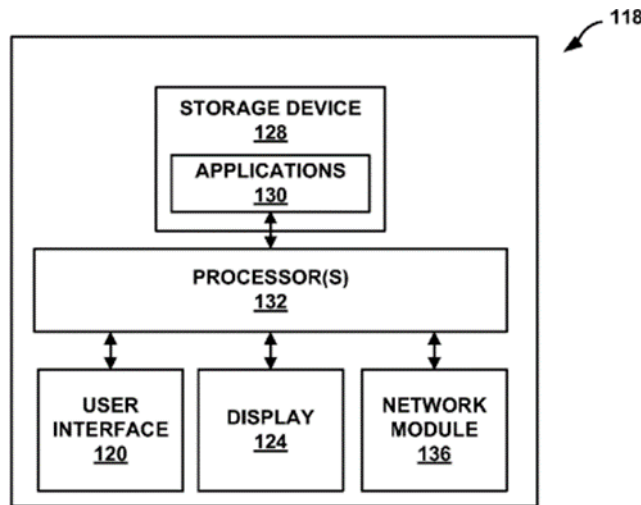


FIG. 4

Ex. 1112, Fig. 4

- d. [17D]: “at least one computer storage media storing computer-usable instructions ...:”**

Controlled device 18 is a computing device that includes memory. Ex. 1112, 11:7-13, 12:1-16; Ex. 1102, ¶¶232-233.

- e. [17E]: “obtain a synchronization code ... stored on a remote server device;”**

Element [17E] is obvious for at least the same reasons as discussed above regarding limitation [1B]. *See* VI.A.1.b; Ex. 1102, ¶234.

- f. [17F]: “provide the synchronization code ... to store an association ...;”**

Element [17F] is obvious for at least the same reasons as discussed above regarding limitation [1C]. *See* VI.A.1.c; Ex. 1102, ¶235.

- g. [17G]: “receive, ..., a first message that includes at least one command in a first format, ...;”**

Element [17G] is obvious for at least the same reasons as discussed above

regarding limitation [1D]. *See* VI.A.1.d; Ex. 1102, ¶236.

- h. [17H]: “select a first media player application ... based on the first format ... selected to play a first piece of content ...; and”**

Element [17H] is obvious for at least the same reasons as discussed above regarding limitation [1E]. *See* VI.A.1.e; Ex. 1102, ¶237.

- i. [17I]: “control how the selected first media player application plays”**

Element [17I] is obvious for at least the same reasons as discussed above regarding limitation [1F]. *See* VI.A.1.f; Ex. 1102, ¶238.

Therefore, Danciu-Mahajan and Danciu-Mahajan-Calvert teach claim 17.

18. Dependent Claim 18

- a. “..., wherein the first media player application is configured to recognize each command of the at least one command in the first format.”**

Danciu in view of Mahajan teaches claim 18. Ex. 1102, 239-241. Danciu teaches that control commands received by the controlled device are understood by that device to take appropriate action, such as to “play” or “stop” the content. Ex. 1112, 5:29-37, 7:17-29. In view of Mahajan, and as described above in Section VI.A.1.d, a POSITA would have understood that those commands would be received in a genericized form, which is recognizable by the first type of media player application upon processing by the abstraction layer of the receiving device. Ex. 1114, [0014], [0022]-[0024], [0037]-[0040], Fig. 2; ; Ex. 1102, ¶¶239-242.

19. Dependent Claim 19

- a. “..., wherein the second message is sent from the associated second computing device to the remote server device.”**

Dependent claim 19 is rendered obvious by Danciu-Mahajan and Danciu-Mahajan-Calvert for at least the reasons discussed above regarding claims 17 and claim 4. *See* VI.A.4, VI.A.17; Ex. 1102, ¶243.

20. Dependent Claim 20

- a. “..., wherein the first media player application is selected based further on the received first message including therein a reference to the first media player application.”**

Dependent claim 20 is rendered obvious by Danciu-Mahajan and Danciu-Mahajan-Calvert for at least the reasons discussed above regarding claims 17 and claim 7. *See* VI.A.7, VI.A.17; Ex. 1102, ¶244.

B. Ground C: Claims 1-20 are Rendered Obvious by Aldrey in view of Mahajan

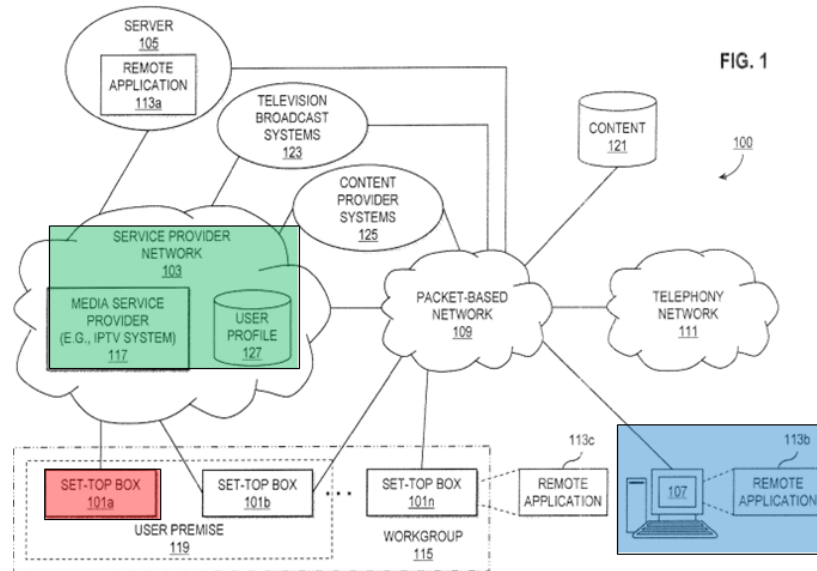
1. Independent Claim 1

Elements [1A]-[1F] are rendered obvious by Aldrey in view of Mahajan. Ex. 1102, ¶¶245-329.

- a. [1A]: “A non-transitory computer storage medium ...:”**

While the preamble is not limiting, Aldrey teaches it. Ex. 1102, ¶¶246-250. Aldrey discloses a STB 101 (a “first computing device”, **red**) connected via a server

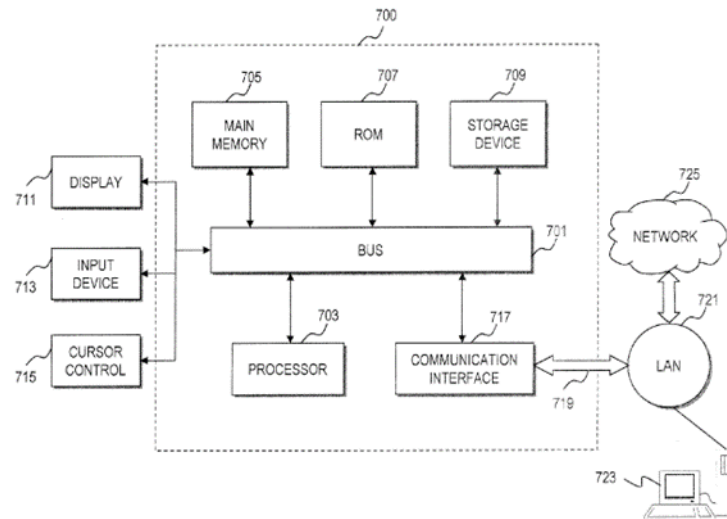
provider network comprising a media service provider (MSP) 117 and a user profile repository 127 (a “remote server device”, **green**) to a remote application running on an end terminal 107 (a “second computing device”, **blue**). Ex. 1115, [0018]-[0023], [0025]-[0026], [0029]-[0030], Fig. 1; Ex. 1102, ¶¶246-249.



Ex. 1115, Fig. 1 (annotated)

Aldrey discloses that the respective devices are computing devices that may operate in response to instructions stored in memory. Ex. 1115, [0029]-[0030], [0090].

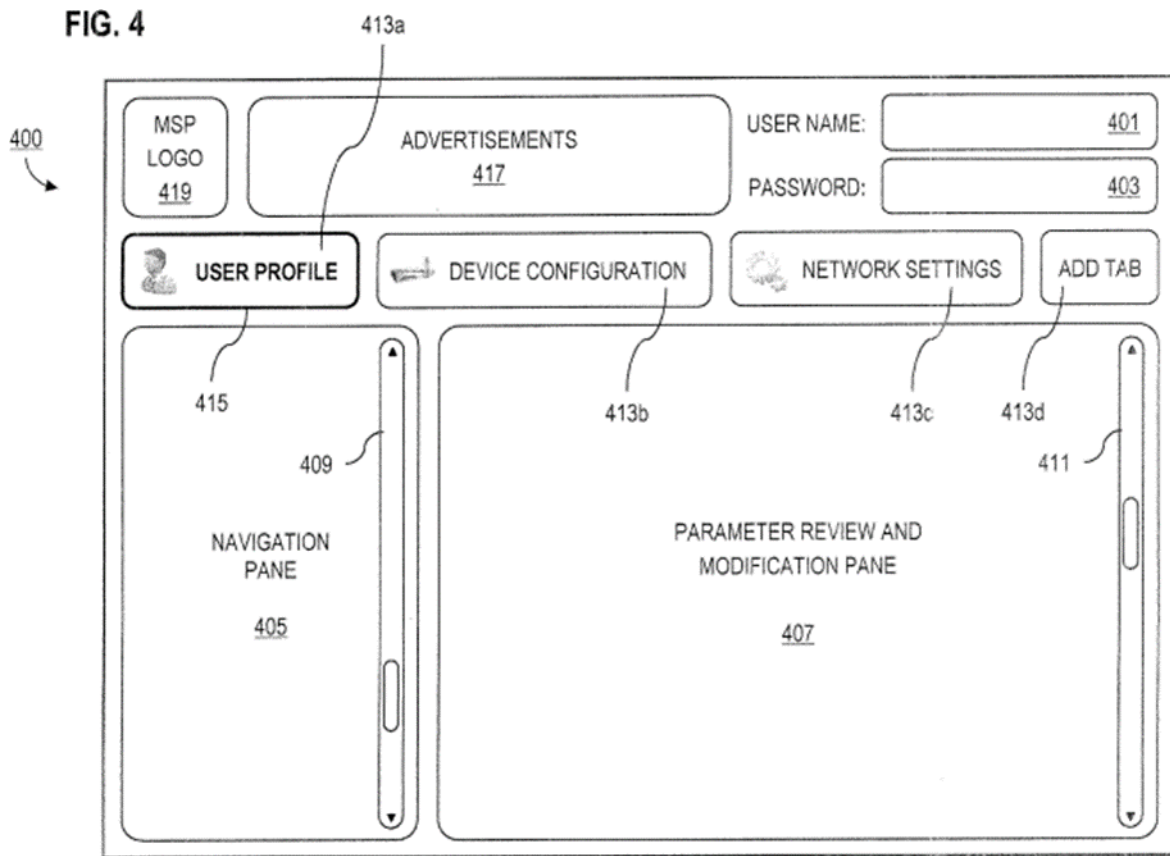
FIG. 7



Ex. 1115, Fig. 7

b. [1B] “obtaining a synchronization ... stored on a remote server device;”

Aldrey teaches the elements of limitation [1B]. Ex. 1102, ¶¶251-254. Aldrey discloses a user interface 400 “wherein an authenticated subscriber may directly review and modify user profile information and/or network settings.” Ex. 1115, [0067]-[0071]. This user interface may be executed on any device, including a STB. *Id.*, [0031], [0067], Fig. 4. Remote applications 209a-209c operate on devices remote from the STB, such as a server or an end terminal. *Id.*, [0042], Fig. 2.

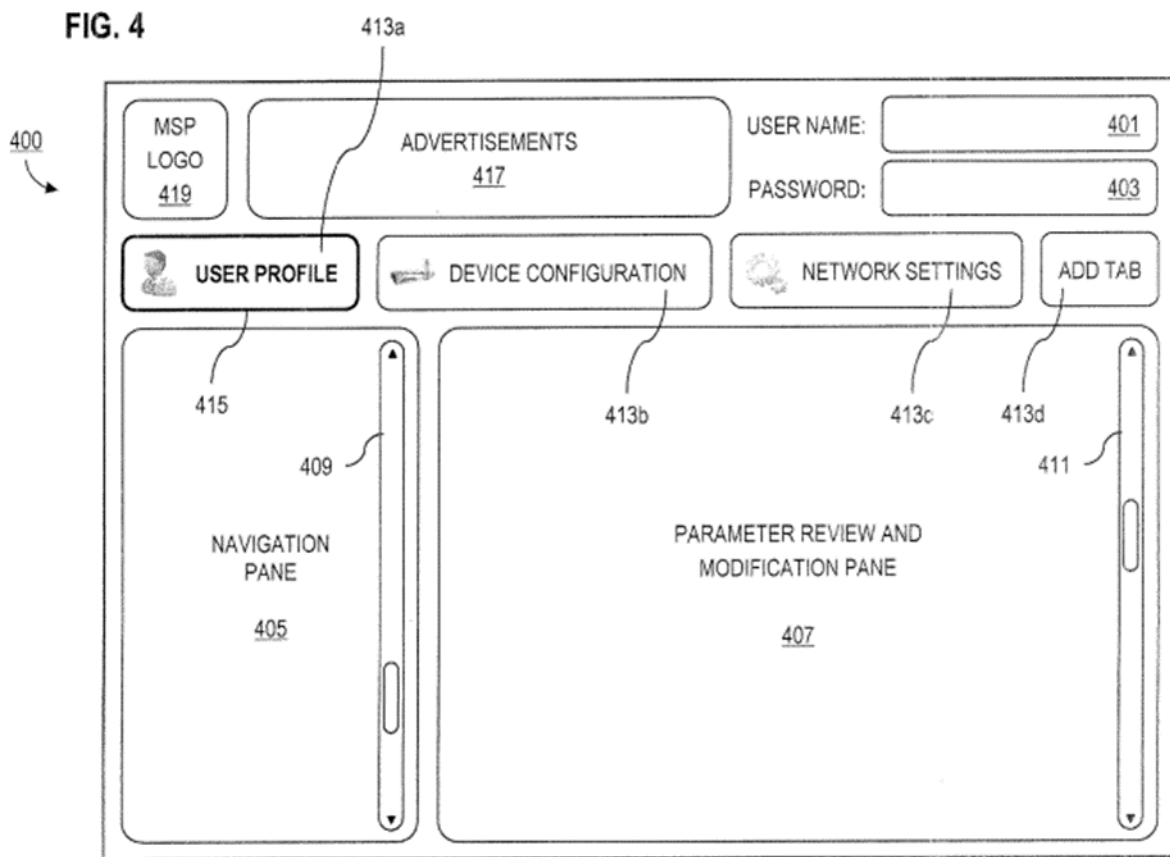


Ex. 1115, Fig. 4

A user, using the user interface, may register one or more devices by entering in information including a “device type, serial number, registration number, MAC address, phone number, communications link, etc.,” any of which may be a “synchronization code” as claimed. Ex. 1115, [0064]. Using this information, “MSP 117, server 105, and or one or more remote applications 209a-209c may obtain configuration parameters and user interface information.” *Id.* This information is stored in the user profile repository 127 (“stored on a remote server device”). Ex. 1115, [0057]-[0066]; Ex. 1102, ¶253.

- c. [1C]: “providing the synchronization code to a second computing device ..., ... the remote server device to store an association between the first computing device and the second computing device;”

As discussed above regarding limitation [1B], Aldrey teaches that a user interface is provided to the user on an end terminal (“a second computing device”) which involves registration of user profile information and/or configuration data (“an association”) allowing the user to access, via an end terminal, devices identified in the user profile repository, including a STB (“first computing device”). Ex. 1115, [0042], [0064]-[0072], Figs. 2, 4.



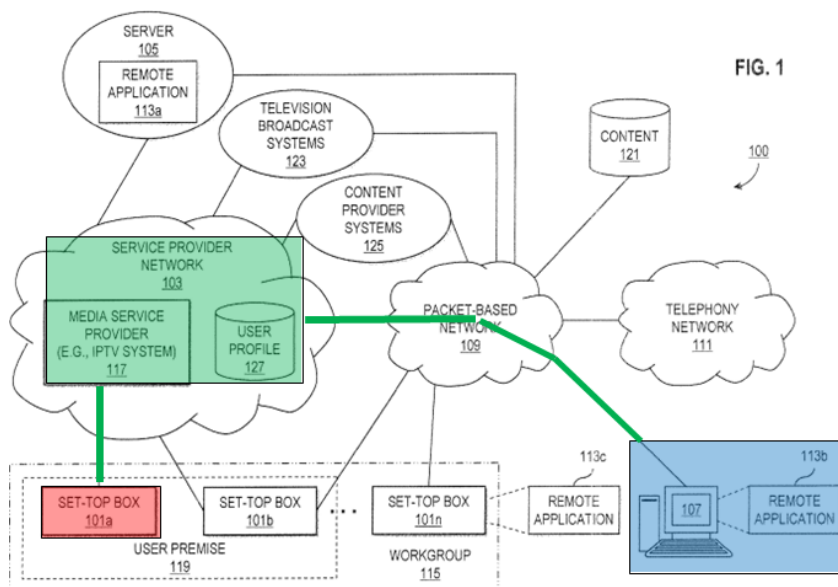
Ex. 1115, Fig. 4

The end terminal may access the unique identifier, as may be included in a list of subscribers, when modifying or interacting with a user profile at an end terminal.

Ex. 1115, [0065]-[0066]; Ex. 1102, ¶¶255-257.

- d. [1D]: “receiving, ... at least one command in a first format, ... received based at least in part on the stored association and on a second message including at least one command in a second format ...;”

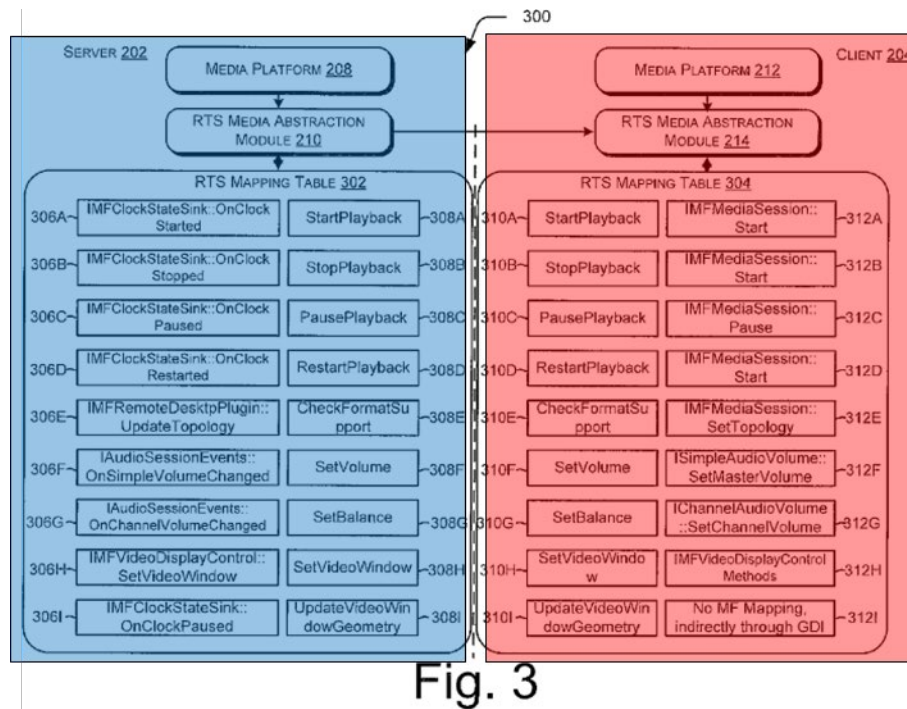
Aldrey teaches the elements of limitation [1D]. Ex. 1102, ¶¶ 258-269. Aldrey teaches a STB 101 (red) receiving commands from a remote application running on an end terminal 107 (blue). Ex. 1115, [0018]-[0023], [0025]-[0026], Fig. 1; Ex. 1102, ¶258. Aldrey further teaches that “connections [green] between the STBs 101a-101n and the end terminal(s) 107 may be established directly or through server 105 and/or MSP 117.” Ex. 1115, [0039], [0025], [0035]-[0036], [0048]; Ex. 1102, 259.



Ex. 1115, Fig. 1 (annotated)

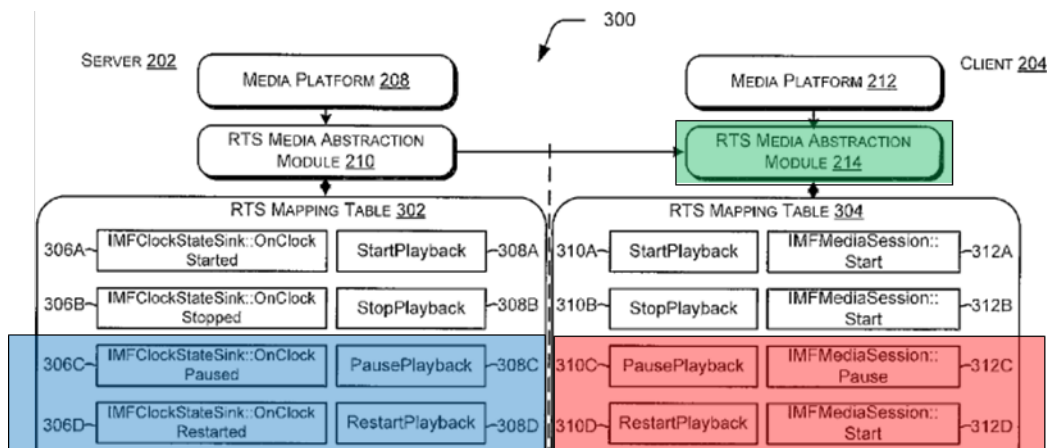
A user, who is accessing user interface menus based on the registered information from the STB (“based at least in part on the stored association”), may send a set of messages to be received at the STB. Ex. 1115, [0063]-[0067]; Ex. 1102, ¶259. These messages, which include a set of commands, satisfy the elements of limitation [1D]. Ex. 1115, [0019]-[0020]; Ex. 1102, ¶260.

To any extent that Aldrey fails to teach or suggest at least one command in a first format, and at least one command in a second format, this is taught by Mahajan. As discussed above regarding Danciu-Mahajan in Section VI.A.1.d, Mahajan teaches implementation details regarding transmitting commands from a computing device (e.g., an end terminal) to a client (e.g., a STB). For example, Mahajan’s figure 3 depicts an API for translating between commands received at Mahajan’s server (**blue**) to a client (**red**):



Ex. 1114, Fig. 3 (annotated)

The RTS Media Abstraction module of the client (an API converter, **green**) converts the commands received by the client (**red**) from Mahajan's server (**blue**). Ex. 1114, [0037]-[0043], [0063], Figs. 1, 3, 5.



A POSITA would have understood that the RTS Media Abstraction Module is a software intermediary that converts commands from one interface (e.g., a genericized interface) into another (e.g., the interface of the first type of media playback application). Ex. 1102, ¶263.

Further, it would have been obvious to a POSITA that the RTS Media Abstraction Module could be located on the client or server, or on an intermediary device. Ex. 1102, ¶264. Mahajan describes its system as operating using a “collaboration media abstraction layer 130” that is responsible for translating commands. Ex. 1114, [0022]-[0023]. Mahajan further states that the distribution manager 418 and multimedia component 446, which comprise the RTS Media Abstraction modules, can make use of a “virtual channel connection” as part of a “distributed topology.” *Id.*, [0051]. Based on Mahajan’s express teachings that its system can operate in a distributed environment, it would have been obvious to a POSITA that one or more RTS Media Abstraction Modules could operate at a server, such as in Service Provider Network 103. Ex. 1114, [0018], [0058], [0078]; Ex. 1102, ¶264.

These commands “may be specific to events associated with the playback of media files” such as “when a media file is accessed for playback by one or more users at the client.” Ex. 1114, [0037]. Messages containing the commands, which are particular to the media content playing on the type of media playing application

of the server, are thus “the first message being received based at least in part on the stored association and on a second message including at least one command in a second format.” Ex. 1102, ¶265.

Based on the teachings of Mahajan, a POSITA would have been motivated to implement Aldrey’s system, comprising an end terminal sending commands to a STB, using known techniques for sending commands for media playback between remote devices, such as is taught by Mahajan. Ex. 1102, ¶266. Mahajan, like Aldrey, teaches a system wherein a user can command media on a controlled device. Ex. 1114, [0014]; Ex. 1115, [0020], [0025], [0029]-[0030]; Ex. 1102, ¶266. A POSITA would have understood that Mahajan’s server-command teachings could be implemented on Aldrey’s end terminal remote control, particularly because both disclosures reference those respective devices being a mobile phone. Ex. 1115, [0026]; Ex. 1114, [0017]; Ex. 1102, ¶266. A POSITA would have been motivated to apply Mahajan’s teachings of command conversion because a POSITA would have understood that Aldrey’s end terminal, which may be a portable device such as a cell phone, would likely employ different applications than Aldrey’s STB. Ex. 1115, [0023]-[0026]; Ex. 1102, ¶266.

Combining Mahajan with Aldrey would have been nothing more than applying a known technique (Mahajan’s system for sending commands) to a known device (Aldrey’s web-based UI control system) ready for improvement to yield

predictable results (Aldrey's end terminal would translate commands associated with a first type of media playing application to a command associated with a second type of media playing application on a STB). Ex. 1102, ¶267. Mahajan teaches a system similar to Aldrey wherein commands are sent from a remote device to control media playback on another device. *Id.*

Additionally, a POSITA would have had the skills and knowledge to implement support for sending commands for disparate devices in Aldrey's system, as taught by Mahajan, by incorporating into Mahajan the ability for an end terminal to translate commands from those associated with a first type of media player application to another type of command such that they can be understood by a STB. Ex. 1102, ¶268. The improvements of Mahajan are directed to the context of a computing environment commonly encountered at that point in time. Ex. 1114, [0016]. Thus, a POSITA would have expected success in applying Mahajan's teaching to the similar Aldrey system. *Id.*

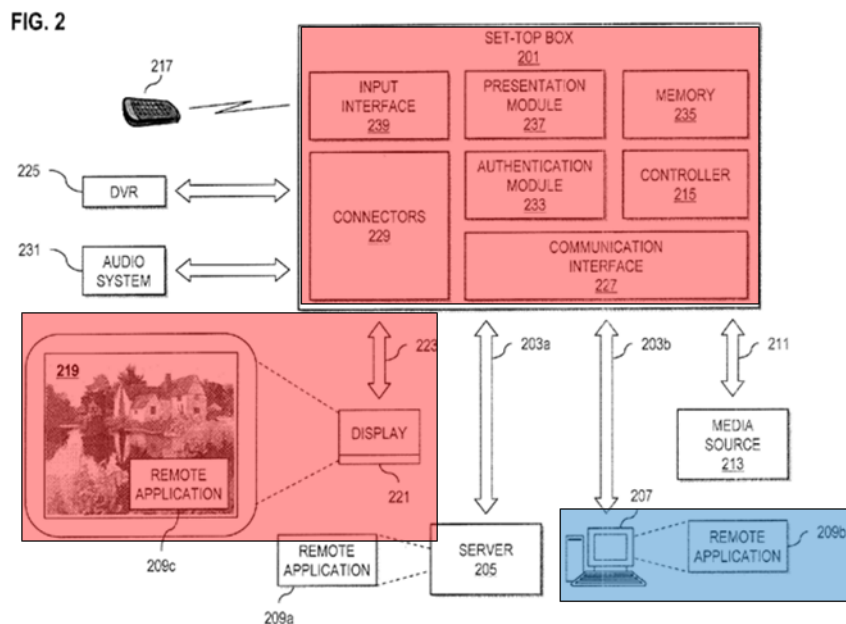
- e. **[1E]: “selecting a first media player application from a plurality of media player applications based at least in part on the first format ..., ... selected to play a first piece of content referenced in the received first message; and”**

Aldrey teaches the elements of limitation [1E]. As described above regarding limitation [1D], Aldrey teaches receiving a set of commands Ex. 1102, ¶¶270-271. Aldrey further teaches that, when receiving data streams, “the data streams may

include content received in response to user commands specifying: broadcast channels to be made available, a list of media content to be recorded, an on-demand program (e.g., VOD, AOD, etc.) to be received, or other content available over a data network to be retrieved, such as content from an audio and/or video sharing site.” Ex. 1115, [0053]. A POSITA would have understood this disclosure to teach that the command specifies a media player application and a particular piece of content associated with a particular type of media player application, and that the corresponding type of media player application should thus be selected in response to the command. Ex. 1102, ¶¶270-272.

f. [1F]: “controlling how the selected first media player application plays the referenced first piece of content based on a first command ... in the received first message.”

Aldrey teaches the elements of limitation [1F]. Aldrey teaches that the messages control a STB to play media. Ex. 1115, [0020], [0025], [0029]-[0030], [0042]-[0050], Fig. 2. Aldrey’s Figure 2 shows an example of the STB 201 (**red**) displaying content on a display 221 in response to commands from a remote application running on an end terminal 207 (**blue**). Ex. 1115, [0061], Fig. 2; Ex. 1102, ¶¶273-275.



Ex. 1115, Fig. 2 (annotated)

Therefore, Aldrey and Aldrey-Mahajan teach claim 1.

2. Dependent Claim 2

- a. **“..., wherein each command of the at least one command in the second format is a universal command.”**

Aldrey-Mahajan teaches claim 2. As discussed above regarding limitation [1D], Aldrey-Mahajan teaches a system wherein commands are translated into a universal format for transmission to a client device. Ex. 1114, [0037]-[0043], [0063], Figs. 3, 5. Those commands are in a universal format because the devices need not be aware of all possible media platforms, and can instead convert genericized commands into a platform-specific command as appropriate. Ex. 1114, [0042]. Ex. 1102, ¶¶276-278.

3. Dependent Claim 3

- a. “..., wherein the first format is different than the second format.”**

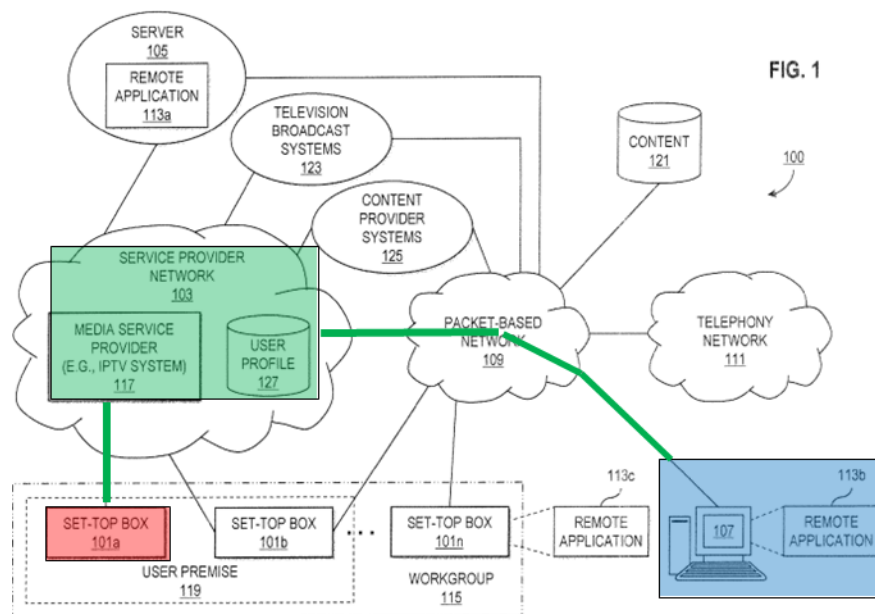
Aldrey-Mahajan teaches claim 3. As discussed above in Section VI.B.1.d, it would have been obvious to a POSITA that one or more RTS Media Abstraction Modules could operate at a server, such as in Service Provider Network 103. Ex. 1114, [0018], [0037]-[0038], [0058], [0063], [0078]; Ex. 1102, ¶¶279-280. A POSITA would have been motivated to apply Mahajan’s teachings of command conversion because a POSITA would have understood that Aldrey’s end terminal, which may be a portable device such as a cell phone, would likely employ different applications than Aldrey’s STB. Ex. 1115, [0023]-[0026]; Ex. 1102, ¶279. In such an instance, the message formatted for an application on the portable device is in the second format, and the message formatted for an application on the STB is in the first format different from the second format.

4. Dependent Claim 4

- a. “..., wherein the second message is sent from the associated second computing device to the remote server device.”**

Aldrey-Mahajan teaches claim 4. As discussed above in Section VI.B.1.d regarding limitation [1D], Aldrey thus teaches a STB 101 (**red**) receiving commands from a remote application running on an end terminal 107 (**blue**). Ex. 1115, [0018]-[0023], [0025]-[0026], Fig. 1; Ex. 1102, ¶281. Aldrey further teaches that

“connections [green] between the STBs 101a-101n and the end terminal(s) 107 may be established directly or through server 105 and/or MSP 117.” Ex. 1115, [0039], [0025], [0035]-[0036], [0048]; Ex. 1102, ¶¶281-282.

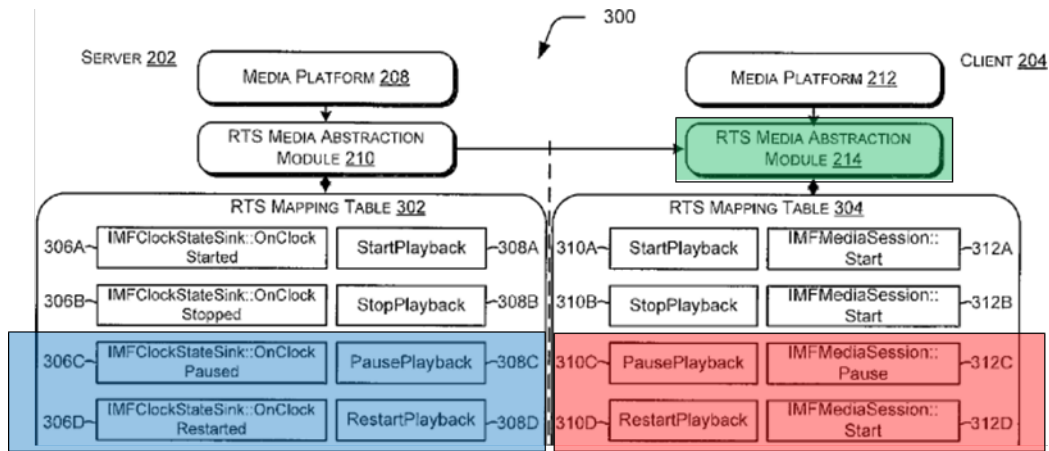


Ex. 1115, Fig. 1 (annotated)

5. Dependent Claim 5

- a. **“..., wherein the remote server device is configured to convert the at least one command ... based at least in part on the second message including therein a reference to the first piece of content.”**

Aldrey-Mahajan teaches claim 5. Mahajan teaches that the RTS Media Abstraction module of the client (an API converter, green) converts the commands received by the client (red) from Mahajan’s server (blue). Ex. 1114, [0037]-[0043], [0063], Figs. 3, 5.



Ex. 1114, Fig. 3 (annotated)

A POSITA would have understood that the RTS Media Abstraction Module is a software intermediary that converts commands from one interface (e.g., a genericized interface) into another (e.g., the interface of the first type of media playback application). Ex. 1102, ¶¶283-284.

These commands “may be specific to events associated with the playback of media files” such as “when a media file is accessed for playback by one or more users at the client.” Ex. 1114, [0037]. Messages containing the commands, which are particular to the media content playing on the type of media playing application of the server, are thus converted “based at least in part on the second message including therein a reference to the first piece of content.” Ex. 1102, ¶¶285-286.

6. Dependent Claim 6

- a. **“..., wherein the remote server device is configured to convert the at least one command ... based at least in part on a reference to the first media player application having been included in the second message.”**

Aldrey-Mahajan teaches claim 6. As discussed above in Section VI.B.1.e regarding limitation [1E], Aldrey in view of Mahajan teaches that the system selects the first type of media playing application from the plurality of media playing application types based on the data source and the capabilities of the client, as taught by Mahajan. Ex. 1114, [0050]. Accordingly, “the client 404 may determine that it has a media platform, such as media platform 408 that supports the media format.” *Id*; Ex. 1102, ¶¶287-288.

7. Dependent Claim 7

- a. **“..., wherein the first media player application is selected based at least in part on the received first message including therein a reference to the first media player application.”**

Aldrey-Mahajan teaches claim 7. As discussed above in Section VI.B.1.e regarding limitation [1E], Aldrey in view of Mahajan teaches that the system selects the first type of media playing application from the plurality of media playing application types based on the data source and the capabilities of the client, as taught by Mahajan. Ex. 1114, [0050]; Ex. 1102, ¶¶289-290.

8. Dependent Claim 8

- a. “..., wherein controlling ... includes an execution of the first command.”**

Aldrey-Mahajan teaches claim 8. As discussed above in Section VI.B.1.f regarding limitation [1F], Aldrey teaches controlling media player software and associated hardware in response to commands. Ex. 1115, [0020], [0025], [0029]-[0030], [0042]-[0050]. And, in view of Mahajan, those commands comprise commands for the first type of media playing application that are executed by the receiving device. Ex. 1114, [0014], [0021]-[0022], [0037]-[0040], [0047]-[0050], [0053], [0063]; Ex. 1102, ¶¶291-292.

9. Dependent Claim 9

- a. “... further comprising: retrieving the first media player application from a remote content provider based on a determination that the first media player application is not already selected.”**

Aldrey-Mahajan teaches claim 9. Aldrey teaches that its system may retrieve content from an external source in response to commands. Ex. 1115, [0053]. Further, Aldrey discloses that applications (which could be media players) and associated information may be accessed by a STB or end-terminal based on user profile information stored on servers. *Id.*, [0058], [0060]. This includes subscription information for subscription services. *Id.*, [0058]. Also, it would have been obvious to a POSITA that the new media player could be retrieved from the provider of the content. Ex. 1102, ¶¶293-294. For example, it was well known that providers of

media players frequently provide sample content to test or demonstrate the capabilities of their media players. *Id.*

10. Dependent Claim 10

- a. “... claim 9, wherein the remote content provider is associated with the referenced first piece of content.”**

Aldrey-Mahajan teaches claim 10. As discussed above in Section VI.B.9 regarding claim 9, Aldrey discloses retrieving a new media player application. Aldrey further teaches that the content may be from “an audio and/or video sharing site.” Ex. 1115, [0053]; Ex. 1102, ¶¶295-296.

11. Dependent Claim 11

- a. [11A]: “..., the operations further comprising:”**

As discussed above in Section VI.B.1, Aldrey-Mahajan teaches the limitations of claim 1. Ex. 1102, ¶297.

- b. [11B]: “based on the stored association and while the first media player application is selected, receiving, from the remote server device, a third message that includes at least one command in a third format, ... based at least in part on a fourth message including at least one other command in the second format ...; and”**

Aldrey teaches that devices join sessions, such that devices in a session can send multiple messages and commands on an ongoing basis. Ex. 1115, [0019]. Upon authenticating with an authentication model, a session for controlling a STB may be instigated. *Id.*, [0039]. A POSITA would have understood that the remote control may send an additional (e.g., “fourth”) message in the same format as an earlier (e.g.,

“second”) message. Ex. 1114, [0018], [0058], [0078]; Ex. 1102, ¶¶298-299; *see* Sections VI.B.3 and VI.B.1.d.

- c. **[11C]: “selecting a second media player application ... based at least in part on the third format of the third message, ... to play a second piece of content referenced in the third message.”**

As discussed above in Section VI.B.1.e regarding limitation [1E], Aldrey-Mahajan teaches selecting a media player application from a plurality of media player applications. A POSITA would have understood that a “second media player” could be selected based on the command and information in the “third message” just as the first media player was selected based on information in the first message. Ex. 1102, ¶¶300-301.

12. Independent Claim 12

- a. **[12A]: “A computer-implemented method for remotely presenting various types of content, comprising:”**

While the preamble is not limiting, Aldrey teaches it for the reasons discussed above in Section VI.B.1.a regarding limitation [1A]. Ex. 1102, ¶302.

- b. **[12B]: “obtaining, by a content presentation device, a synchronization code ... stored on a remote server device;”**

Element [12B] is obvious for at least the same reasons as discussed above in Section VI.B.1.b regarding limitation [1B]. Ex. 1102, ¶303.

- c. **[12C]: “providing, ..., the synchronization code to a remote computing device ... to store an association between the content presentation device and the remote computing device;”**

Element [12C] is obvious for at least the same reasons as discussed above in Section VI.B.1.c regarding limitation [1C]. Ex. 1102, ¶304.

- d. **[12D]: “receiving, ..., a first message that includes at least one command in a first format, ... received based at least in part on the stored association and on a second message ...;”**

Element [12D] is obvious for at least the same reasons as discussed above in Section VI.B.1.d regarding limitation [1D]. Ex. 1102, ¶305.

- e. **[12E]: “selecting, ..., a first media player application from a plurality of media player applications based at least in part on the first format of the first message, ... to play a first piece of content ...; and”**

Element [12E] is obvious for at least the same reasons as discussed above in Section VI.B.1.e regarding limitation [1E]. Ex. 1102, ¶306.

- f. **[12F]: “controlling, ..., how the selected first media player application plays the referenced first piece of content based on a first command”**

Element [12F] is obvious for at least the same reasons as discussed above in Section VI.B.1.f regarding limitation [1F]. Ex. 1102, ¶307.

Therefore, Aldrey-Mahajan teaches the limitations of claim 12.

13. Dependent Claim 13

- a. “..., wherein the first media player application is selected based further in part on ... a reference to the first media player application.”**

Dependent claim 13 is rendered obvious by Aldrey-Mahajan for at least the reasons discussed above in Sections VI.B.7 and VI.B.12 regarding claims 12 and 7. Ex. 1102, ¶308.

14. Dependent Claim 14

- a. “... further comprising: selecting the first media player application based on a determination that a second media player application is currently selected.”**

Dependent claim 14 is rendered obvious by Aldrey-Mahajan for at least the reasons discussed above in Sections VI.B.9 and VI.B. 12 regarding claims 12 and 9. Ex. 1102, ¶309.

15. Dependent Claim 15

- a. “..., further comprising: retrieving, by the content presentation device, the selected first media player application from a remote content provider based on the first format of the first message.”**

Aldrey-Mahajan teaches claim 15. Aldrey discloses that its system may retrieve content from an external source in response to commands. Ex. 1115, [0053]. Further, Aldrey discloses that applications and associated information may be accessed by a STB or end-terminal including subscription information for subscription services. *Id.*, [0058], [0060]. Also, it would have been obvious to a

POSITA that the new media player could be retrieved from the provider of the content. Ex. 1102, ¶¶310-311. In instances where the first format of the first message comprises an authenticated message with authenticated information, the selection of a media player application based on the authentication is thus “based on the first format of the first message.” *Id.*

16. Dependent Claim 16

- a. “..., wherein the remote server device is configured to convert ... based at least in part on a reference to the first media player application having been included in the second message, and wherein the first media player application is selected based further on the at least one command in the first format having been converted from the second format.”**

Aldrey-Mahajan teaches claim 16 for at least the reasons discussed above in Section VI.B.6 regarding claim 6. Further, a POSITA would have understood that when converting commands, as taught by Mahajan, the selection of the media player application corresponds to the resulting command for that application, after having been converted from the second format into the first format. Ex. 1102, ¶¶312-313.

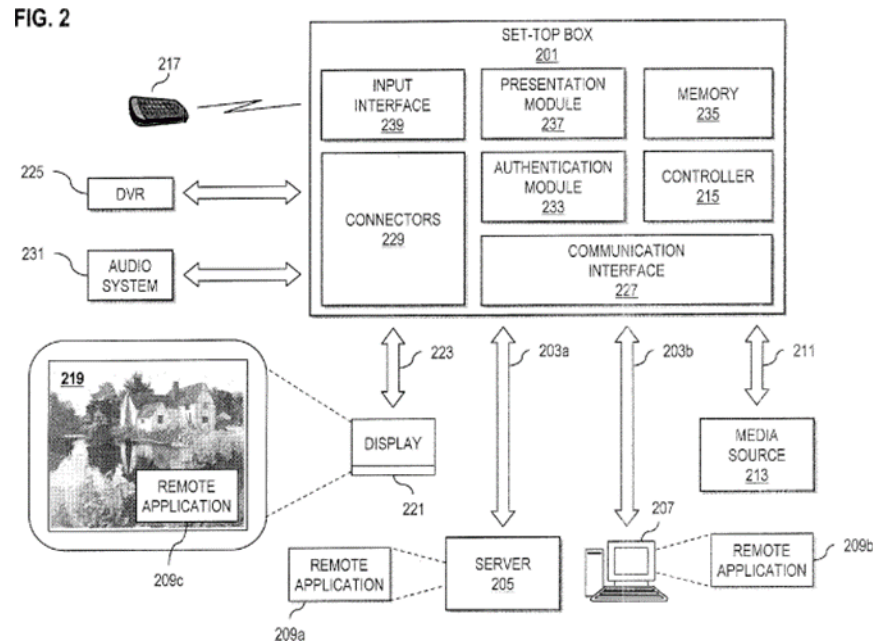
17. Independent Claim 17

- a. [17A]: “A content presentation device comprising:”**

While the preamble is not limiting, Aldrey teaches it for the reasons discussed above in Section VI.B.1.a regarding limitation [1A]. Ex. 1102, ¶314.

b. [17B] “a display;”

Aldrey teaches that the STB has an associated display. Ex. 1115, [0044]-0047], Fig. 2; Ex. 1102, ¶¶315-316.



Ex. 1115, Fig. 2.

c. [17C]: “at least one processor; and”

Aldrey teaches that the set-top box included a processor, which would also have been understood by a POSITA. Ex. 1115, [0043], [0088]-[0096], Fig. 7; Ex. 1102, ¶¶317-318.

d. [17D]: “at least one computer storage media storing computer-usable instructions ...:”

Aldrey teaches that the processor executes instructions in memory. Ex. 1115, [0043], [0088]-[0096], Fig. 7; Ex. 1102, ¶¶319-320.

- e. **[17E]: “obtain a synchronization code ... stored on a remote server device;”**

Element [17E] is obvious for at least the same reasons as discussed above in Section VI.B.1.b regarding limitation [1B]. Ex. 1102, ¶321.

- f. **[17F]: “provide the synchronization code ... to store an association ...;”**

Element [17F] is obvious for at least the same reasons as discussed above in Section VI.B.1.c regarding limitation [1C]. Ex. 1102, ¶322.

- g. **[17G]: “receive, ..., a first message that includes at least one command in a first format, ...;”**

Element [17G] is obvious for at least the same reasons as discussed above in Section VI.B.1.d regarding limitation [1D]. Ex. 1102, ¶323.

- h. **[17H]: “select a first media player application ... based on the first format ... selected to play a first piece of content ...; and”**

Element [17H] is obvious for at least the same reasons as discussed above in Section VI.B.1.e regarding limitation [1E]. Ex. 1102, ¶324.

- i. **[17I]: “control how the selected first media player application plays”**

Element [17I] is obvious for at least the same reasons as discussed above in Section VI.B.1.f regarding limitation [1F]. Ex. 1102, ¶325.

Therefore, Aldrey-Mahajan teaches claim 17.

18. Dependent Claim 18

- a. “..., wherein the first media player application is configured to recognize each command of the at least one command in the first format.”**

Aldrey-Mahajan teaches claim 18. Aldrey teaches that control commands received by the controlled device are understood by that device to take appropriate action, such as to “play” or “stop” the content. Ex. 1115, [0055]-[0056]. In view of Mahajan, and as described above in Section VI.B.1.d, a POSITA would have understood that those commands would be received in a genericized form, which is recognizable by the first type of media player application upon processing by the abstraction layer of the receiving device. Ex. 1114, [0014], [0022]-[0024], [0037]-[0040], Fig. 2; Ex. 1102, ¶¶326-328.

19. Dependent Claim 19

- a. “..., wherein the second message is sent from the associated second computing device to the remote server device.”**

Dependent claim 19 is rendered obvious by Aldrey-Mahajan for at least the reasons discussed above in Sections VI.B.4 and VI.B.17 regarding claims 17 and claim 4. Ex. 1102, ¶329.

20. Dependent Claim 20

- a. “..., wherein the first media player application is selected based further on the received first message including therein a reference to the first media player application.”**

Dependent claim 20 is rendered obvious by Aldrey-Mahajan for at least the reasons discussed above in Sections VI.B.7 and VI.B.17 regarding claims 17 and 7. Ex. 1102, ¶¶330-331.

III. GROUNDS FOR STANDING & FEE PAYMENT

Petitioner hereby certifies that the '751 Patent is available for, and Petitioner is not barred or estopped from requesting, *inter partes* review challenging claims 1-20.

Pursuant to 37 C.F.R. § 42.103, the undersigned authorizes the charge of any required fees to Deposit Account No. 50-2387.

IV. CONCLUSION

Inter partes review should be instituted and claims 1-20 canceled.

Dated: August 9, 2024

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CERTIFICATION UNDER 37 CFR § 42.24(d)

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for Inter Partes Review totals 13,828, which is less than the 14,000 allowed under 37 CFR § 42.24(a)(1)(i). This total includes 13,732 words as counted by the Word Count feature of Microsoft Word and 0 words used in annotations.

Pursuant to 37 C.F.R. § 42.24(a)(1), this count does not include the table of contents, the table of authorities, mandatory notices under § 42.8, the certificate of service, this certification of word count, the claims listing appendix, or appendix of exhibits.

ARNOLD & PORTER KAYE
SCHOLER LLP

Dated: August 9, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.105, I hereby certify that I caused a true and correct copy of this Petition for *Inter Partes* Review in connection with U.S. Patent No. 11,048,751 and supporting evidence to be served via FedEx Priority Overnight on August 9, 2024, on the following:

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CLAIM LISTING APPENDIX

U.S. Pat. No. 11,048,751

Designation	Claim Language
Claim 1	
[1A]	1. A non-transitory computer storage medium storing computer-useable instructions that, when used by a first computing device, cause the first computing device to perform operations comprising:
[1B]	obtaining a synchronization code associated with the first computing device, wherein the associated synchronization code is stored on a remote server device;
[1C]	providing the synchronization code to a second computing device in communication with the remote server device, wherein the provided synchronization code causes the remote server device to store an association between the first computing device and the second computing device;
[1D]	receiving, from the remote server device, a first message that includes at least one command in a first format, the first message being received based at least in part on the stored association and on a second message including at least one command in a second format having been sent from the associated second computing device;
[1E]	selecting a first media player application from a plurality of media player applications based at least in part on the first format of the first message, the first media player application being selected to play a first piece of content referenced in the received first message; and
[1F]	controlling how the selected first media player application plays the referenced first piece of content based on a first command of the at least one command in the first format having been included in the received first message.
Claim 2	
2	2. The non-transitory computer storage medium of claim 1, wherein each command of the at least one command in the second format is a universal command.
Claim 3	

Designation	Claim Language
3	3. The non-transitory computer storage medium of claim 2, wherein the first format is different than the second format.

Designation	Claim Language
Claim 4	
4	4. The non-transitory computer storage medium of claim 1, wherein the second message is sent from the associated second computing device to the remote server device.
Claim 5	
5	5. The non-transitory computer storage medium of claim 1, wherein the remote server device is configured to convert the at least one command in the second format into the at least one command in the first format based at least in part on the second message including therein a reference to the first piece of content.
Claim 6	
6	6. The non-transitory computer storage medium of claim 1, wherein the remote server device is configured to convert the at least one command in the second format into the at least one command in the first format based at least in part on a reference to the first media player application having been included in the second message.
Claim 7	
7	7. The non-transitory computer storage medium of claim 1, wherein the first media player application is selected based at least in part on the received first message including therein a reference to the first media player application.
Claim 8	
8	8. The non-transitory computer storage medium of claim 1, wherein controlling how the selected first media player application plays the referenced first piece of content includes an execution of the first command.
Claim 9	
9	The non-transitory computer storage medium of claim 1, the operations further comprising: retrieving the first media player application from a remote content provider based on a determination that the first media player application is not already selected.

Designation	Claim Language
Claim 10	
10	10. The non-transitory computer storage medium of claim 9, wherein the remote content provider is associated with the referenced first piece of content.

Designation	Claim Language
Claim 11	
[11A]	11. The non-transitory computer storage medium of claim 1, the operations further comprising:
[11B]	based on the stored association and while the first media player application is selected, receiving, from the remote server device, a third message that includes at least one command in a third format, wherein the third message is received based at least in part on a fourth message including at least one other command in the second format having been sent from the associated second computing device; and
[11C]	selecting a second media player application from the plurality of media player applications based at least in part on the third format of the third message, the second media player application being selected to play a second piece of content referenced in the third message.
Claim 12	
[12A]	12. A computer-implemented method for remotely presenting various types of content, comprising:
[12B]	obtaining, by a content presentation device, a synchronization code associated with the content presentation device, wherein the associated synchronization code is stored on a remote server device;
[12C]	providing, by the content presentation device, the synchronization code to a remote computing device in communication with the remote server device, wherein the provided synchronization code causes the remote server device to store an association between the content presentation device and the remote computing device;

Designation	Claim Language
[12D]	receiving, by the content presentation device and from the remote server device, a first message that includes at least one command in a first format, the first message being received based at least in part on the stored association and on a second message including at least one command in a second format having been sent from the associated remote computing device;
[12E]	selecting, by the content presentation device while a connection between the content presentation device and the remote server device is maintained, a first media player

Designation	Claim Language
	application from a plurality of media player applications based at least in part on the first format of the first message, the first media player application being selected to play a first piece of content referenced in the received first message; and
[12F]	controlling, by the content presentation device, how the selected first media player application plays the referenced first piece of content based on a first command of the at least one command in the first format having been included in the received first message.
Claim 13	
13	13. The computer-implemented method of claim 12, wherein the first media player application is selected based further in part on the received first message including therein a reference to the first media player application.
Claim 14	
14	14. The computer-implemented method of claim 12, the operations further comprising: selecting the first media player application based on a determination that a second media player application is currently selected.
Claim 15	
15	15. The computer-implemented method of claim 12, further comprising: retrieving, by the content presentation device, the selected first media player application from a remote content provider based on the first format of the first message.
Claim 16	

Designation	Claim Language
16	16. The computer-implemented method of claim 12, wherein the remote server device is configured to convert the at least one command in the second format into the at least one command in the first format based at least in part on a reference to the first media player application having been included in the second message, and wherein the first media player application is selected based further on the at least one command in the first format having been converted from the second format.
Claim 17	
[17A]	17. A content presentation device comprising:
[17B]	a display;

Designation	Claim Language
[17C]	at least one processor; and
[17D]	at least one computer storage media storing computer-usable instructions that, when used by the at least one processor, cause the at least one processor to:
[17E]	obtain a synchronization code associated with the content presentation device, wherein the associated synchronization code is stored on a remote server device;
[17F]	provide the synchronization code to a remote computing device in communication with the remote server device, wherein the provided synchronization code causes the remote server device to store an association between the content presentation device and the remote computing device;
[17G]	receive, from the remote server device, a first message that includes at least one command in a first format, the first message being received based on the stored association and on a second message in the second format sent from the associated remote computing device;
[17H]	select a first media player application from a plurality of media player applications based on the first format of the first message, the first media player application being selected to play a first piece of content referenced in the received first message; and

Designation	Claim Language
[171]	control how the selected first media player application plays the referenced first piece of content based on a first command of the at least one command in the first format having been included in the received first message.
Claim 18	
18	18. The content presentation device of claim 17, wherein the first media player application is configured to recognize each command of the at least one command in the first format.
Claim 19	
19	19. The content presentation device of claim 17, wherein the second message is sent from the associated second computing device to the remote server device.
Claim 20	
20	20. The content presentation device of claim 18, wherein the first media player application is selected based further on the

Designation	Claim Language
	received first message including therein a reference to the first media player application.