UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ALTICE USA, INC.

Petitioner,

v.

TOUCHSTREAM TECHNOLOGIES, INC.,
Patent Owner.

Patent No. 8,356,251
Filing Date: September 26, 2011
Issue Date: January 15, 2013
Title: PLAY CONTROL OF CONTENT ON A DISPLAY DEVICE

Inter Partes Review No.: IPR2024-01262

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

III. OVERVIEW OF THE '251 PATENT 1

- A. Brief Description 1
- B. Prosecution History 4
- C. Earliest Priority Date for the Claims 4

IV. OVERVIEW OF PRIOR ART 4

- A. Danciu 4
  - 1. Danciu is Entitled to a Priority Date of November 8, 2010 8
- B. Mahajan 9
- C. Calvert 11
- D. Aldrey 13

V. IDENTIFICATION OF CHALLENGE PURSUANT TO 37 C.F.R. § 42.104(b) 16

- A. Claims for Which Review is Requested and Grounds on Which Challenge Is Based 16
- B. 314(a) Discretion Does Not Apply 17
- C. 325(d) Discretion Does Not Apply 18
- D. Level of Ordinary Skill 18
- E. Claim Construction 19

VI. SPECIFIC GROUNDS FOR UNPATENTABILITY 20

- A. Grounds A-B: Danciu-Mahajan or Danciu-Mahajan-Calvert Render Claims 1-26 Obvious 20
  - 1. Independent Claim 1 20
  - 2. Dependent Claim 2 43
  - 3. Dependent Claim 3 45
  - 4. Dependent Claim 4 47

5. Dependent Claim 5 48
6. Dependent Claim 6 48
7. Dependent Claim 7 49
8. Dependent Claim 8 49
9. Dependent Claim 9 50
10. Dependent Claim 10 50
11. Independent Claim 11 51
12. Dependent Claims 12-21 54
13. Independent Claim 22 54
14. Dependent claim 23 58
15. Dependent claim 24 58
16. Dependent Claim 25 59
17. Dependent Claim 26 59
B. Ground C: Aldrey-Mahajan Renders Claims 1-26 Obvious 59
1. Independent Claim 1 59
2. Dependent Claim 2 73
3. Dependent Claim 3 74
4. Dependent Claim 4 75
5. Dependent Claim 5 76
6. Dependent Claim 6 77
7. Dependent Claim 7 77
8. Dependent Claim 8 77
9. Dependent Claim 9 78
10. Dependent Claim 10 78
11. Independent Claim 11 79
12. Dependent Claims 12-21 81
13. Independent Claim 22 82
14. Dependent claim 23 86
15. Dependent claim 24 87

16. Dependent Claim 25 87
17. Dependent Claim 26 87
VII. GROUNDS FOR STANDING & FEE PAYMENT 88
VIII. CONCLUSION.....88
CERTIFICATION UNDER 37 CFR § 42.24(d) 89
CERTIFICATE OF SERVICE 90
CLAIM LISTING APPENDIX 91

EXHIBITS

Ex. 1101:	U.S. Patent No. 8,356,251 ("the '251 Patent")
Ex. 1102:	Expert Declaration of David B. Lett
Ex. 1103:	Curriculum Vitae of David B. Lett
Ex. 1104:	Certified Prosecution History of the '251 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, *Touchstream Technologies, Inc. v. Google LLC*, 6:21-cv-00569-ADA (WDTX) (Feb. 8, 2022)
Ex. 1121:	Exhibit 1 to Joint Disputed Claim Terms Charts, *Touchstream Technologies, Inc. v. Vizbee, Inc.*, 1:17-cv-06247-PGG-KNF (SDNY) (Aug. 6, 2018)
Ex. 1122:	Jury Instructions, *Touchstream Technologies, Inc. v. Google LLC*, 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, HIGH-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

MANDATORY NOTICES

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

The real parties-in-interest for this petition are (i) Altice USA, Inc., (ii) Cequel Communications, LLC, (iii) CSC Holdings, LLC, and (iv) Friendship Cable of Texas, Inc.

No unnamed entity is funding, controlling, or directing this Petition for *inter partes* review (IPR) of U.S. Patent No. 8,356,251 ("the '251 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 '251 Patent, along with related U.S. Patent Nos. 11,048,751 ("the '751 Patent") and 11,086,934 ("the '934 Patent"), is being asserted against Altice USA, Inc., Cequel Communications, LLC, CSC Holdings, LLC, and Friendship Cable of Texas, Inc. in the Eastern District of New York in *Touchstream Technologies, Inc. v. Altice USA, Inc. et al* 2-24-cv-03186 ("EDNY Litigation"). The EDNY Litigation was transferred from *Touchstream Technologies, Inc. d/b/a Shodogg v. Altice USA, Inc. et al,* 2-23-cv-00060 ("EDTX Litigation") on April 29, 2024. The earliest date of service on any of the Altice entities named in the EDTX Litigation was February 17, 2023, however the '751 and '934 Patents were first asserted in a First Amended Complaint served on May 12, 2023.

The ’251, ’751, and ’934 Patents are also presently being asserted against Comcast Cable Communications, LLC (“Comcast”), d/b/a Xfinity, 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 Charter Communications, Inc., Charter Communications Operating, LLC, Spectrum Management Holding Company, LLC, Time Warner Cable Enterprises, LLC, and Spectrum Gulf Coast, LLC in *Touchstream Technologies, Inc. v. Charter Communications, Inc. et al*, 2:23-cv-00059-JRG (EDTX). The ’251, ’751, and ’934 Patents were the subject of requests for *inter partes* review filed by Comcast in IPR2024-00321; IPR2024-00322; IPR2024-00323; IPR2024-00324; IPR2024-00325; and IPR2024-00326. Altice is currently seeking to join IPR2024-00322, challenging the claims of the ’251 Patent, which was instituted on July 18, 2024. The Board also instituted review of IPR2024-00324, challenging the claims of the ’751 Patent, on July 24, 2024. The real parties-in-interest in this Petition are not presently involved in any of those IPRs.

The ’251 Patent is also presently being asserted against Google LLC in *Touchstream Technologies, Inc. v. Google LLC*, 6:21-cv-00569-ADA (WDTX) 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 presently 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 (SDNY) which was terminated by stipulated dismissal on January 24, 2020.

No other petitions for *inter partes* review, post-grant review, or covered business method review have been filed against the ’251 Patent.

According to the Office’s records, the ’251 Patent is a continuation of U.S. Pat. App. No. 13/157,821, filed June 10, 2011 (issued as U.S. Pat. No. 8,904,289), which claims priority to Provisional App. No. 61/477,998, filed April 21, 2011.

Petitioner is also filing a petition for *inter partes* review against the related ’751 Patent along with a motion for joinder of Comcast’s IPR2024-00324.

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.

Lead Counsel	**Back-Up Counsel**
Scott Border (Reg. # 77,744) WINSTON & STRAWN LLP 1901 L Street, N.W. Washington, D.C. 20036 sborder@winston.com T: 202-282-5100	Krishnan Padmanabhan (pro hac vice to be submitted) WINSTON & STRAWN LLP 200 Park Avenue New York, NY 10166 kpadmanabhan@winston.com T: 212.294.6700 Christopher T. Gresalfi (Reg. #78,949) WINSTON & STRAWN LLP 200 Park Avenue New York, NY 10166 cgresalfi@winston.com T: 212.294.6700

Please address all correspondence to counsel at this address shown above. Petitioner consents to electronic service by email at the following address and the above emails: Altice-Touchstream@winston.com.

I. INTRODUCTION

Altice USA, Inc., ("Petitioner") petitions for *inter partes* review and cancellation of claims 1-26 of U.S. Patent No. 8,356,251 ("the '251 Patent") (Ex. 1101).

II. SUMMARY OF ARGUMENT

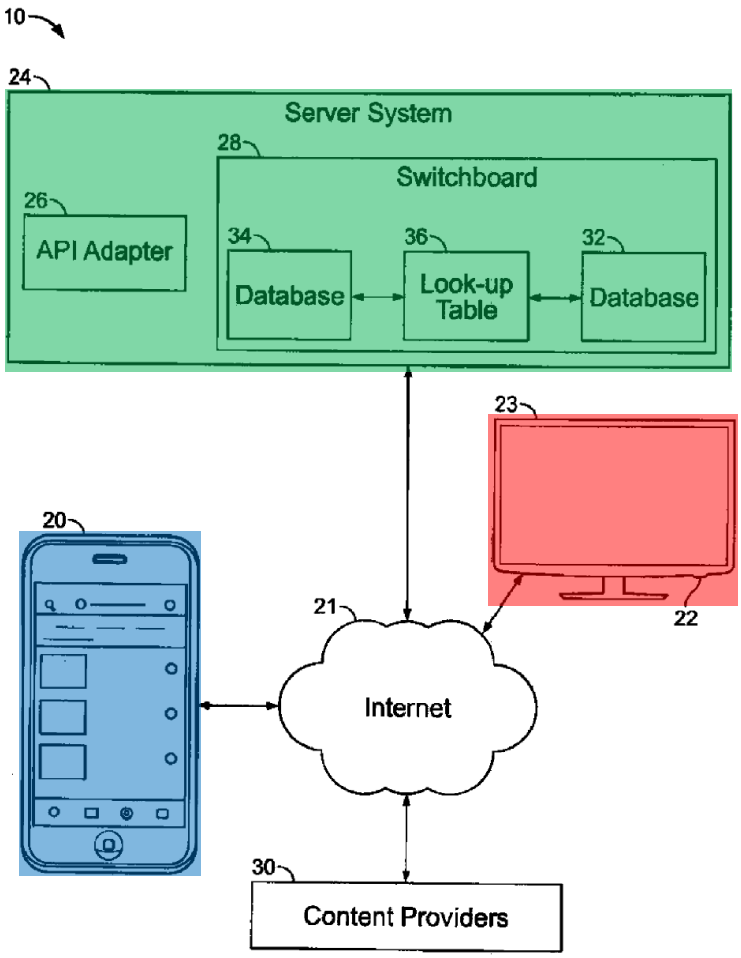
The '251 Patent claims methods for translating commands among associated devices to control media. A server controls presentation of video content, using one of various media players, via messages transmitted from a computer. The messages are converted into commands for the selected media player and then transmitted to a display device. In one embodiment, the display device is assigned a synchronization code used to associate the computer with the display device and stored in the server.

The '251 Patent claims are disclosed and rendered obvious by the prior art relied on herein, in view of the declaration of Mr. Lett. Ex. 1102, ¶¶ 1-32, 64-81.

III. OVERVIEW OF THE '251 PATENT

A. Brief Description

The '251 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. 1001, 2:66-3:11; Ex. 1102, ¶¶ 40-42.



Ex. 1001, Fig. 1 (annotated)

As shown in Figure 1, a personal computing device connects to and "acts as a controller" for a display 23 that receives and plays content selected by a user. The display "respond[s] to commands that originate at the personal computing device." Ex. 1001, 3:2-7. For example, television 22 can be commanded "to access a content provider 30 through the Internet 21, load a specific media player, load the media player-specific content (e.g., a video) and play the content on the television display 23." *Id.*, 3:19-23.

The connection between the personal computing device (*e.g.*, a mobile phone) and the display may be established by the user selecting from a list of devices or entering a synchronization code on the mobile phone uniquely associated with the display. Ex. 1001, 5:8-16. The code can be e.g., a text or QR code displayed on the screen of the display device. *Id.*, 5:16-23. The server system may then store the association between the personal computing device and display in a look-up table. *Id.*, 5:29-35.

Personal computing device 20 controls the selection of and playback of content on the display through server system 24, rather than directly. *Id.*, 3:10-18, 3:36-41. The signal which selects content or controls playback is formatted and transmitted by personal computing device 20 in a message sent via the Internet to server system 24. *Id.*, 4:27-42, Fig. 3. Server system 24 then converts the incoming commands from the mobile device 20 into the correct code used by the display to control the specific player. *Id.*, 5:67-6:3. Server system 24 "interpret[s] and convert[s] a standard or universal command (e.g., play, pause, etc.) into the specific command recognized by the media player" playing content on the display. *Id.*, 5:58–62. Then, server system 24 "copies the converted version of the message to the database 34 associated with the [television set] 22." *Id.*, 6:3-6. The display receives and executes the converted message (*id*., 6:23–33), e.g., "load[s] and unload[s] different video players." *Id.*, 6:34-48.

B. Prosecution History

During prosecution, all claims were rejected as anticipated by U.S. Publication No. 2011/00600998 to Schwartz or as obvious over Schwartz alone or in view of a non-patent publication. Ex. 1104, pp. 61-81; Ex. 1102, ¶¶ 43-63. In response, Applicant stated, "[i]n the context of the present application, it is clear that a 'media player' refers to application software for playing back the video content." *Id*., p. 190, footnote 2. The Notice of Allowance included an Examiner's Amendment that the display device "loads any one of a plurality of different media players" to place the claims in condition for allowance. *Id*., pp. 272-287.

C. Earliest Priority Date for the Claims

The earliest possible priority date for the claims of the '251 Patent is April 21, 2011. Ex. 1101, cover.

IV. 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. Danciu is prior art under 35 U.S.C. § 102(e). Danciu was not considered during prosecution. Ex. 1101, cover; Ex. 1102, ¶¶ 82-84.

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. Ex. 1112, 3:21-28, 5:1-12, 5:42-63, Fig. 1; Ex. 1102, ¶¶ 85-90.

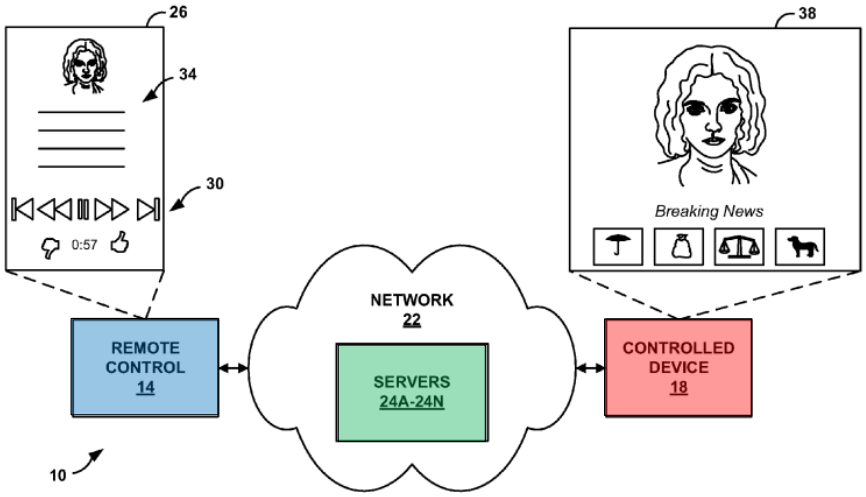


FIG. 1

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.

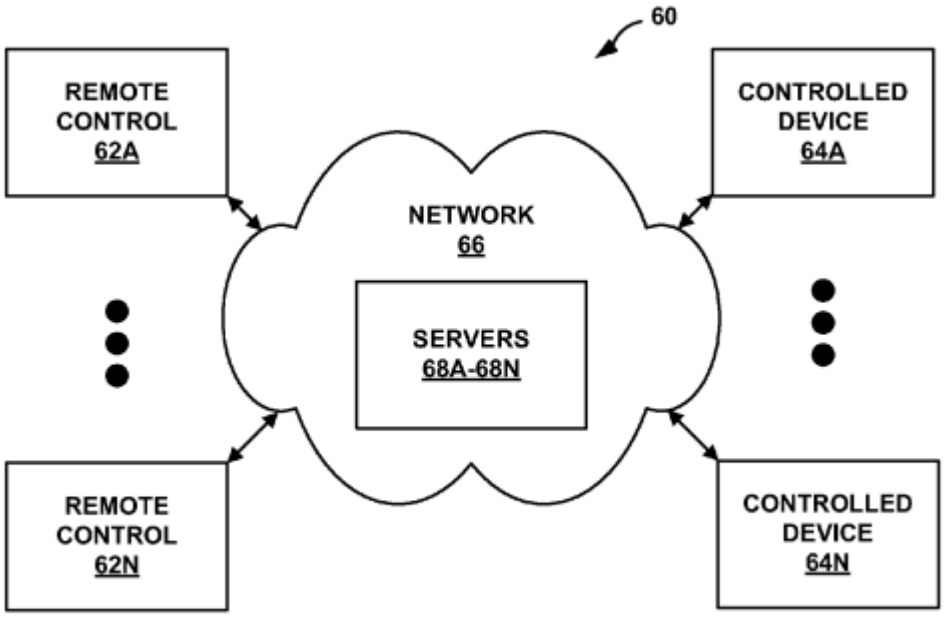
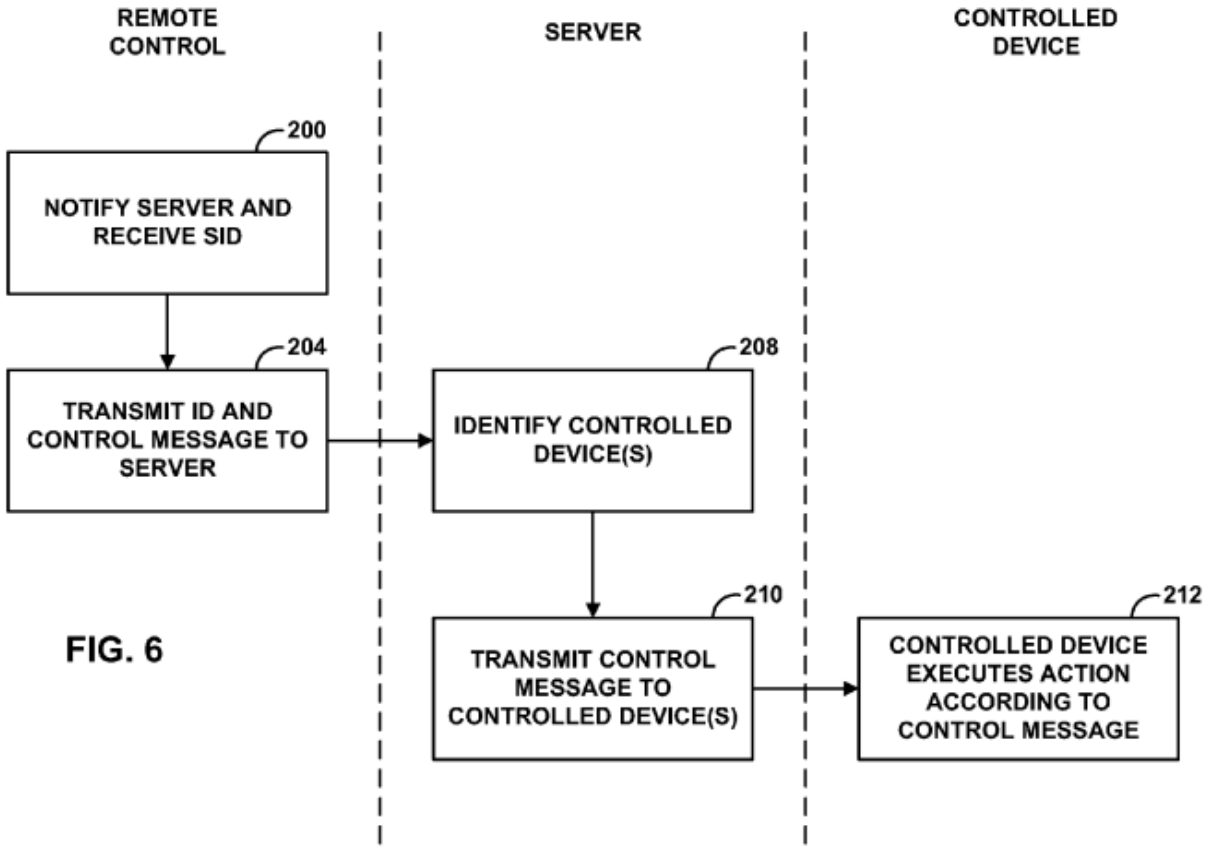


FIG. 2

Ex. 1112, Fig. 2

Danciu discloses that a "network service may assign each remote device 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. Ex. 1112, 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. Ex. 1112, 5:64-6:2, 10:45-53; Ex. 1102, ¶ 91.



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; Ex. 1102, ¶¶ 92-100. 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. Ex. 1112, 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. Ex. 1112, 18:55-19:20, Fig. 9.

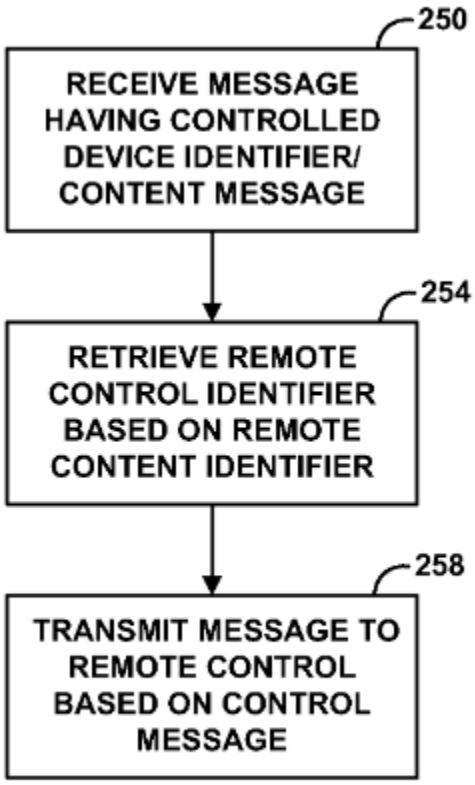


FIG. 9

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, ¶ 82; 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].

Danciu Claim 1	Danciu Provisional
[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, Claim 1, Claim 16, Claim 17, [0005],- [0007], [0074], [0078], Fig. 7.
[1h]	Ex. 1113, Abstract, Claim 1, Claim 16, Claim 17, [0005]- [0007], [0078], Fig. 5, Fig. 7.
[1i]	Ex. 1113, Abstract, Claim 1, Claim 16, Claim 17, [0005]-[0007], [0078], Fig. 7.

B. Mahajan

Mahajan (Ex. 1114) is a U.S. Published Application, 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 not considered during prosecution. Ex. 1102, ¶ 124.

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; Ex. 1102, ¶¶

125-128. The platform translates generic commands to platform specific media playback commands that can be understood by the client's media platform. Ex. 1114, [0012]-[0013], [0022], [0035]-[0036], [0041], Figs. 3, 5.

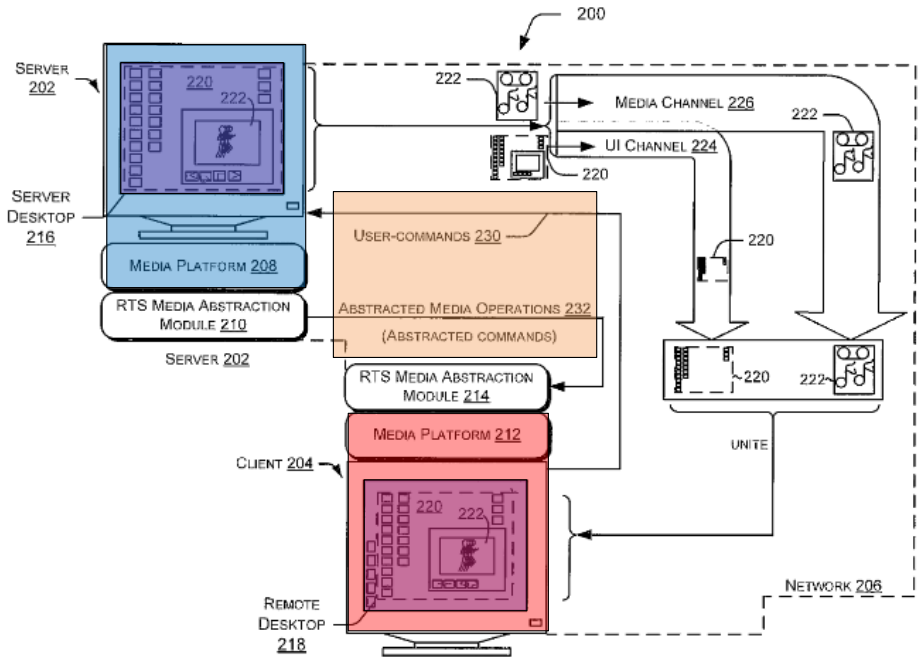


Fig. 2

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. Ex. 1114, [0035]-[0036], Figs. 1-2; Ex. 1102, ¶¶ 129-130. Command mappings are shown in Figure 3. Ex. 1114, [0036]-[0043], [0063], Figs. 3, 5.

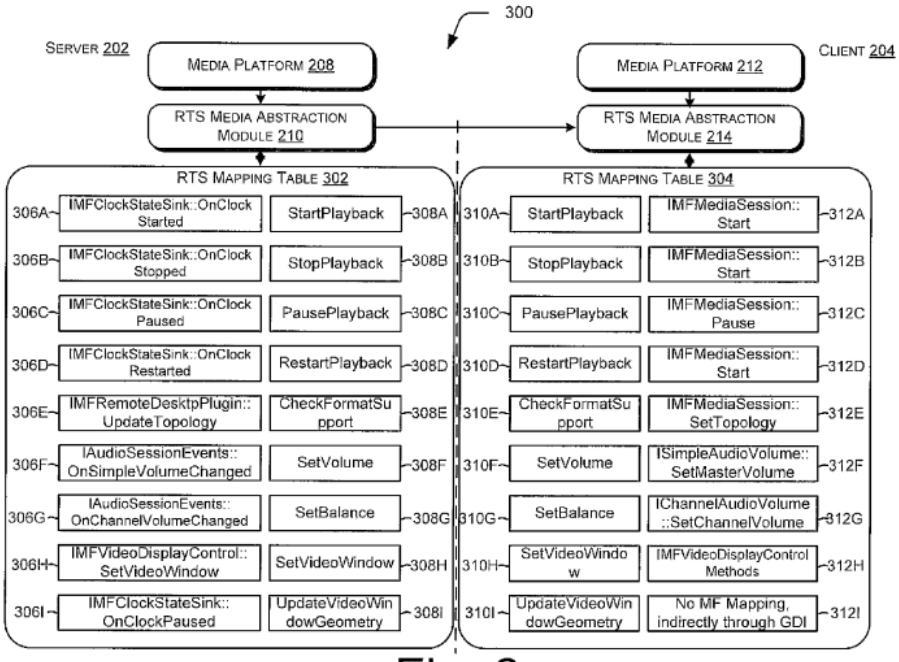


Fig. 3

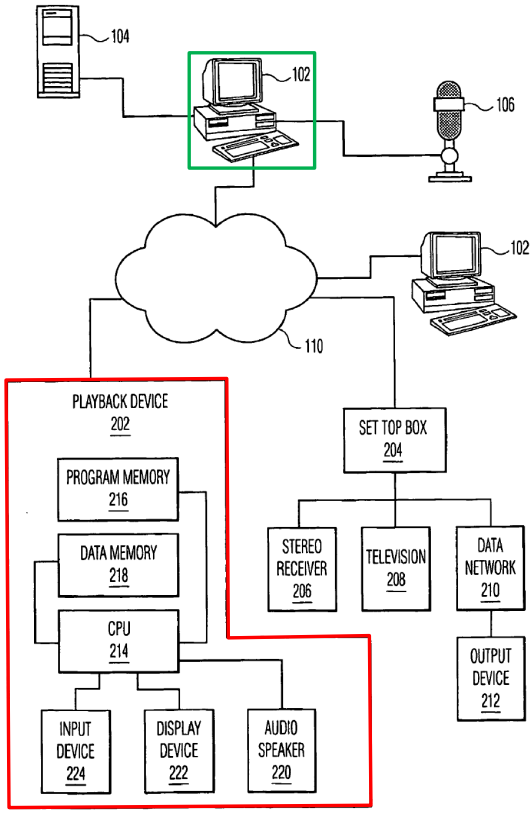
Ex. 1114, Fig. 3

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, ¶ 111.

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, ¶¶ 112-119. Content aggregator 102 (**green**) has multiple media services available to it that include audio and/or video content. 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. Ex. 1111, [0025]-[0027], [0033]-[0038], Figs. 2-4.



Ex. 1111, Fig. 2 (annotated)

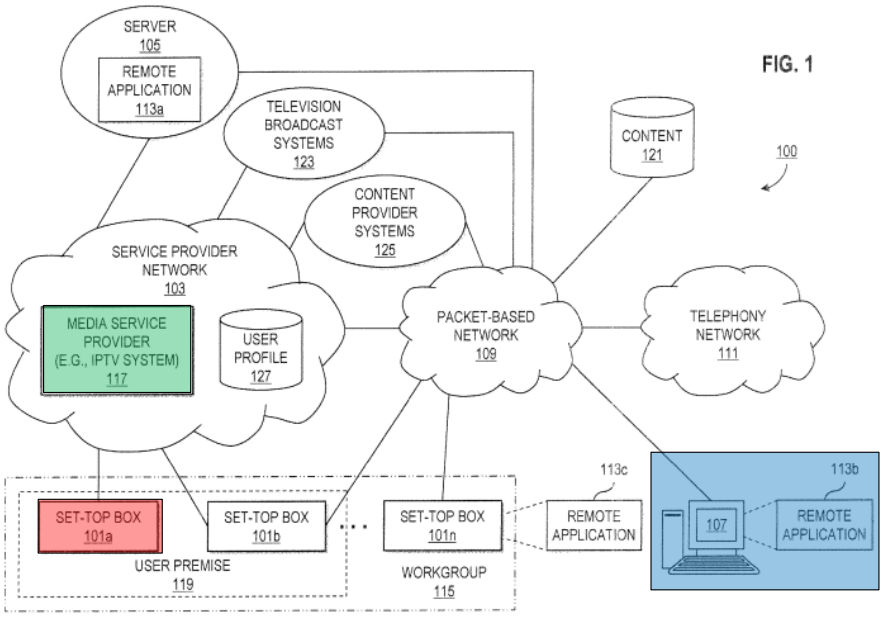
Following selection by a user of a particular media service, device 202 requests the selected service directly from the media service provider, or through content aggregator 102. Ex. 1111, [0027], [0038]-[0040], Figs. 3-4; Ex. 1102, ¶¶ 120-123. Device 202 receives the media service in the form of a data transmission which device 202 analyzes to determine its format. Ex. 1111, [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. Ex. 1111, [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

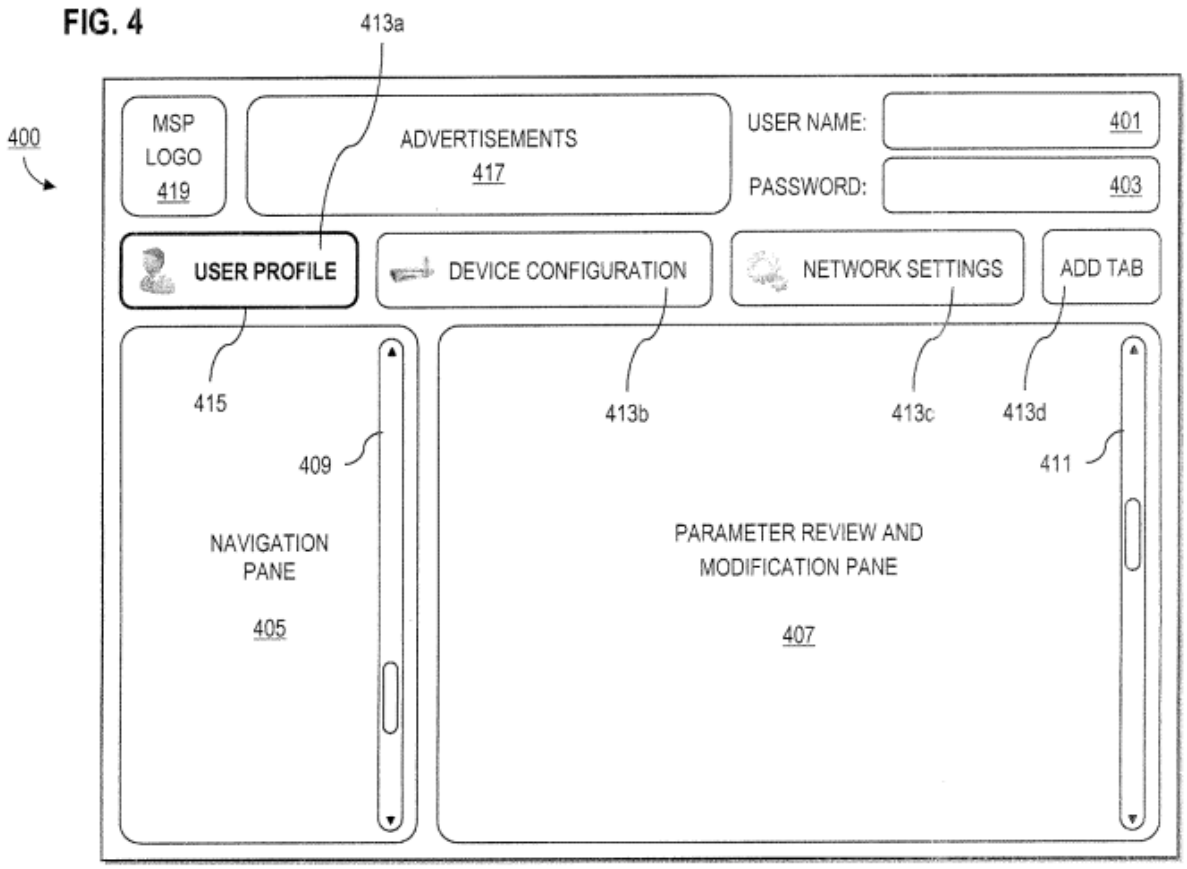
Aldrey (Ex. 1115) is a U.S. Published Application, No. 2009/0172757, published July 2, 2009. Aldrey is prior art under pre-AIA 35 U.S.C. § 102(b) and was not considered during prosecution. Ex. 1101, cover; Ex. 1102, ¶¶ 101-102.

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**). Ex. 1115, [0018]-[0022], [0025], Fig. 1; Ex. 1102, ¶ 103.



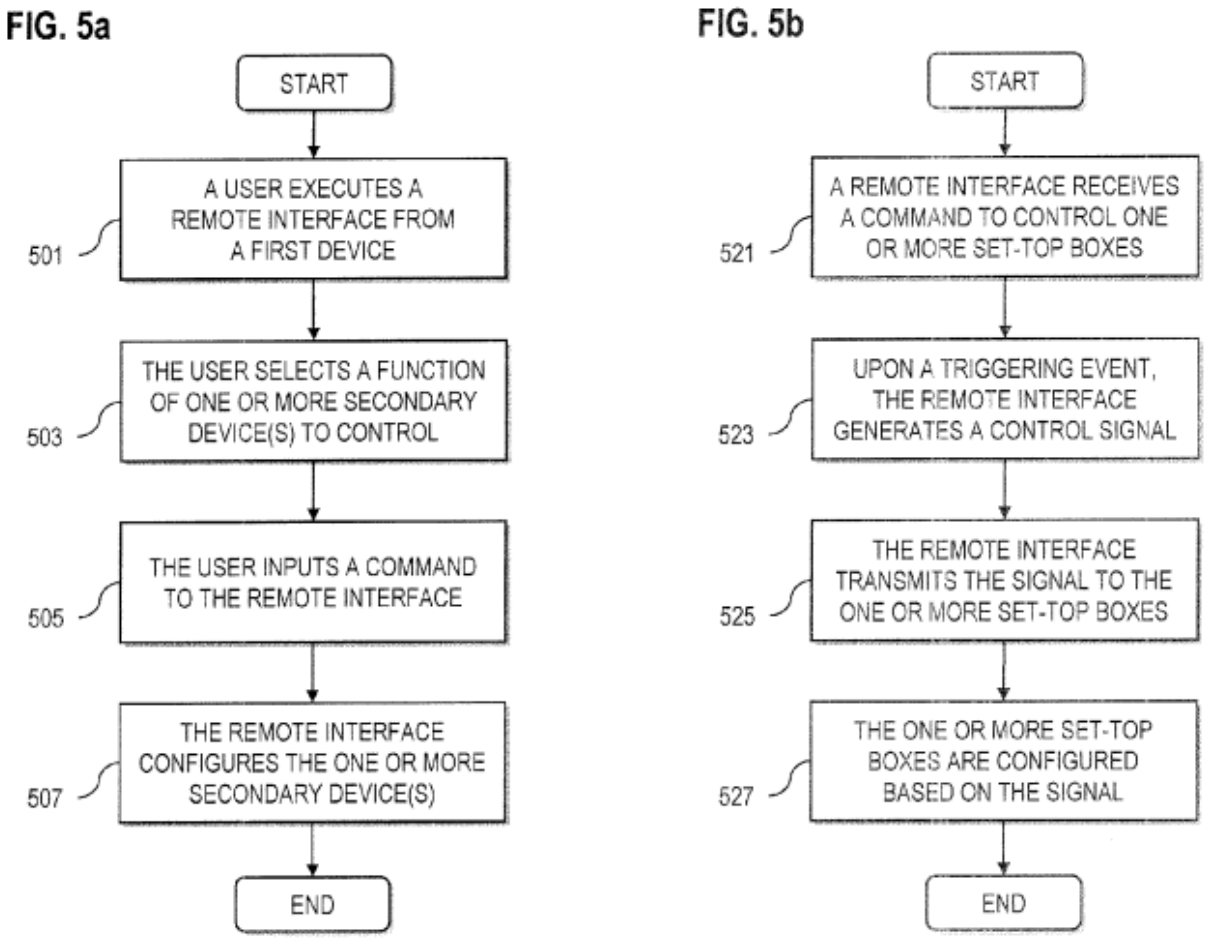
Ex. 1115, Fig. 1 (annotated)

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." Ex. 1115, [0019], [0073]-[0074], Fig. 4; Ex. 1102, ¶¶ 104-110.



Ex. 1115, Fig. 5

This allows the user to control STBs including setting configuration information or playing content. Ex. 1115, [0020]-[0023]. Thus, using commands comprising metadata, the STB is controlled to display content. Ex. 1115, [0035]-[0056], [0060].

V. 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 1–26 on the following grounds.

Ground	References	Basis	Claims Challenged
A	Danciu-Mahajan	§103	1-26
B	Danciu-Mahajan-Calvert	§103	1-26
C	Aldrey-Mahajan	§103	1-26

None of the prior art listed in the table above was before the examiner during prosecution of the ’251 Patent. Ex. 1102, ¶¶ 131-135.

B. 314(a) Discretion Does Not Apply

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

Factor one favors institution. Petitioner has filed IPR petitions challenging two of three patents asserted in the District Court. Petitioner has filed a motion to stay in the District Court pending resolution of *inter partes* review of the ’251 and ’751 Patents.

Factor two favors institution. A trial date has not been set yet in the District Court case against Petitioner. *Touchstream Technologies, Inc. v. Altice USA, Inc. et al,* 2-24-cv-03186 (EDNY), Dkt Nos. 187-188. In fact, the Markman hearing is scheduled for February 20, 2025, or at the Court’s convenience, and the deadline for the parties will occur no earlier than thirty (30) days after the Markman hearing. *Id.*

Likewise, factor three does not warrant denial as the District Court has not yet begun the claim construction process.

Factor four strongly favors institution. The petition challenges all claims in the ’251 Patent while only claims 1-2, 5, and 7-9 are asserted in the District Court. In addition, Petitioner stipulates that if the Board institutes, Petitioner will not pursue the same grounds in the district court litigation. This further weighs in favor of institution. *See Sand Revolution II, LLC v. Cont’l Intermodal Grp.*, IPR2019-01393, Paper 24, 12 (PTAB June 16, 2020).

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

Factor six favors institution. Petitioner seeks to join Comcast’s instituted petition in IPR2024-00322, which presents compelling unpatentability challenges.

C. 325(d) Discretion Does Not Apply

The Board should not exercise its 35 U.S.C. § 325(d) discretion to deny institution. The grounds raised herein are not the same or substantially the same as the art and arguments raised during prosecution, and if 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 are given their ordinary and customary meaning to a POSITA. 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 Touchstream-Google case involving the '251 Patent, Patent Owner advocated that plain and ordinary meaning applies for all claim terms[1], and the Court agreed. 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.

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." *See* Ex. 1164, 13. The prior art relied on herein includes software media players.

---

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

VI. SPECIFIC GROUNDS FOR UNPATENTABILITY

A. Grounds A-B: Danciu-Mahajan or Danciu-Mahajan-Calvert Render Claims 1-26 Obvious

1. Independent Claim 1

a. [1A]: "A machine-implemented method of controlling presentation of video content on a display device that loads any one of a plurality of different media players, … comprising:"

To any extent the preamble is limiting, Danciu teaches it. Danciu discloses a controlled device 18 ("display device", **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; Ex. 1102, ¶¶ 136-137.

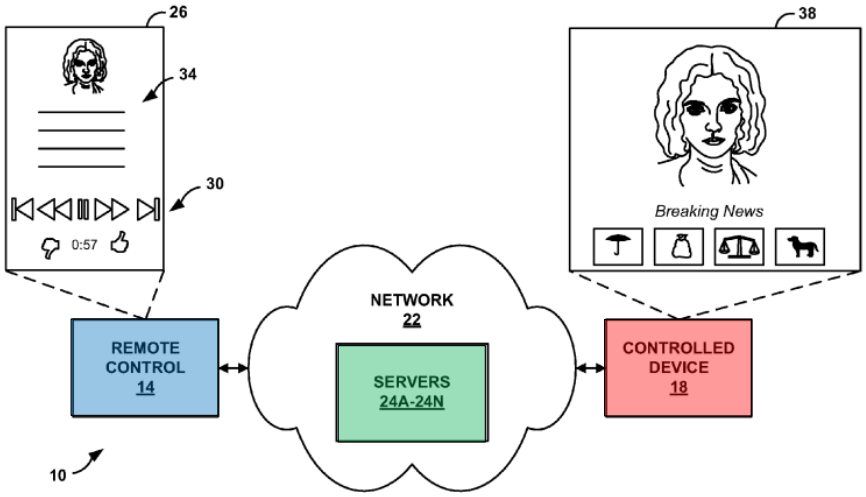


FIG. 1

Ex. 1112, Fig. 1 (annotated)

Controlled device 18 is a computing device that includes one or more processors 132 for executing program instructions stored on a non-transitory storage medium (e.g., ROM or electronic media of storage device 128) to perform operations. Ex. 1112, 11:7-13, 12:1-16; Ex. 1102, ¶ 138.

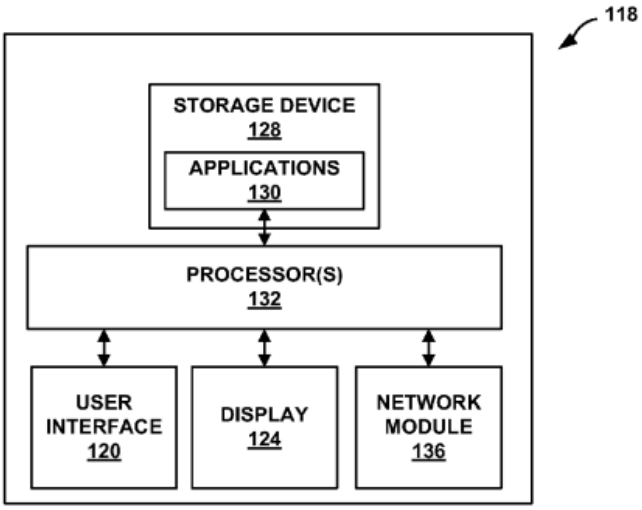


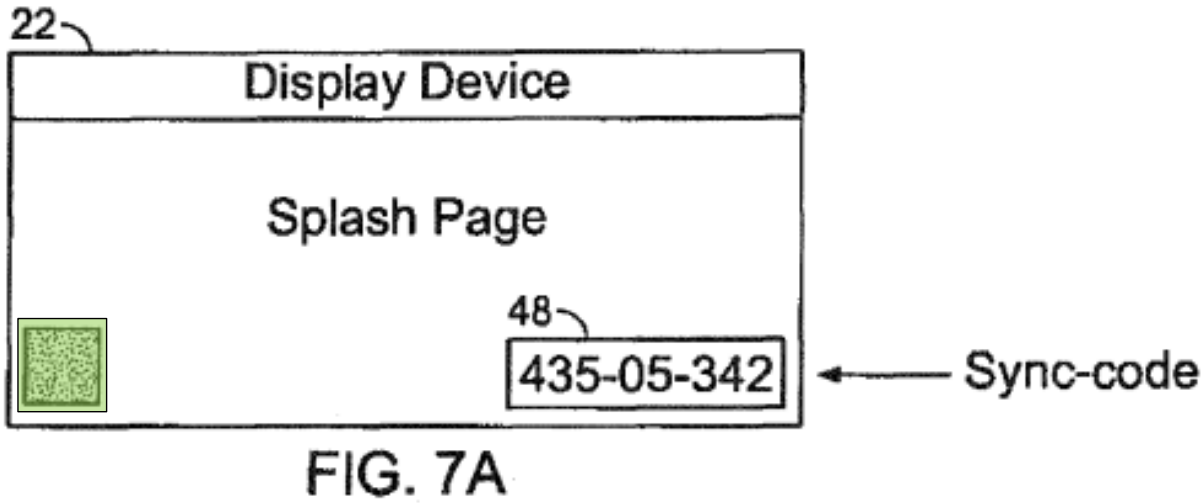
FIG. 4

Ex. 1112, Fig. 4

Danciu teaches that the video content that may be displayed using a web browser loaded on the controlled device. Ex. 1112, 11:41-44, 12:32-49, 13:4-15; Ex. 1102, ¶¶ 139-140. Additional detail as to how Danciu, Mahajan, and Calvert teach loading of a media player may be found above in Sections IV.A, IV.B. and IV.C.

b. [1B]: "assigning … a synchronization code to the display device;"

Danciu teaches the elements of limitation [1B]. Ex. 1102, ¶¶ 141-144. 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, 6:40-8:49, 13:62-14:36, 15:59-16:6. The unique identifier may be considered as a synchronization code because it synchronizes a session to which the remote control wishes to join. Ex. 1102, ¶ 142. In another example, the controlled device may present a user with a QR code, which the user may scan with the remote control. Ex. 1112, 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. Ex. 1112, 5:1-12. The QR code, which is provided to the controlled device ("the display device") for input on the remote control ("personal computing device"), may be considered as a synchronization code because it synchronizes a session to which the remote control wishes to join. Ex. 1102, ¶ 142. This is consistent with the '251 Patent, which states that "the synchronization code 48 [**green**] can be displayed, for example, on a splash page of the display device as text on the screen or as an image such as a QR code and can be entered into the mobile phone 20, for example, manually by the user or by scanning the code into the mobile phone," just as in Danciu. Ex. 1101, 5:16-21, Fig. 7A.



Ex. 1101, Fig. 7A (annotated)

Further, the QR code is assigned by 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." Ex. 1112, 4:39-41. Danciu further teaches that the QR code is generated by the device management module, which is stored on the servers. Ex. 1112, 15:38-58, Fig. 5. A POSITA reading Danciu's disclosure would thus have understood that the QR code is thus assigned by the server system, and would be stored in memory on the remote server device at least during the process of generating the code. Ex. 1102, ¶ 143.

c. [1C]: "receiving … a message, wherein the message includes the synchronization code;"

As discussed above regarding limitation [1B], Danciu teaches 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; *see* Section VI.A.1.b.

In another example, the controlled device ("the display device") may present a user with a QR code, which the user may scan with the remote control ("a personal computing device"). Ex. 1112, 4:36-45, 5:1-12, 8:23-49, 13:16-32, 15:28-58; Ex. 1102, ¶ 145.

Danciu teaches that "Upon scanning the QR code, remote control 62A transmits a message to servers 68 requesting that servers 68 issue remote control 62A a unique identification number and add remote control 62A to the session associated with the QR code, thereby pairing remote control 62A with controlled device 64A." Ex. 1112, 8:23-34, 15:38-58, Fig. 5. It would have been obvious to a POSITA that the remote control would need to communicate information, such as an indication of the scanned QR code, in a message to the server in order to initiate pairing. Ex. 1112, 15:38-58, Fig. 5; Ex. 1102, ¶ 146. This creates a unique session number included in messages for the session between the remote control and the controlled device. Ex. 1112, 4:4-35, 7:6-40, 8:11-22. Danciu teaches that the QR code is generated by the device management module, which is stored on the servers. Ex. 1112, 15:38-58, Fig. 5. Further, the session identifiers and other session information are stored on a data repository of the servers. Ex. 1112, 6:40-55, 13:62-14:1, 15:28-41, 15:59-16:6; Ex. 1102, ¶¶ 146-147.

d. [1D]: "storing … an association between the personal computing device and the display device based on the synchronization code;"

Danciu teaches that, upon receiving a message comprising the unique identifier and/or the QR code, an association is stored, as the resultant session identifiers and other session information are stored on a data repository of the servers. Ex. 1112, 6:40-55, 13:62-14:1, 15:28-41, 15:59-16:6. For example, "device management module 168 identifies and stores associations of remote controls 62 and controlled devices 64 to facilitate repeat communication between remote controls 62 and controlled devices 64." Ex. 1112, 15:28-41, Fig. 5; Ex. 1102, ¶¶ 148-149.

e. [1E]: "receiving … one or more signals … specifying a video file … and identifying a particular media player …"

Danciu teaches the elements of limitation [1E]. Ex. 1102, ¶¶ 150-175. Danciu's remote control 14 (**blue**) provides commands ("for example, 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. In doing so, the controlled device 18 ("the display device") is provided with commands from the remote control ("one or more signals from the personal computing device") that were received by the servers ("receiving, in the server system"). Ex. 1112, 5:64-6:2, 10:45-53; Ex. 1102, ¶ 151.

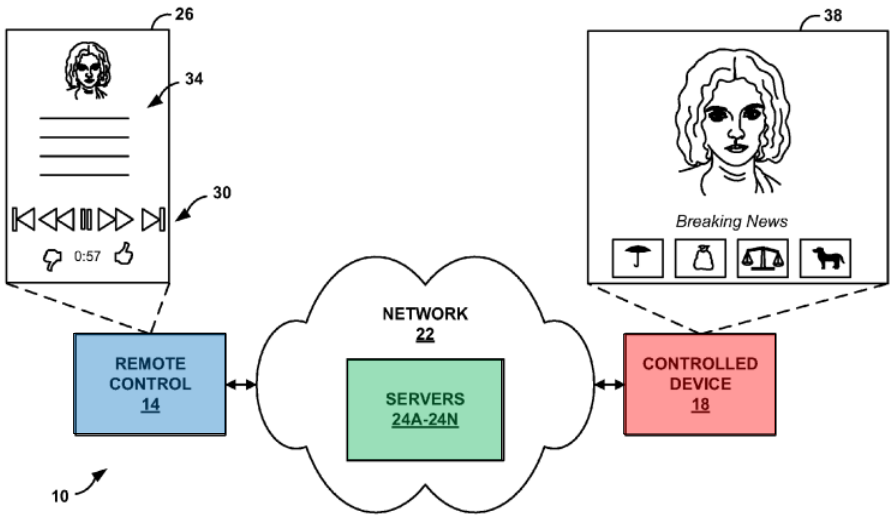


FIG. 1

Ex. 1112, Fig. 1 (annotated)

Danciu teaches that the servers direct the messages in a session from the remote control to the controlled device. Ex. 1112, 6:50-60, 7:17-29, 8:11-34, 10:45-53, 15:42-58, 16:24-17:12. "For example, server 24 may query a database of stored identification numbers to determine which controlled device is associated with the session that includes the remote control identifier. Server then transmits the control information to the intended controlled device 18 (210)." Ex. 1112, 16:56-61; Ex. 1102, ¶ 152.

Further, Danciu teaches using the session identification numbers to "route the messages to other members of the session. For example, a user may actuate one of controls 30 of remote control 14 to alter the content displayed on display 38 of controlled device 18." 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. Ex. 1112, 16:24-17:12, 17:21-43; Ex. 1102, ¶ 153.

Danciu teaches "identifying a particular media player for playing the video content." 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. "For example, a user may actuate one of controls 30 of remote control 14 to alter the content displayed on display 38 of controlled device 18." Ex. 1112, 7:17-29. "[U]ser interface 26 [of the remote control 14] may display controls 30 and information 34 associated with content being played on controlled device 18." Ex. 1112, 5:31-33. The types of content that the controlled device may display include YouTube, Hulu, Netflix, or other such video content services. Ex. 1112, 11:34-35, Fig. 1; Ex. 1102, ¶ 154.

To any extent that Patent Owner argues that Danciu's specification does not explicitly state that user interface 26 displays the same content as display 38, 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." Ex. 1112, 5:29-41; Ex. 1102, ¶¶ 155-156. 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 "identifying a particular media player for playing the video content," because the remote device ("the personal computing device") sends commands for a video application, which may be a web browser, presenting the content displayed on the controlled device ("the display device"). Ex. 1102, ¶ 156.

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.[2] The platform

---

[2] A POSITA would have understood that the disclosure is bidirectional. Ex. 1102, ¶ 157.

accomplishes this by translating between universal commands and platform specific media playback commands that can be understood by the client's media platform. Ex. 1114, [0012]-[0013], [0022], [0035]-[0036], [0041], Figs. 3, 5; Ex. 1102, ¶ 157.

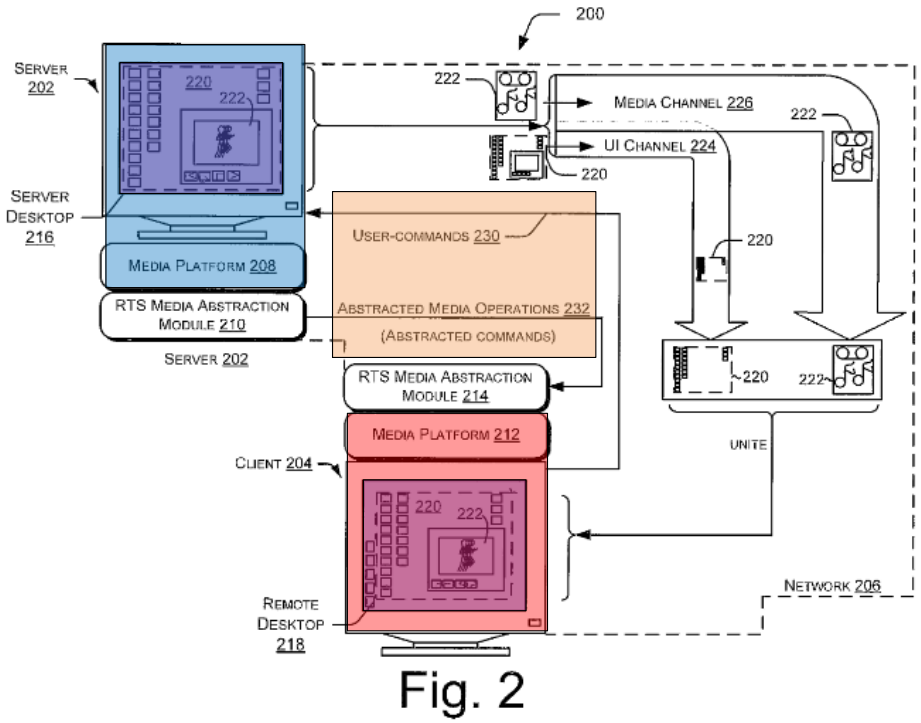


Fig. 2

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**):

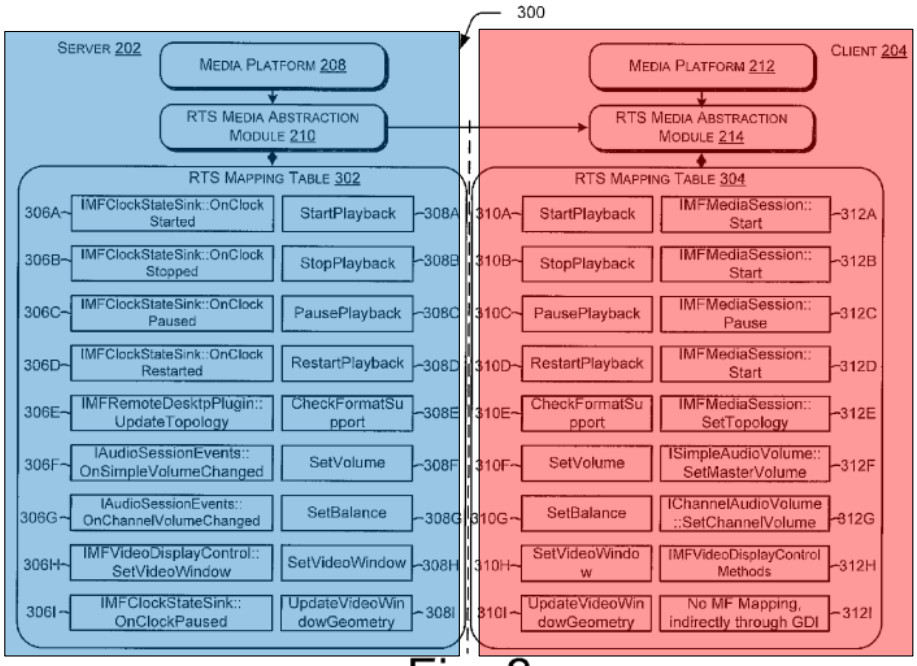
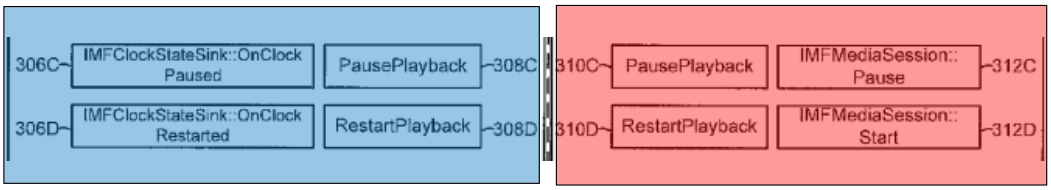


Fig. 3

Ex. 1114, Fig. 3 (annotated)

Ex. 1102, ¶ 158.

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"). Ex. 1114, [0037]-[0043], Fig. 3.



Ex. 1114, Fig. 3 (annotated)

Ex. 1102, ¶ 159.

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 204." Ex. 1114, [0037]. The '251 Patent describes sending a "command (e.g., play, pause, rewind, etc.)." Ex. 1101, 4:29-35, 5:58-62; Ex. 1102, ¶ 160. Furthermore, in the Touchstream-Google case, Patent Owner stated 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, p. 2 (emphasis added). Signals containing the commands, which are particular to the media content playing on the type of media player of Mahajan's server, are thus a "specifying a video file to be acted upon and identifying a particular media player for playing the video content." Ex. 1102, ¶ 161.

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, ¶ 162. Mahajan, like Danciu, teaches a system wherein a user can command media on a controlled device to "play," "stop," etc. Ex. 1114, [0014]; Ex. 1112, 5:29-41; Ex. 1102, ¶ 162. 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, ¶ 162. 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, ¶ 162.

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, ¶ 163. Mahajan teaches a system

similar to Danciu wherein commands are sent from a remote device to control media playback on another device. Ex. 1102, ¶ 163.

Additionally, a POSITA would have had the skills and knowledge to implement support for sending commands for disparate devices 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. Ex. 1102, ¶ 164. 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, ¶ 164.

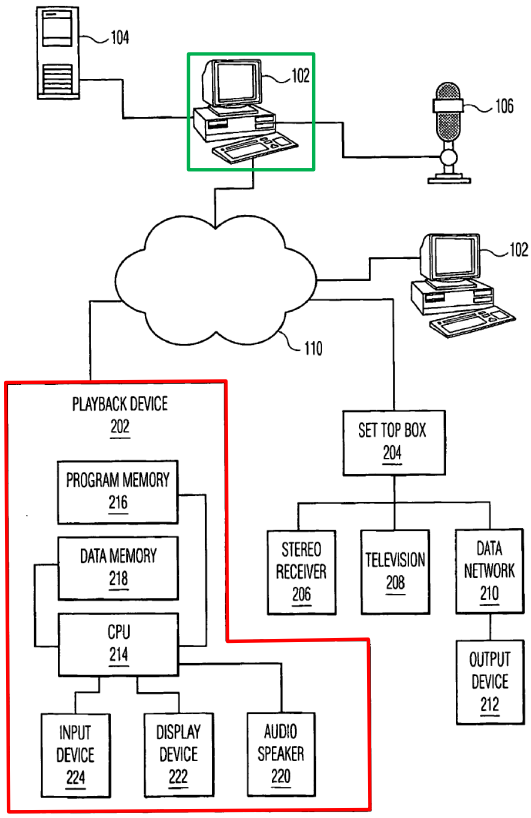
In Danciu-Mahajan, the system identifies the first type of media playing application from the plurality of media playing application types based on the data source and the capabilities of the client, as taught by Mahajan. Ex. 1114, [0050]; Ex. 1102, ¶ 165.

Once a command is received, those commands "are associated with platform specific commands." Ex. 1114, [0063], Fig. 5 (step 508). The system thus identifies the media player (e.g., Dshow operating on the client) in response to receiving the commands in the received set of messages. Ex. 1114, [0037]-[0043], [0059]-[0063], Figs. 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. Ex. 1114, [0050]; Ex. 1102, ¶ 166.

Further, to any extent that Patent Owner argues that Danciu-Mahajan does not teach "identifying a particular media player for playing the video content", it was known before the priority date of the '251 Patent to select between a plurality of media players based on messages referencing a piece of content as demonstrated by Calvert. Ex. 1102, ¶ 167.

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. 1102, ¶ 168.

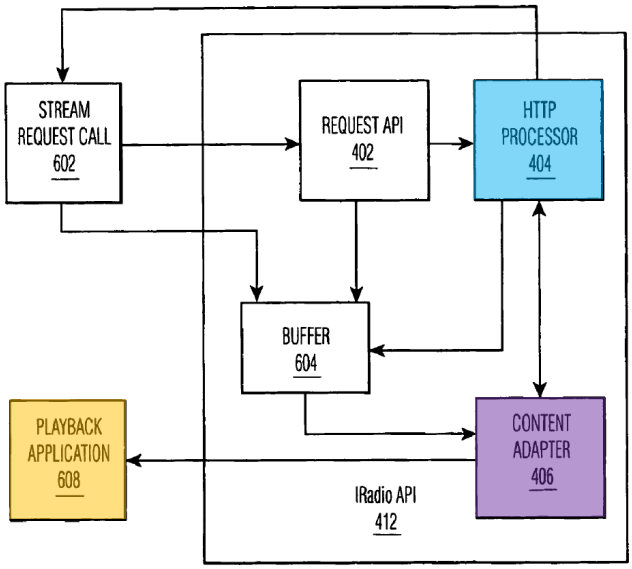


Ex. 1111, Fig. 2 (annotated)

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]; Ex. 1102, ¶ 169.

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]-[0042], Fig 6. Based on that analysis, the media service data is sent to the appropriate player application 608 (**orange**). Ex. 1111, [0040]-[0044], Fig. 6; Ex. 1102, ¶ 170.



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, [0030]-[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. Ex. 1111, [0031]-[0032]; Ex. 1102, ¶ 171.

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, ¶ 172. 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. Ex. 1102, ¶ 172. 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, 11:22-35, 12:32-49, 16:55-67, 17:21-43; Ex. 1102, ¶ 172. 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, ¶ 172.

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, ¶ 173. 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. Ex. 1102, ¶ 173.

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, ¶ 174. Thus, a POSITA would have expected success in applying Calvert's teaching to the similar Danciu system. Ex. 1102, ¶ 174.

f. [1F]: "the one or more signals further including a … universal playback control command for controlling playing of the video content …"

As discussed above regarding limitation [1E], Danciu-Mahajan and Danciu-Mahajan-Calvert teach a system wherein commands are translated into a universal format for transmission to a client device. Ex. 1102, ¶¶ 176-178. 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 ("Controlled device 18 receives the control message and performs the appropriate action"), 16:55-67, 17:21-43. And in view of Mahajan, these commands comprise playback commands such as "play", "pause", or "restart." Ex. 1114, [0014]. And they are a "universal . . . command" because the devices need not be aware of all possible media platforms, and can instead convert genericized commands into platform-specific commands as appropriate. Ex. 1114, [0014], [0021]-[0022], [0037]-[0043], [0047]-[0050], [0053], [0063], Figs. 3, 5; Ex. 1102, ¶ 177.

g. [1G]: "converting … the … command into corresponding programming code to control playing of the video content …, wherein converting … includes selecting from … specific commands, each of which represents a corresponding playback control command …; and"

Danciu-Mahajan teaches converting the universal playback command into corresponding programming code. Ex. 1102, ¶¶ 179-184. Mahajan's Figure 3 depicts an API for translating between commands sent from Mahajan's server (**blue**) to a client (**red**):

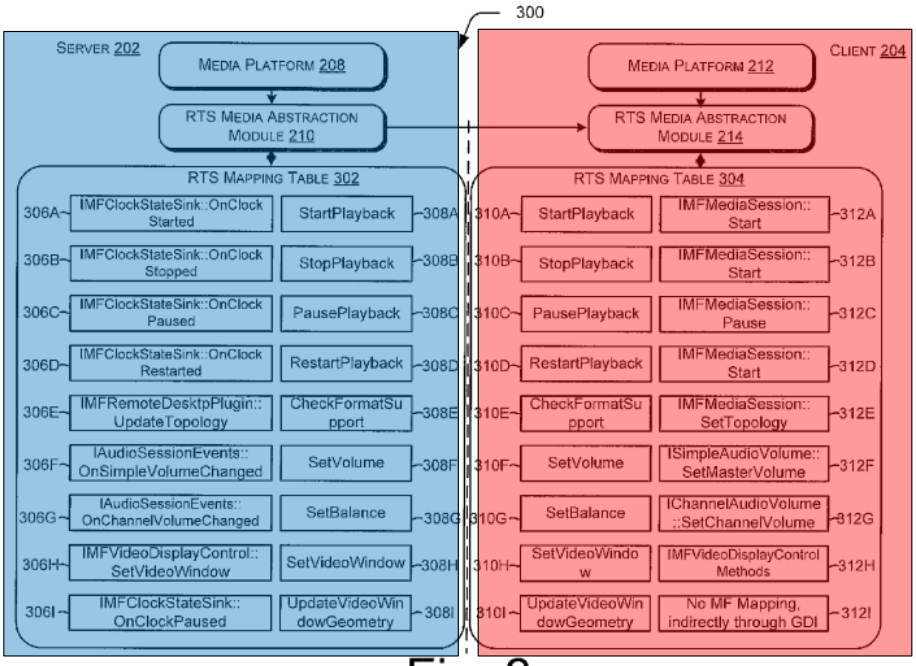
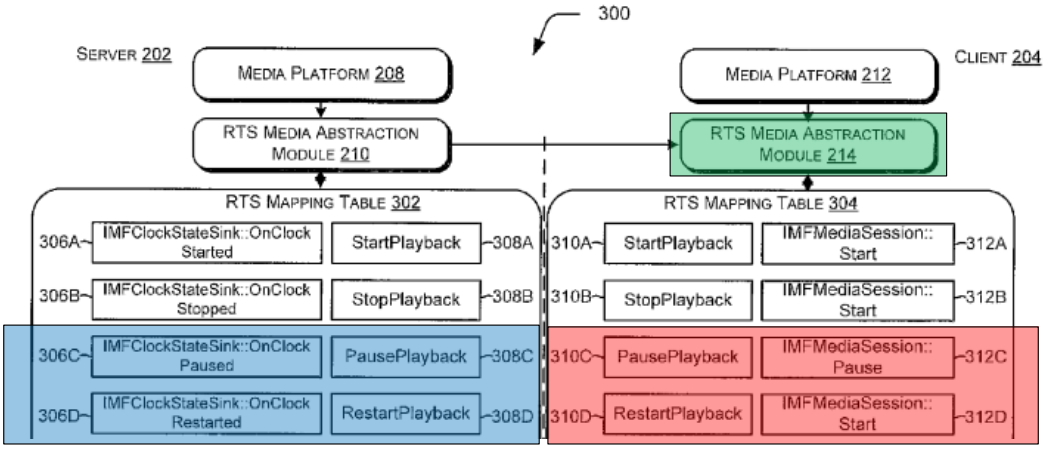


Fig. 3

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 the server (**blue**). Ex. 1114, [0037]-[0043], [0063], Figs. 3, 5; Ex. 1102, ¶ 180.



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, ¶ 181.

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. Ex. 1102, ¶ 182. 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." Ex. 1114, [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, ¶ 182.

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 "selecting from among a plurality of specific commands, each of which represents a corresponding playback control command for a respective media player." Ex. 1102, ¶ 183.

h. [1H]: "storing … information for … the display device, wherein the information specifies the video file …, identifies the particular media player …, and includes the corresponding programming code to control playing of the video content … in accordance with the … command."

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." Ex. 1112, 4:39-41. Danciu further teaches that the QR code is generated by the device management module, which is stored on the servers. Ex. 1112, 15:38-58, Fig. 5. A POSITA reading Danciu's disclosure would thus have understood that the QR code is thus assigned by the server system, and would be stored in memory on the remote server device at least during the process of generating the code. Ex. 1102, ¶ 185. This creates a unique session number for the session between the remote control and the controlled device. Ex. 1112, 4:4-35, 7:6-10, 8:11-34. The session identifiers and other session information are stored on a data repository of the servers. Ex. 1112, 6:40-55, 13:62-14:1, 15:28-41, 15:59-16:6, Figs. 5, 7. This includes storing control information for a particular application (e.g., "stop playback") while the server determines a controlled device corresponding to a command. Ex. 1112, 17:21-43, 17:66-18:54, Figs. 7, 8; Ex. 1102, ¶¶ 185-186. The

command may be further be formatted for a particular device, as taught by Mahajan. *See* Sections VI.A.1.e-VI.A.1.f.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 1. Ex. 1102, ¶¶ 137-186.

2. Dependent Claim 2

a. [2A]: "The method of claim 1 including:"

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the method of claim 1 for the reasons set forth above. *See* Section IV.A.1. Ex. 1102, ¶ 187.

b. [2B]: "checking … the identity of the media player …;"

As noted above in Section VI.A.1.e, Danciu-Mahajan teach receiving one or more signals "identifying a particular media player for playing the video content". Ex. 1112, 5:29-6:2, 10:45-53; Ex. 1114, [0012]-[0013], [0022], [0035]-[0036], [0041], Figs. 3, 5; Ex. 1102, ¶ 188.

To the extent Patent Owner argues that Danciu does not teach "checking, in the server system, the identity of the media player identified in the one or more signals from the personal computing device," it was known before the priority date of the '251 Patent to check the identity of a particular media player based on information received in a signal as demonstrated by Calvert. Ex. 1102, ¶ 189.

As discussed above in Section VI.A.1.e, Calvert describes controlling playback of content that 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 identifying the appropriate media player based on information received in a message to determine "the format of the media service, the corresponding playback application 608, [and] output requirements of the media service." Ex. 1111, [0040]-[0042], Fig 6; Ex. 1102, ¶ 190.

Based on the teachings of Calvert, a POSITA would have understood that the server of Danciu could identify the appropriate media player from information in the message. Ex. 1102, ¶ 191.

c. [2C]: "loading … protocols or application programming interfaces … based on the … media player; and"

As discussed above in Sections VI.A.1.e-g, Mahajan teaches an API for commands, such as commands to "pause" content. Ex. 1114, [0037]-[0043], Fig. 3; Ex. 1102, ¶ 193.

To the extent Patent Owner argues that Danciu-Mahajan does not teach "loading an appropriate set of protocols or application programming interfaces from a library based on the identity of the media player," it was known before the priority date of the '251 Patent to load API commands from a library based on an identified media player as demonstrated by Calvert. Ex. 1102, ¶ 194.

As discussed above in Sections VI.A.1.a and VI.A.1.e, Calvert describes selecting from a plurality of media players based on information about the received media and sending the media data to the appropriate selected media player. Calvert further describes how this is accomplished using API calls and that APIs are stored in program memory. Ex. 1111, [0026], [0039]-[0043]. A POSITA would have known that in order for API commands to be used in a computing device, the API must be loaded and that a library is a typical data structure used for storing APIs. Ex. 1102, ¶ 195.

d. [2D]: "converting the command … into corresponding code …."

As discussed above in Section VI.A.1.g, Danciu-Mahajan and Danciu-Mahajan-Calvert teach converting between universal commands and platform-specific commands for controlling a media player. Ex. 1102, ¶ 197.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 2. Ex. 1102, ¶¶ 187-198.

3. Dependent Claim 3

a. "… wherein converting the command into corresponding programming code … includes using … a look-up table."

As discussed in Section VI.A.1.g, Mahajan teaches an RTS Media Abstraction module that converts the commands received by a client from a server. Ex. 1114, [0037]-[0043], [0063], Figs. 3, 5. Further, this conversion is performed "using

information in a look-up table." Ex. 1114, [0037]-[0042], Fig. 3. Figure 3 of Mahajan shows mapping tables for translating between commands sent from Mahajan's server (**blue**) to a client (**red**):

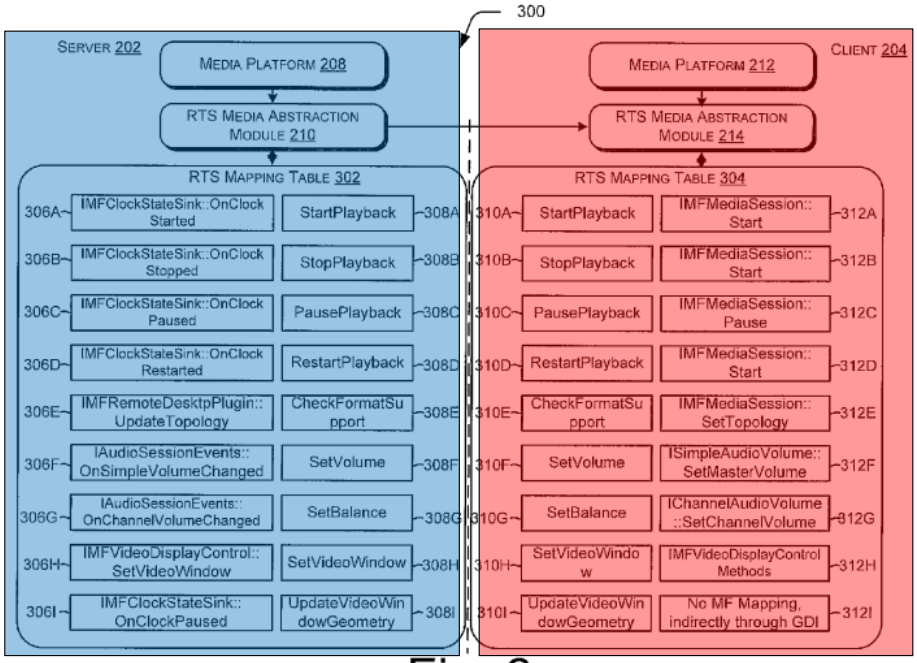


Fig. 3

Ex. 1114, Fig. 3 (annotated)

Therefore, Danciu-Mahajan and Danciu-Mahajan-Calvert renders obvious claim 3. Ex. 1102, ¶¶ 199-201.

4. Dependent Claim 4

a. "… wherein the look-up table stores … commands, each of which represents … a corresponding command …."

As discussed in Section VI.A.3, Figure 3 of Mahajan shows mapping tables for translating between commands sent from Mahajan's server (**blue**) to a client (**red**):

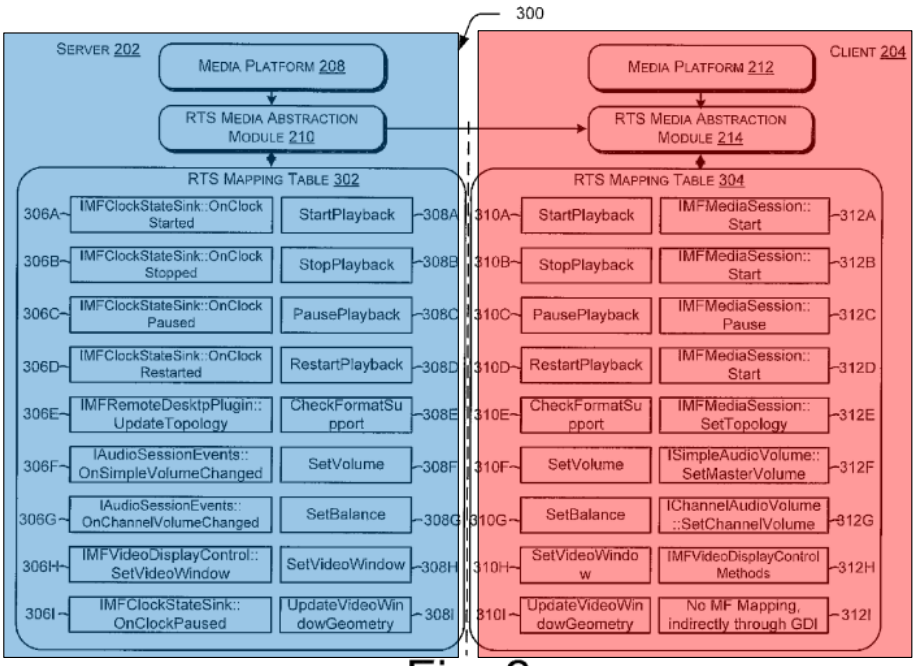


Fig. 3

Ex. 1114, Fig. 3 (annotated)

These commands show how, for example, a "pause" command is translated. Ex. 1114, [0037]-[0043], Fig. 3; Ex. 1102, ¶¶ 202-205.

Therefore, Danciu-Mahajan and Danciu-Mahajan-Calvert render obvious claim 4.

5. Dependent Claim 5

a. "… wherein the … command represents an instruction to play …, to stop … or to pause playing the video content."

As discussed in Sections VI.A.1.e and VI.A.4, Mahajan teaches an RTS mapping table for translating between universal commands and particular commands for a given media player. Ex. 1114, [0037]-[0043], Fig. 3. Those commands include commands to "StartPlayback", "StopPlayback", or "PausePlayback". Ex. 1114, Fig. 3; Ex. 1102, ¶¶ 206-208.

Therefore, Danciu-Mahajan and Danciu-Mahajan-Calvert render obvious claim 5.

6. Dependent Claim 6

a. "… wherein the video content is an interactive video game."

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the method of claim 1 for the reasons set forth above. *See* Section VI.A.1.

Danciu teaches that its controlled device and remote device both comprise processors for playing an interactive video game. Ex. 1112, 10:9-23, 12:32-49. It would have been obvious to a POSITA, in view of these express teachings, that the video content under control may comprise an interactive video game. Ex. 1102, ¶¶ 209-210.

To any extent that Patent Owner argues that Danciu doesn't teach this feature, it is taught by Mahajan. Mahajan teaches that the computing environment for operation of its systems and methods may include a "game console." Ex. 1114, [0065]. Further, Mahajan teaches that input to its system may be made using a "game pad" or a "game port." Ex. 1114, [0072]. Thus, it would have been obvious to a POSITA, in view of these express teachings, that the video content under control may comprise an interactive video game. Ex. 1102, ¶¶ 211-212.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 6.

7. Dependent Claim 7

a. "… wherein the video content is streaming media."

As discussed above in Section VI.A.1.e, Danciu teaches that the video content may be streaming media, including YouTube, Hulu, Netflix, or other such video content services. Ex. 1112, 5:31-33, 7:17-29, 11:34-35; Ex. 1102, ¶¶ 213-215.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 7.

8. Dependent Claim 8

a. "… wherein the synchronization code is uniquely associated with the display device …."

As discussed in Section VI.A.1.b, 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; Ex. 1102, ¶¶ 216-218.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 8.

9. Dependent Claim 9

a. "… wherein the synchronization code is different from an IP address … and … a MAC address…."

Danciu teaches that the QR code "identifies a session that has been created by servers 68." Ex. 1112, 8:26-27. Danciu teaches that the QR code may identify "a user account or previously initiated session maintained by the network service." Ex. 1112, 4:39-41. A POSITA would thus have understood the QR code may be something other than an IP address or a MAC address. Ex. 1102, ¶¶ 219-221.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 9.

10. Dependent Claim 10

a. "… wherein assigning a synchronization code includes assigning a randomly generated code … each time the display device connects to the server system."

As discussed above in Section VI.A.1.b, Danciu's pairing operation uses a uniquely-generated session identifier and/or QR code to associate the remote control to a session with the controlled device. Ex. 1112, 4:4-13, 4:36-45, 6:40-7:10, 8:23-49, 13:16-32, 15:28-58. And to any extent Danciu does not explicitly describe whether the session identifier and/or QR code is random, or whether it is generated each time the display device connects, a POSITA would have found such an implementation to be an obvious design choice, for example, to improve security or to prevent an accidental incorrect pairing of devices. Ex. 1112, 13:16-32; Ex. 1102,

¶¶ 222-224. For example, when assigning a unique identifier, it would have been an obvious design choice that a random process could be used to generate a unique number. Ex. 1102, ¶ 223.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 10.

11. Independent Claim 11

a. [11A]: "A system for controlling playing of video content … that loads any one of … different media players, … comprising:"

As discussed in Section VI.A.1.a, to the extent the preamble is limiting, Danciu-Mahajan or Danciu-Mahajan-Calvert teaches it. Ex. 1102, ¶ 225.

b. [11B] "a server system;"

As discussed in Sections VI.A.1.a-VI.A.1.b, Danciu discloses a controlled device 18 ("display device", **red**), which may be a computing device such as a set-top box (STB) or personal video recorder (DVR), connected via network 22, including servers 24A-24N (**green**), to a remote control 14 (**blue**). Ex. 1112, 5:42-63; Ex. 1102, ¶ 226.

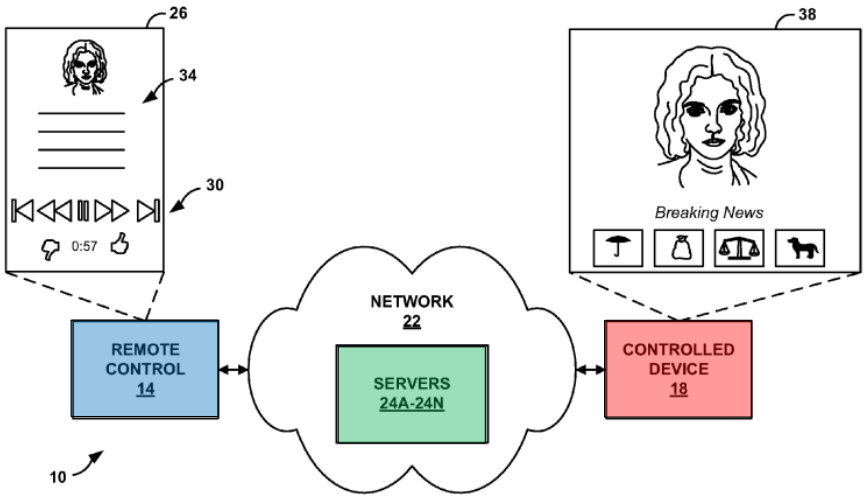


FIG. 1

Ex. 1112, Fig. 1 (annotated)

c. [11C]: "a first database storing a relationship between a personal computing device and the display device based on a synchronization code … in a message from the personal computing device … separate from the server system and … the display device; and"

As described in Sections VI.A.1.b-VI.A.1.d, Danciu teaches that, upon receiving a unique identifier, a relationship between the personal computing device and the display device, based on the unique identifier, is stored. The resultant session identifiers and other session information are stored on a data repository of the servers. Ex. 1112, 6:55-7:51, 13:62-14:1, 15:28-41, 15:59-16:6, Fig. 5; Ex. 1102, ¶ 228.

d. [11D]: "a second database;"

Danciu teaches that "servers 24 include one *or more* data repositories or databases for storing information, such as identification numbers, session identifiers, and any other information required to carry out data transfer between remote control 14 and controlled device 18." Ex. 1112, 6:40-46 (emphasis added); Ex. 1102, ¶¶ 230-231.

e. [11E]: "wherein the server system is configured to receive one or more signals from the personal computing device … specifying a video file … and … a particular media player … further including a … command for controlling playing of the video content …"

As described above in Sections VI.A.1.e-VI.A.1.f, Danciu-Mahajan and Danciu-Mahajan Calvert teach this feature. Ex. 1102, ¶¶ 232-233.

f. [11F]: "one or more non-transitory computer-readable media storing instructions that … cause the server system to perform operations including converting the … command into corresponding programming code …, wherein converting … includes selecting from … specific commands, each of which represents a corresponding … command for a respective media player;"

As described above in Section VI.A.1.g, Danciu-Mahajan and Danciu-Mahajan-Calvert teach this feature. Ex. 1102, ¶¶ 234-235.

g. [11G]: "the server system being further configured to store … information for … the display device, wherein the information specifies the video file …, identifies the particular media player …, and includes the corresponding programming code …."

As described above in Section VI.A.1.h, Danciu-Mahajan and Danciu-Mahajan-Calvert teach this feature. As Danciu teaches it may use "one or more" databases, it would have been obvious to a POSITA that the information referenced in limitation [11C] could be stored in one database, and information referenced in limitation [11G] may be stored in another. Ex. 1112, 6:40-46; Ex. 1102, ¶ 236.

Danciu-Mahajan and Danciu-Mahajan-Calvert thus teach claim 11. Ex. 1102, ¶¶ 225-237.

12. Dependent Claims 12-21

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the systems of claims 12-21 for the same reasons set forth above regarding claim 11 further in view of the discussion of the additional features of claims 2-10. *See* Sections VI.A.2-VI.A.11. Ex. 1102, ¶¶ 238-247.

13. Independent Claim 22

a. [22A]: "An automated machine-implemented method of presenting video content on a display device that loads any one of … different media players, the method comprising:"

As discussed in Section VI.A.1, to the extent the preamble is limiting, Danciu-Mahajan or Danciu-Mahajan-Calvert teaches it. Ex. 1102, ¶ 248.

b. [22B]: "displaying … a synchronization code …, …storing, based on a message from a personal computing device …, an association between the display device and the personal computing device, the message … including the synchronization code;"

As described in Sections VI.A.1.b-VI.A.1.d, Danciu-Mahajan and Danciu-Mahajan-Calvert teach limitation [22B]. Danciu teaches that the controlled device may display a QR code to a user, which the user may scan with the remote control. Ex. 1112, 4:36-45, 8:23-49, 13:16-32, 15:28-58. Danciu teaches that, upon receiving a message comprising the unique identifier and/or the QR code, an association is stored, as the resultant session identifiers and other session information are stored on a data repository of the servers. Ex. 1112, 6:55-7:51, 13:62-14:1, 15:28-41, 15:59-16:6; Ex. 1102, ¶¶ 249-250.

c. [22C]: "retrieving … first information that specifies a first video file …, … identifies a first media player …, and … indicates corresponding programming code to control playing of the first video file … in accordance with a first playback control command, wherein the server system previously received… one or more signals specifying the first video file, identifying the first media player and including the first playback control command;"

As described in Sections VI.A.1.e and VI.A.1.f, Danciu-Mahajan and Danciu-Mahajan-Calvert teach the features of limitation [22C]. In the instance where multiple commands are sent for the same video file, this meets the limitation

regarding "wherein the server system previously received… one or more signals specifying the first video file…" Ex. 1102, ¶ 251.

d. [22D]: "obtaining … over the Internet the first media player …;"

Danciu teaches that the video content that may be displayed on the controlled device may include "content accessible via the World Wide Web, or other content providers." Ex. 1112, 11:43-44. In such an instance, it would have been obvious to a POSITA that the media player for that Internet content would have been downloaded as part of the webpage. Ex. 1112, 11:41-44, 12:32-49, 13:4-15; Ex. 1102, ¶ 253. Further, Mahajan teaches that the display device may display a webpage obtained and loaded over the Internet from a server for displaying content. Ex. 1114, [0019]-[0020].

To any extent Patent Owner argues that Danciu-Mahajan does not teach this feature, 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]; Ex. 1102, ¶¶ 254-255.

e. [22E]: "loading the first media player …;"

As described in Section VI.A.13.d, Danciu-Mahajan and Danciu-Mahajan-Calvert teach obtaining a media player over the Internet in order to load (e.g., install)

it on the controlled device ("the display device"). It would have been obvious to a POSITA that for a media player to execute and display content, it should be loaded on the device, even if temporarily in RAM. Ex. 1102, ¶ 256.

f. [22F]: "executing the first playback control command … using the first media player;"

Danciu teaches that the controlled device executes the commands. Ex. 1112, 5:29-37, 5:64-6:2, 7:17-29, 13:4-32, 16:55-67, 17:21-43; Ex. 1102, ¶ 258.

g. [22G]-[22J]: "… retrieving … second information that specifies a second video file … that identifies a second media player … and that indicates corresponding programming code to control playing of the second video file … in accordance with a second playback control command, wherein the server system previously received … signals specifying the second video file, identifying the second media player and including the second playback control command;

obtaining … the second media player for playing the second video file;

loading the second media player …; and

executing the second playback control command … using the second media player.

Limitations [22G]-[22J] are no different from limitations [22C]-[22F] but for a second video file, second media player different from the first media player, and second playback control command. Ex. 1101, claim 22. Danciu teaches that upon creation of a session, "messages", which is plural, are routed continually for that session. Ex. 1112, 7:11-8:58. Accordingly, the controlled device and the remote

control operate in the same manner as described in Sections VI.A.13.c-VI.A.13.f for a subsequent command entered by a user of the remote control for the controlled device, which includes converting the command to a second playback control command. Ex. 1102, ¶ 260.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 22. Ex. 1102, ¶¶ 248-261.

14. Dependent claim 23

a. "…wherein the display device comprises a television set …."

Danciu teaches that the controlled device may be an Internet-connected television with a display screen. Ex. 1112, 1:39-50, 3:24-28, 5:42-63, 11:36-44, Fig. 4; Ex. 1102, ¶¶ 262-263.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 23.

15. Dependent claim 24

a. "… wherein the display device comprises a laptop or personal computer."

Danciu teaches that the controlled device may "include any Internet-connected device capable of receiving commands." Ex. 1112, 3:24-28, 1:39-50, 5:42-63, 11:36-44, Fig. 4. A POSITA would have understood a laptop or personal computer to be such a device. Ex. 1102, ¶¶ 264-265.

Therefore, Danciu-Mahajan or Danciu-Mahajan-Calvert teach claim 24.

16. Dependent Claim 25

a. "… wherein each of the first and second commands represents an instruction to play …, to stop … or to pause playing the respective video file."

Danciu-Mahajan and Danciu-Mahajan-Calvert further teach the limitations of claim 25 for the same reasons discussed above regarding claim 5. *See* Sections VI.A.5, VI.A.13. Ex. 1102, ¶ 266.

17. Dependent Claim 26

a. "…wherein the display device checks whether the respective media player … is loaded in the display device before obtaining a copy of the media player …."

Danciu-Mahajan and Danciu-Mahajan-Calvert teach the additional limitations of claim 26 for the same reason discussed in Section VI.A.13.d. In particular, it would have been obvious to a POSITA that a device would only obtain a media player over the Internet if it determined that it was not already loaded on the device and therefore needed. Ex. 1102, ¶ 267.

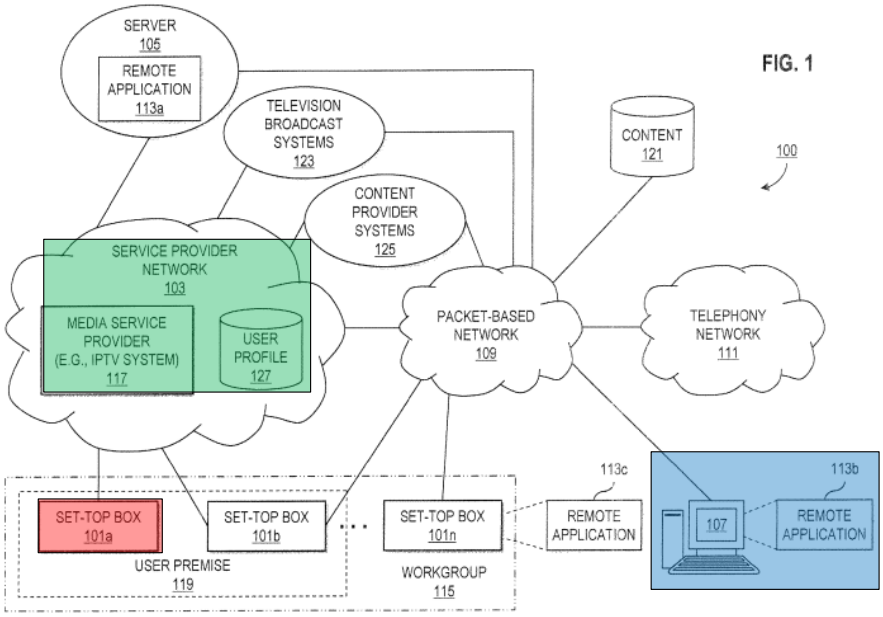
B. Ground C: Aldrey-Mahajan Renders Claims 1-26 Obvious

1. Independent Claim 1

a. [1A]: "A machine-implemented method of controlling presentation of video content on a display device that loads any one of a plurality of different media players, … comprising:"

To any extent the preamble is limiting, Aldrey teaches it. Aldrey discloses a STB 101, or, alternatively, a television (a "display device", **red**) connected via a server provider network 103 (part of a "server system") comprising a media service

provider (MSP) 117 and a user profile repository 127 (**green**) to a remote application running on an end terminal 107 (a "personal computing device", **blue**). Ex. 1115, [0012], [0018]-[0023], [0025]-[0026], [0029]-[0030], Figs. 1-2; Ex. 1102, ¶ 270.

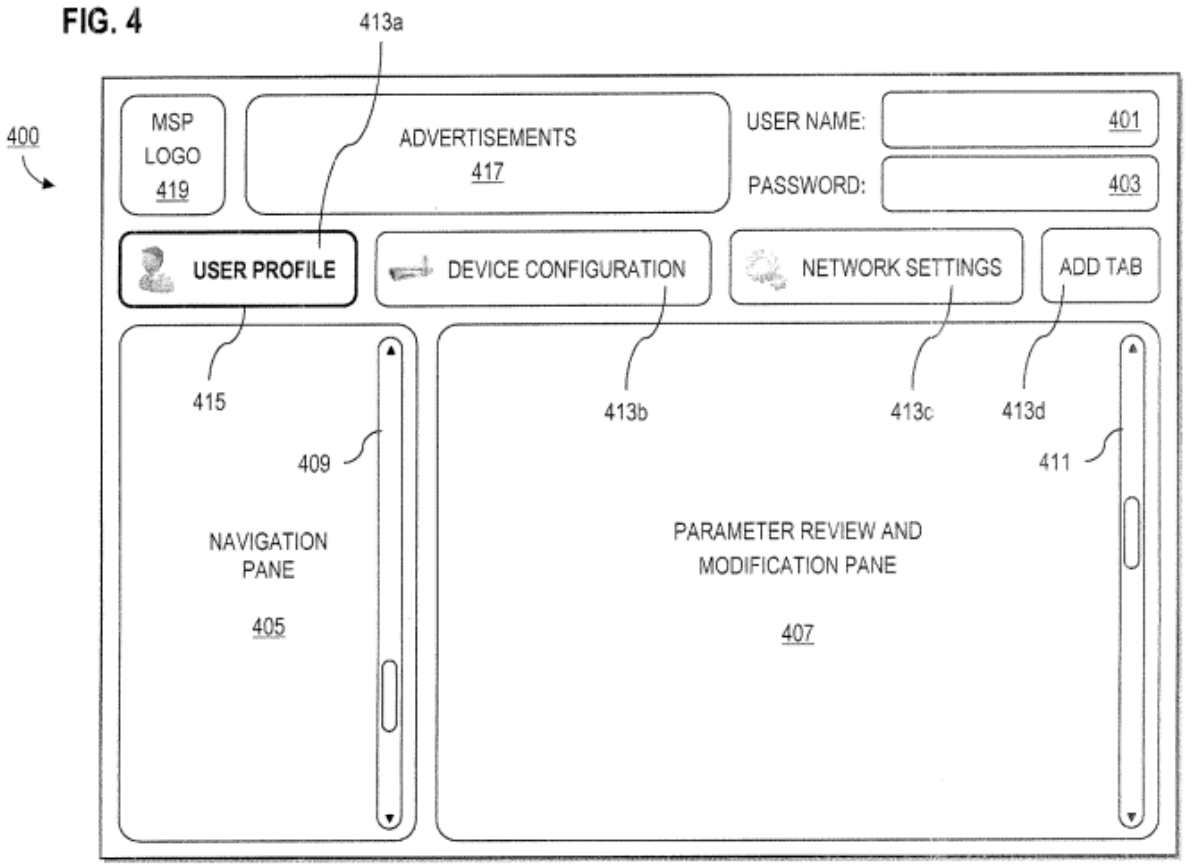


Ex. 1115, Fig. 1 (annotated)

Aldrey teaches that the remote application, which can be connected via the Internet, may be loaded as an overlay on the media content in order to control the media being displayed. Ex. 1115, [0019], [0023]-[0025], [0030]-[0031], [0044]-[0047], [0052]-[0053], [0062]-[0066]; Ex. 1102, ¶¶ 271-273. Further, Aldrey-Mahajan teaches this feature as described in Section VI.B.13.d.

b. [1B] "assigning … a synchronization code to the display device;"

Aldrey teaches the elements of limitation [1B]. 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], [0068]-[0071]. This user interface may be executed on any device, including a remote terminal, STB, or television, to modify information on the server. Ex. 1115, [0031], [0050]-[0051], [0064], [0067], Fig. 4; Ex. 1102, ¶ 275.



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". Ex. 1115, [0064], [0051]. Using this information, "MSP 117, server 105, and or one or more remote applications 209a-209c may obtain configuration parameters and user interface information." Ex. 1115, [0064]. Moreover, 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, ¶ 276. This information is stored in the user profile repository 127. Ex. 1115, [0057]-[0066]; Ex. 1102, ¶¶ 276-277.

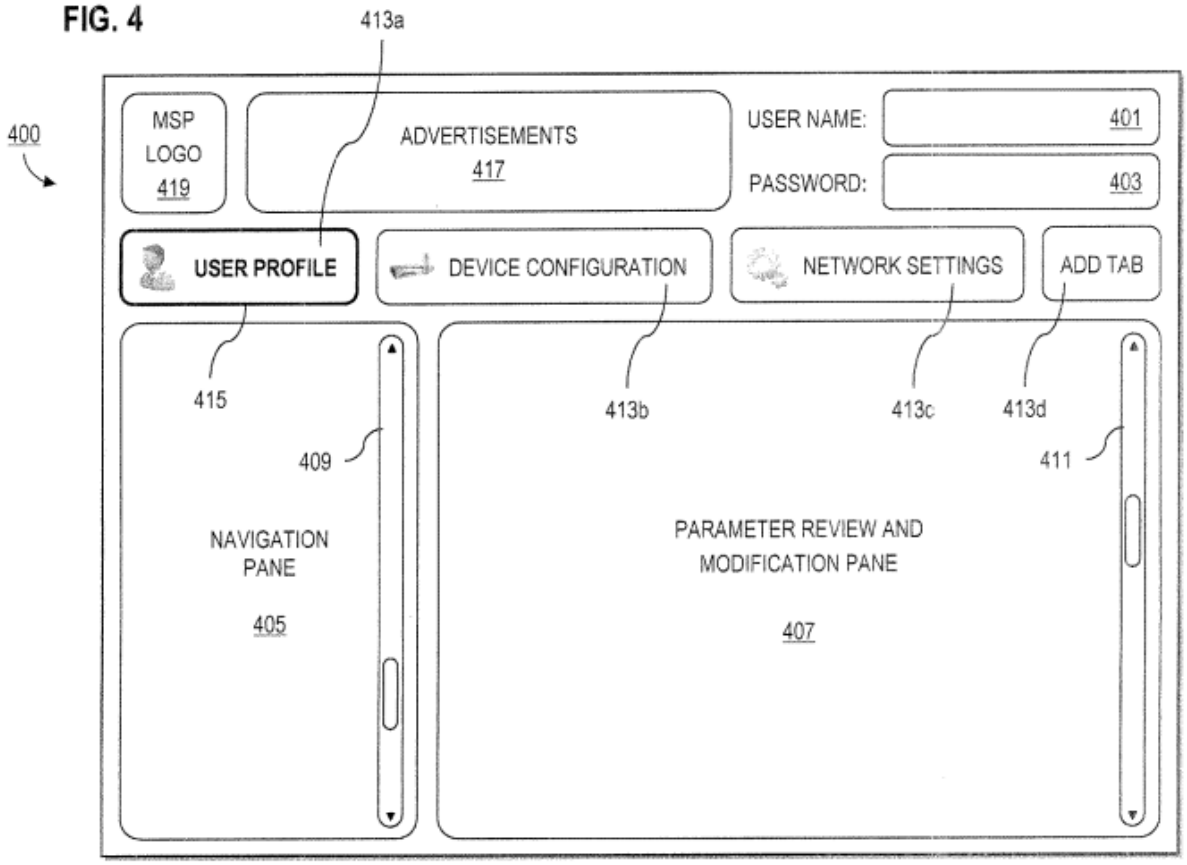
c. [1C]: "receiving … a message…, wherein the message includes the synchronization code;"

Aldrey teaches the elements of limitation [1C]. Aldrey teaches a user entering information "such as: device type, serial number, registration number, MAC address, phone number, communications link, etc." Ex. 1115, [0064]. This message from the user identifying the device thus includes the synchronization code. Ex. 1102, ¶¶ 278-280.

d. [1D]: "storing … a record establishing an association between the personal computing device and the display device based on the synchronization code;"

As discussed above in Section VI.B.1.b regarding limitation [1B], Aldrey teaches that a user interface is provided to the user on an end terminal ("a personal

computing device") which involves registration of user profile information and/or configuration data ("a record establishing an association") allowing the user to access, via an end terminal, devices identified in records stored in the user profile repository, including a STB or television ("display device"). Ex. 1115, [0042], [0064]-[0072], Figs. 2, 4; Ex. 1102, ¶ 281.

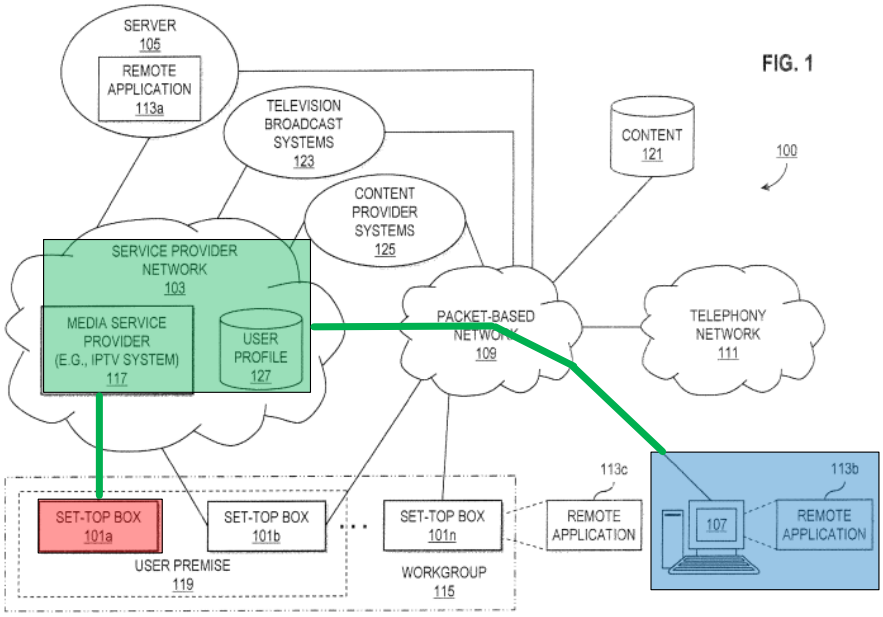


Ex. 1115, Fig. 4

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, ¶¶ 282-283.

e. [1E]: "receiving … one or more signals … specifying a video file … and identifying a particular media player …,"

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, ¶ 284. 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], [0080]-[0081]; Ex. 1102, ¶ 284.



Ex. 1115, Fig. 1 (annotated)

Aldrey teaches commands for media content including broadcast video, VOD, IPTV, streaming video, or any other type of video from a broadcast system or from

third-party providers. Ex. 1115, [0020]-[0021], [0025], [0029]-[0030]. Further, Aldrey teaches that the media content is distinguished by metadata, in the set of messages, specifying the type of media content to be displayed as well as the content-bearing entities and encoding used to display them. Ex. 1115, [0036]-[0037]; Ex. 1102, ¶ 285.

It would have been obvious to a POSITA reading Aldrey's disclosure that the metadata for media content, which specifies content sources and the type of media content, would include commands specifying a video file to be acted upon and identifying a particular media player. Ex. 1102, ¶ 286. For example, a POSITA reading Aldrey's disclosure of a control command for media content would have understood that control command to be specific to the type of media playing application appropriate for a given provider. *Id*.

f. [1F]: "the one or more signals further including a … command for controlling playing of the video content …,"

As discussed above regarding Danciu-Mahajan in Section VI.A.1.e, Mahajan teaches implementation details regarding transmitting commands from Mahajan's server (e.g., an end terminal) to a client (e.g., a STB or television) through the use of intermediary universal commands. For example, Mahajan's Figure 3 depicts an API for translating between commands sent from Mahajan's server (**blue**) to a client (**red**) using universal commands:

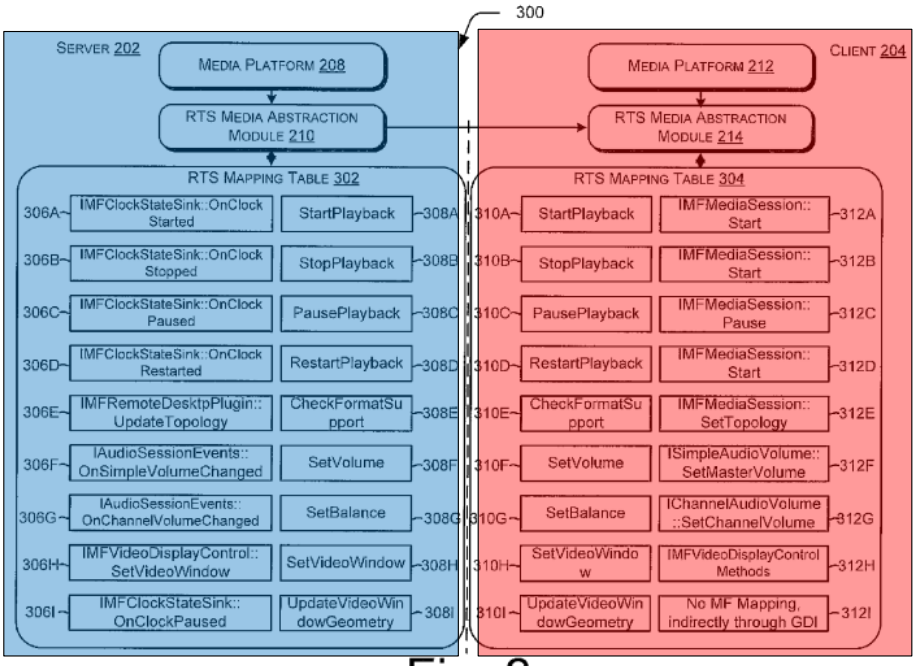
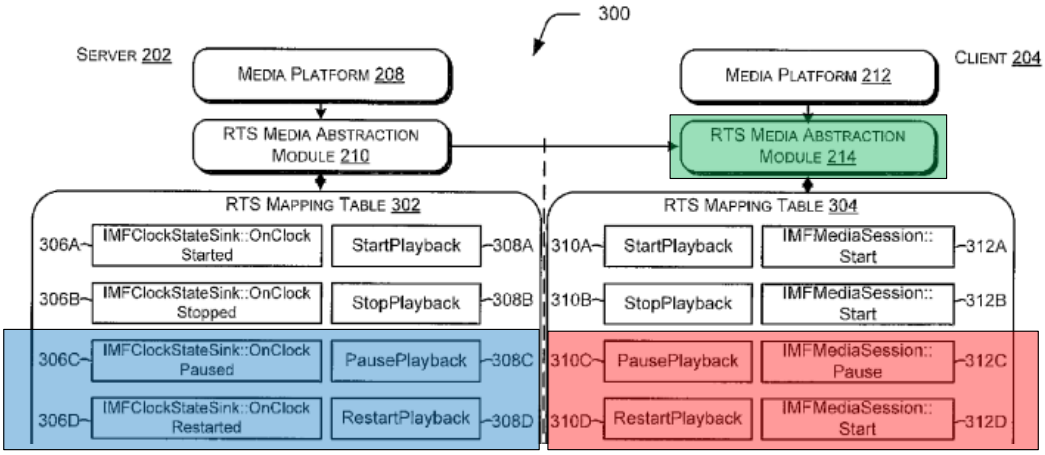


Fig. 3

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. 1102, ¶¶ 288-289.



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, ¶ 290. It would have been obvious to a POSITA that messages routed throughout that intermediary comprise universal commands (e.g., "StartPlayback" or "PausePlayback") as taught by Mahajan. Ex. 1114, [0037]-[0043], [0063], Figs. 3, 5. Ex. 1102, ¶ 290.

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 are particular to the media content playing on the type of media playing application of the server. Ex. 1102, ¶ 291.

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 connected television, using known techniques for sending commands for media playback between remote devices, such as is taught by Mahajan. Ex. 1102, ¶ 292. 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, ¶ 292. 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], [0054]; Ex. 1114, [0017]. Ex. 1102, ¶ 292. 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 television. Ex. 1115, [0023]-[0026]; Ex. 1102, ¶ 292.

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 television). Ex. 1102, ¶ 293. 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 device 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 playback application to another type of command such that they can be understood by a smart

television. Ex. 1102, ¶ 294. 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. Ex. 1102, ¶ 294.

g. [1G]: "converting … the … command into corresponding programming code to control playing of the video content …, wherein converting … includes selecting from … specific commands, each of which represents a corresponding playback control command …; and"

Aldrey-Mahajan teaches converting the universal playback command into corresponding programming code. As discussed above in Section VI.B.1.f, Mahajan's Figure 3 depicts an API for translating between commands sent from Mahajan's server (**blue**) to a client (**red**):

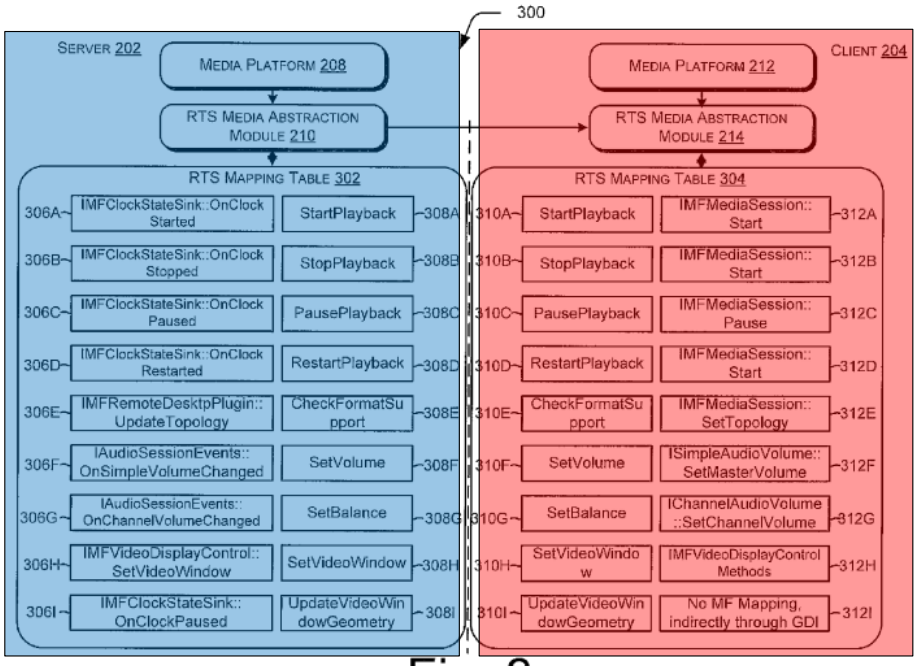
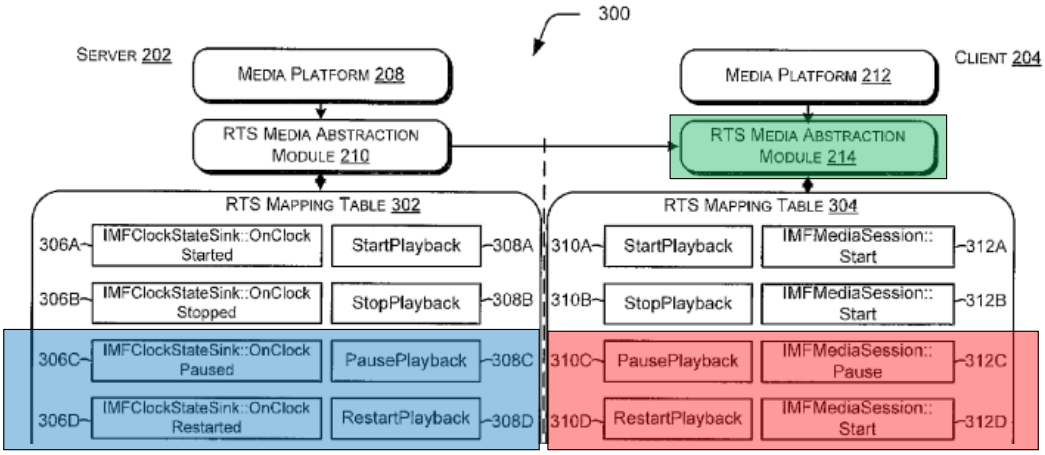


Fig. 3

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**) using universal commands. Ex. 1114, [0037]-[0043], [0063], Figs. 3, 5; Ex. 1102, ¶¶ 296-297.



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, ¶ 298.

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. Ex. 1102, ¶ 299. 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." Ex. 1114, [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 Aldrey's Service Provider Network 103. Ex. 1114, [0018], [0058], [0078]; Ex. 1102, ¶ 299.

h. [1H]: "storing … information for … the display device, wherein the information specifies the video file …, identifies the particular media player …, and includes the corresponding programming code to control playing of the video content … in accordance with the … command."

Aldrey teaches that the MSP 117 allows for the storage of information that can be transmitted to a STB. Ex. 1115, [0025], [0035]. For example, Aldrey teaches that STBs may receive signals and/or data streams, including control commands, which may originate from content servers with associated data repositories. Ex. 1115, [0020]-[0021], [0030], [0032], [0035], [0051]-[0052], [0055]-[0057], [0059]-[0060], [0064], [0066], [0071], [0084]. The content is stored along with metadata, which may identify the video content and a media player as discussed above regarding limitation [1E] in Section VI.B.1.e. Ex. 1115, [0036]-[0037]; Ex. 1102, ¶¶ 301-302.

Therefore, Aldrey-Mahajan teaches claim 1. Ex. 1102, ¶¶ 268-302.

2. Dependent Claim 2

a. [2A]: "The method of claim 1 including:"

Aldrey-Mahajan teaches the method of claim 1 for the reasons set forth above. *See* Section VI.B.1. Ex. 1102, ¶ 303.

b. [2B]: "checking … the identity of the media player …;"

As noted above in Section VI.B.1.e, Aldrey-Mahajan teach receiving one or more signals "identifying a particular media player for playing the video content". It would have been obvious to a POSITA reading Aldrey that the metadata for media content, which specifies content sources and the type of media content, would include commands specifying a video file to be acted upon and identifying a particular media player. Ex. 1102, ¶ 304.

c. [2C]: "loading … protocols or application programming interfaces … based on the … media player; and"

As discussed above in Sections VI.B.1.e-VI.B.1.g, Mahajan teaches an API for commands, such as commands to "pause" content Ex. 1114, [0037]-[0043], Fig. 3; Ex. 1102, ¶ 306.

d. [2D]: "converting the command … into corresponding code …."

As discussed above in Section VI.B.1.g, Aldrey-Mahajan teaches converting between universal commands and platform-specific commands for controlling a media player. Ex. 1102, ¶ 308.

Therefore, Aldrey or Aldrey-Mahajan teaches claim 2. Ex. 1102, ¶¶ 303-309.

3. Dependent Claim 3

a. "… wherein converting the command into corresponding programming code … includes using … a look-up table."

As discussed above in Sections VI.B.1.g and VI.B.2.d, Mahajan teaches an RTS Media Abstraction module that converts the commands received by a client from a server. Ex. 1114, [0037]-[0043], [0063], Figs. 3, 5. Further, this conversion is performed "using information in a look-up table." Ex. 1114, [0037]-[0042], Fig. 3. For example, Mahajan discloses that "the RTS media abstraction module 214 can locate the generic media operation command "StartPlayback" received from the server 202 in the RTS mapping table 304." Ex. 1114, [0040]. Figure 3 of Mahajan shows mapping tables for translating between commands sent from Mahajan's server (**blue**) to a client (**red**):

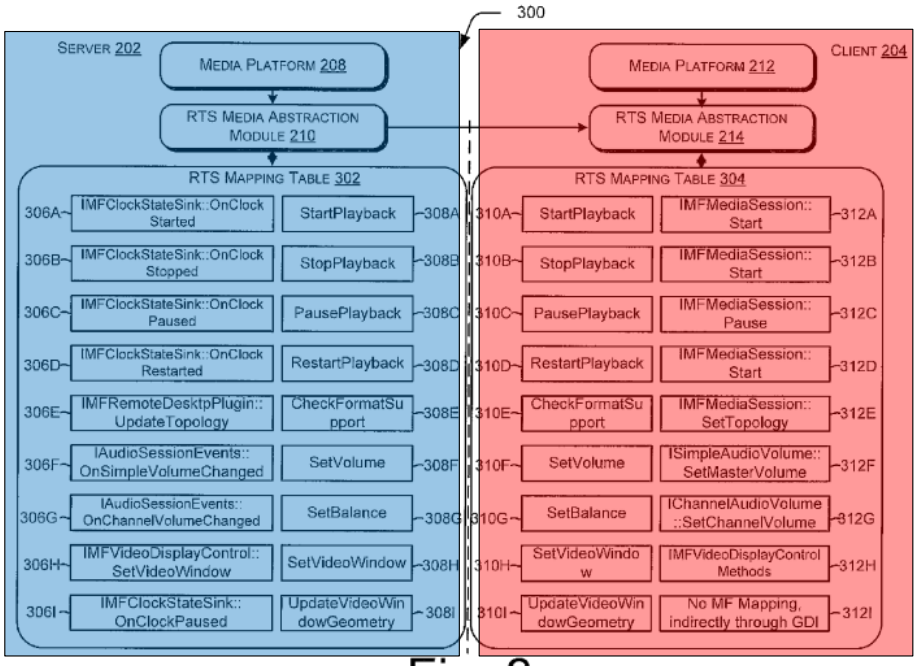


Fig. 3

Ex. 1114, Fig. 3 (annotated)

Therefore, Aldrey-Mahajan renders obvious claim 3. Ex. 1102, ¶¶ 310-312.

4. Dependent Claim 4

a. "… wherein the look-up table stores … commands, each of which represents … a corresponding command …."

As discussed above in Section VI.B.3, Fig. 3 of Mahajan shows mapping tables for translating between commands sent from Mahajan's server (**blue**) to a client (**red**):

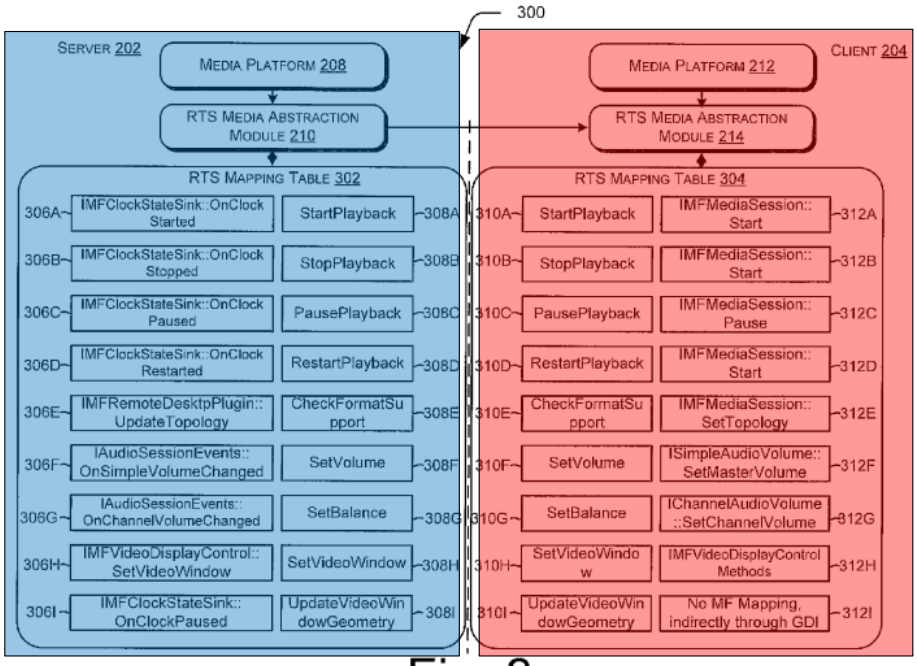


Fig. 3

Ex. 1114, Fig. 3 (annotated); Ex. 1114, [0037]-[0043]; Ex. 1102, ¶ 314.

Therefore, Aldrey-Mahajan renders obvious claim 4. Ex. 1102, ¶¶ 313-316.

5. Dependent Claim 5

a. "… wherein the … command represents an instruction to play …, to stop … or to pause playing the video content ."

As discussed above in Sections VI.B.1.e and VI.B.4, Mahajan teaches an RTS mapping table for translating between universal commands and particular commands for a given media player. Ex. 1114, [0037]-[0043], Fig. 3. Those commands include commands to "StartPlayback", "StopPlayback", or "PausePlayback". Ex. 1114, Fig. 3; Ex. 1102, ¶ 318.

Therefore, Aldrey-Mahajan renders obvious claim 5. Ex. 1102, ¶¶ 317-319.

6. Dependent Claim 6

a. "… wherein the video content is an interactive video game ."

Mahajan teaches that the computing environment for operation of its systems and methods may include a "game console." Ex. 1114, [0065]. Further, Mahajan teaches that input to its system may be made using a "game pad" or a "game port." Ex. 1114, [0072]. Thus, it would have been obvious to a POSITA, in view of these express teachings, that the video content under control may comprise an interactive video game. Ex. 1102, ¶ 321.

Therefore, Aldrey-Mahajan renders obvious claim 6. Ex. 1102, ¶¶ 320-322.

7. Dependent Claim 7

a. "… wherein the video content is streaming media."

As discussed above in Section VI.B.1.e, Aldrey teaches that the video content may be streaming media, including on-demand and/or IPTV streaming media. Ex. 1115, [0015], [0020]-[0026], [0029]-[0030]; Ex. 1102, ¶ 324.

Therefore, Aldrey-Mahajan renders obvious claim 7. Ex. 1102, ¶¶ 323-325.

8. Dependent Claim 8

a. "… wherein the synchronization code is uniquely associated with the display device …."

As discussed above in Section VI.B.1.b, Aldrey teaches uniquely associated synchronization codes, such as a serial number. Ex. 1115, [0051], [0064]; Ex. 1102, ¶ 327.

Therefore, Aldrey-Mahajan renders obvious claim 8. Ex. 1102, ¶¶ 326-328.

9. Dependent Claim 9

a. "… wherein the synchronization code is different from an IP address … and … a MAC address…."

Aldrey discloses numerous identifiers, including a "device type, serial number, registration number" that are not an IP address or MAC address. Ex. 1115, [0064], [0051]; Ex. 1102, ¶ 329.

Therefore, Aldrey-Mahajan renders obvious claim 9. Ex. 1102, ¶¶ 329-330.

10. Dependent Claim 10

a. "… wherein assigning a synchronization code includes assigning a randomly generated code … each time the display device connects to the server system."

Aldrey further teaches that other identifiers may be used ("phone number, communications link, **etc.**"). Ex. 1115, [0064] (emphasis added). In particular, Aldrey teaches that devices may be authenticated using a "key access number," which a POSITA would have understood to refer to a randomly-generated access key. Ex. 1115, [0051]; Ex. 1102, ¶ 331. And to any extent Aldrey does not explicitly describe whether the session identifier and/or QR code is random, or whether it is generated each time the display device connects, a POSITA would have found such an implementation to be an obvious design choice, for example, to improve security or to prevent an accidental incorrect pairing of devices. Ex. 1115, [0051]; Ex. 1102, ¶ 331. For example, when assigning a unique identifier, it would have been an

obvious design choice that a random process could be used to generate a unique number. Ex. 1102, ¶ 331. Further, A POSITA would be familiar with the well-known practice that sessions are temporary in nature and it would have been obvious that when the sessions are established the code may be assigned each time the display device connects to the server system. Ex. 1115, [0019], [0033]-[0034], [0039]-[0040]; Ex. 1102, ¶ 331.

Therefore, Aldrey-Mahajan teaches claim 10. Ex. 1102, ¶¶ 331-333.

11. Independent Claim 11

a. [11A]: "A system for controlling playing of video content … that loads any one of … different media players, … comprising:"

As discussed above in Section VI.B.1.a, to the extent the preamble is limiting, Aldrey-Mahajan teaches it. Ex. 1102, ¶ 334.

b. [11B] "a server system;"

As discussed above in Sections VI.B.1.a-VI.B.1.b, Aldrey discloses a server system. Ex. 1102, ¶ 335.

c. [11C]: "a first database storing a relationship between a personal computing device and the display device based on a synchronization code … in a message from the personal computing device … separate from the server system and … the display device; and"

As described above in Sections VI.B.1.b-VI.B.1.d, Aldrey teaches that 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 209*a*-209*c* may obtain configuration parameters and user interface information." Ex. 1115, [0064]. This information is stored in the user profile repository 127 ("first database"). Ex. 1115, [0057]-[0066]; Ex. 1102 ¶ 337.

d. [11D]: "a second database;"

Aldrey teaches that a STB or end terminal may be in communication with "one *or more* repositories (e.g., repository 127) to 'push' and 'pull' control commands and configuration information." Ex. 1115, [0032] (emphasis added); Ex. 1102, ¶ 339.

e. [11E]: "wherein the server system is configured to receive one or more signals from the personal computing device … specifying a video file … and … a particular media player … further including a … command for controlling playing of the video content …"

Aldrey-Mahajan teaches limitation [11E] for the reasons described above in Sections VI.B.1.e-VI.B.1.f. Ex. 1102, ¶ 341.

f. [11F]: "one or more non-transitory computer-readable media storing instructions that … cause the server system to perform operations including converting the … command into corresponding programming code …, wherein converting … includes selecting from … specific commands, each of which represents a corresponding … command for a respective media player;"

Aldrey-Mahajan teaches limitation [11F] for the reasons described above in Section VI.B.1.g. Ex. 1102, ¶ 342.

g. [11G]: "the server system being further configured to store … information for … the display device, wherein the information specifies the video file …, identifies the particular media player …, and includes the corresponding programming code …."

As described above in Section VI.B.1.h, Aldrey-Mahajan teaches this feature. As Aldrey teaches it may use "one or more" databases, it would have been obvious to a POSITA that the information referenced in limitation [11C] could be stored in one database, and information referenced in limitation [11G] may be stored in another. Ex. 1102, ¶ 343.

Therefore, Aldrey-Mahajan teaches claim 11. Ex. 1102, ¶¶ 334-344.

12. Dependent Claims 12-21

Aldrey-Mahajan teaches the systems of claims 12-21 for the same reasons set forth above regarding claim 11 further in view of the discussion of the additional features of claims 2-10. *See* Sections VI.B.2-VI.B.11; Ex. 1102, ¶¶ 345-354.

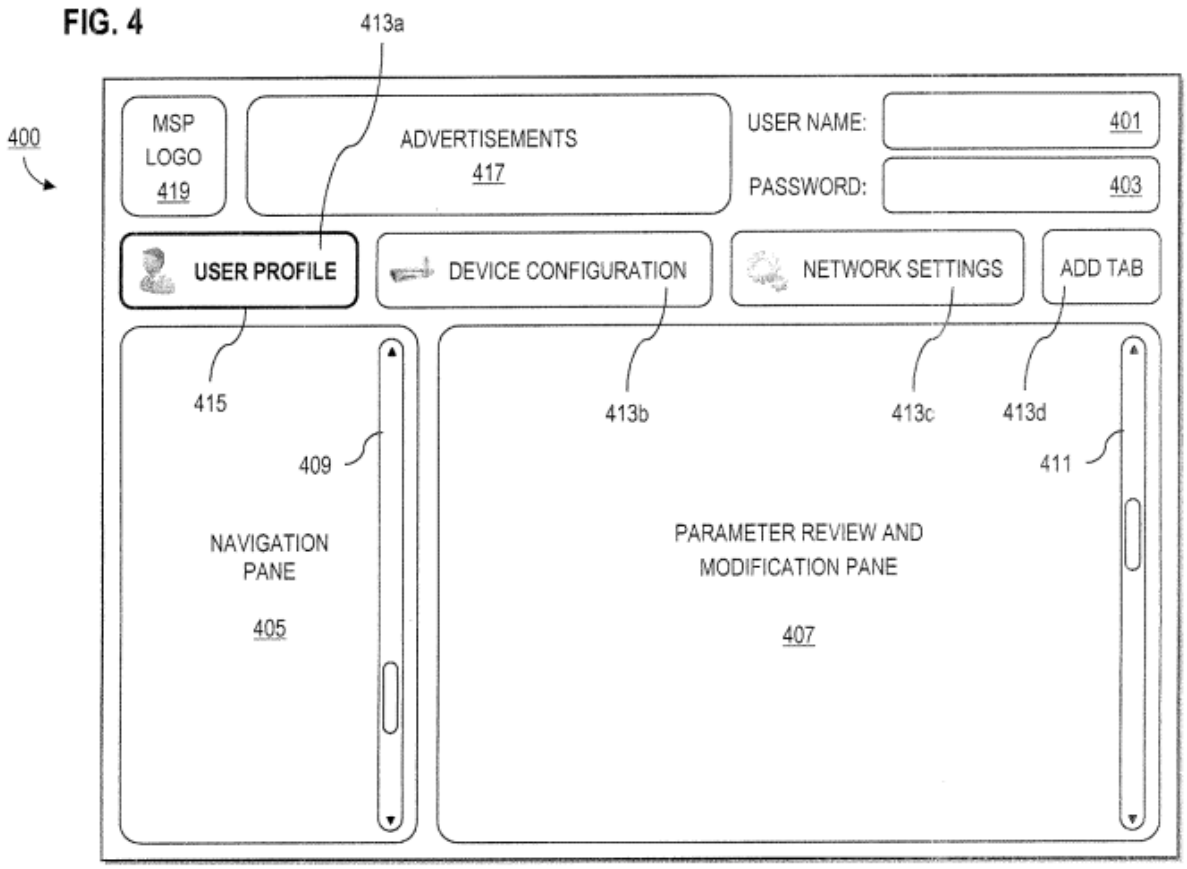
13. Independent Claim 22

a. [22A]: "An automated machine-implemented method of presenting video content on a display device that loads any one of … different media players, the method comprising:"

As discussed above in Section VI.B.1, to the extent the preamble is limiting, Aldrey-Mahajan teaches it. Ex. 1102, ¶ 355.

b. [22B]: "displaying … a synchronization code …, …storing, based on a message from a personal computing device …, an association between the display device and the personal computing device, the message … including the synchronization code;"

As described above in Sections VI.B.1.b-VI.B.1.d, Aldrey-Mahajan teaches limitation [22B]. Aldrey discloses a user interface 400 "wherein an authenticated subscriber may directly review and modify user profile information and/or network settings." Ex. 1115, [0031], [0067]-[0071], Fig. 4; Ex. 1102, ¶ 356.



Ex. 1115, Fig. 4

c. [22C]: "retrieving … first information that specifies a first video file …, … identifies a first media player …, and … indicates corresponding programming code to control playing of the first video file … in accordance with a first playback control command, wherein the server system previously received… one or more signals specifying the first video file, identifying the first media player and including the first playback control command;"

As described above in Sections VI.B.1.e-VI.B.1.f, Aldrey-Mahajan teaches the features of limitation [22C]. In the instance where multiple commands are sent for the same video file, this meets the limitation regarding "wherein the server

system previously received… one or more signals specifying the first video file…" Ex. 1102, ¶ 358.

d. [22D]: "obtaining … over the Internet the first media player …;"

Aldrey teaches retrieving media content from online (e.g., Internet) sources. Ex. 1115, [0060]. Further, Aldrey teaches that the remote application, which can be connected via the Internet, may be loaded as an overlay on the media content in order to control the media being displayed. Ex. 1115, [0019], [0023]-[0025], [0030]-[0031], [0044]-[0047], [0052]-[0053], [0062]-[0066]. In such instances, the remote application functions as the first media player. Ex. 1102, ¶ 360. Further, Mahajan teaches that the display device may display a webpage obtained and loaded over the Internet from a server for displaying content. Ex. 1114, [0019]-[0020]. Ex. 1102, ¶ 360.

e. [22E]: "loading the first media player …;"

As described above in Section VI.B.13.d, Aldrey-Mahajan teaches obtaining a media player over the Internet in order to load (e.g., install) it on the controlled device ("the display device"). It would have been obvious to a POSITA that for a media player to execute and display content, it should be loaded on the device, even if temporarily in RAM. Ex. 1102, ¶ 362.

f. [22F]: "executing the first playback control command … using the first media player;"

Aldrey teaches that the controlled device executes the commands. Ex. 1115, [0020], [0025], [0029]-[0030]; Ex. 1102, ¶ 364.

g. [22G]-[22J]: "… retrieving … second information that specifies a second video file … that identifies a second media player … and that indicates corresponding programming code to control playing of the second video file … in accordance with a second playback control command, wherein the server system previously received … signals specifying the second video file, identifying the second media player and including the second playback control command;

obtaining … the second media player for playing the second video file;

loading the second media player …; and

executing the second playback control command … using the second media player.

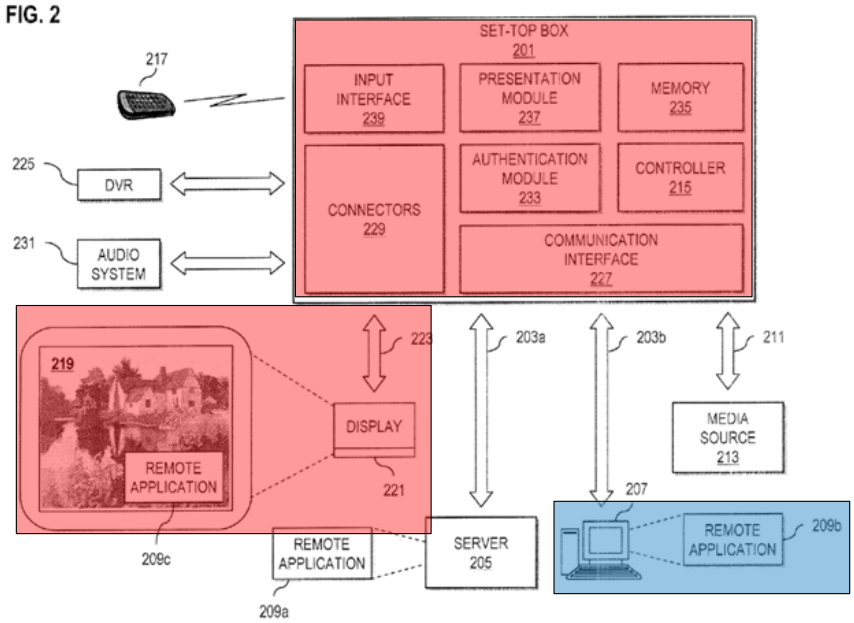
Limitations [22G]-[22J] are no different from limitation [22C]-[22F] but for a second video file, second media player different from the first media player, and second playback control command. Aldrey teaches multiple messages can be sent "on-the-fly" or "batched." Ex. 1115, [0042]. Accordingly, the controlled device and the remote control operate in the same manner as described above in Sections VI.B.13.c-VI.B.13.f for a subsequent command entered by a user of the remote control for the controlled device, which includes converting the command to a second playback control command. Ex. 1102, ¶ 366.

Therefore, Aldrey-Mahajan teaches claim 22. Ex. 1102, ¶¶ 355-367.

14. Dependent claim 23

a. "…wherein the display device comprises a television set …."

Aldrey teaches that embodiments discussing a STB could also apply to a smart television. Ex. 1115, [0012], Ex. 1102, ¶ 368. Aldrey's Figure 2 further shows an example of the STB 201 (**red**) displaying content on "a display 221 (e.g., television)" in response to commands from a remote application running on an end terminal 207 (**blue**). Ex. 1115, [0044]; Ex. 1102, ¶ 368.



Ex. 1115, Fig. 2 (annotated)

Therefore, Aldrey-Mahajan teaches claim 23. Ex. 1102, ¶¶ 368-369.

15. Dependent claim 24

a. "… wherein the display device comprises a laptop or personal computer."

Aldrey teaches that computer devices described throughout "may include desktop computers, notebook computers." Ex. 1115, [0026]; Ex. 1102, ¶ 370.

Therefore, Aldrey-Mahajan teaches claim 24. Ex. 1102, ¶¶ 370-371.

16. Dependent Claim 25

a. "… wherein each of the first and second commands represents an instruction to play …, to stop … or to pause playing the respective video file."

Aldrey-Mahajan further teaches the limitations of claim 25 for the same reasons discussed above regarding claim 5. *See* Section VI.B.5; Ex. 1102, ¶¶ 372-373.

17. Dependent Claim 26

a. "…wherein the display device checks whether the respective media player … is loaded in the display device before obtaining a copy of the media player …."

Aldrey-Mahajan teaches the additional limitations of claim 26 for the same reason discussed above in Section VI.B.13.d. In particular, it would have been obvious to a POSITA that a device would only obtain a media player over the Internet if it determined that it was not already loaded on the device and therefore needed. Ex. 1102, ¶¶ 374-376.

VII. GROUNDS FOR STANDING & FEE PAYMENT

Petitioner hereby certifies that the ’251 Patent is available for, and Petitioner is not barred or estopped from requesting, *inter partes* review challenging claims 1-26.

Pursuant to 37 C.F.R. § 42.103, the undersigned authorizes the charge of any required fees to Deposit Account No. 501814.

VIII. CONCLUSION

Inter partes review should be instituted and claims 1-26 canceled.

Dated: August 16, 2024

By: /Scott Border/

Scott Border
Reg. No. 77,744
WINSTON & STRAWN LLP
1901 L Street, N.W.
Washington, D.C. 20036
sborder@winston.com
T: 202-282-5100

CERTIFICATION UNDER 37 CFR § 42.24(d)

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count using Microsoft Word for the foregoing Petition for Inter Partes Review totals 13,995, which is less than the 14,000 allowed under 37 CFR § 42.24(a)(1)(i).

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.

WINSTON & STRAWN LLP

Dated: August 16, 2024

By: /Scott Border/

Scott Border
Reg. No. 77,744
WINSTON & STRAWN LLP
1901 L Street, N.W.
Washington, D.C. 20036
sborder@winston.com
T: 202-282-5100

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. 8,356,251 and supporting evidence to be served via FedEx Priority Overnight on August 16, 2024 on the following:

SHOOK, HARDY & BACON LLP
Touchstream Technologies (149550)
INTELLECTUAL PROPERTY DEPARTMENT
2555 Grand Blvd.
Kansas City, MO 64108

A courtesy copy of this Petition was also served upon litigation counsel for Patent Owner via email, as follows:

Ryan Dykal (rdykal@bsfllp.com)
Jordan T. Bergsten (jbergsten@bsfllp.com)
BOIES SCHILLER FLEXNER LLP
1401 New York Avenue, NW
Washington, DC 20005

Sabina Mariella (smariella@bsfllp.com)
BOIES SCHILLER FLEXNER LLP
55 Hudson Yards
New York, NY 10001

Dated: August 16, 2024

By: /Scott Border/

Scott Border
Reg. No. 77,744

CLAIM LISTING APPENDIX

U.S. Pat. No. 8,356,251

Designation	Claim Language
Claim 1	
[1A]	1. A machine-implemented method of controlling presentation of video content on a display device that loads any one of a plurality of different media players, the method comprising:
[1B]	assigning, by a server system, a synchronization code to the display device;
[1C]	receiving, in the server system, a message from a personal computing device that is separate from the server system and separate from the display device, wherein the message includes the synchronization code;
[1D]	storing, by the server system, a record establishing an association between the personal computing device and the display device based on the synchronization code;
[1E]	receiving, in the server system, one or more signals from the personal computing device, the one or more signals specifying a video file to be acted upon and identifying a particular media player for playing the video content,
[1F]	the one or more signals further including a universal playback control command for controlling playing of the video content on the display device by the particular media player,
[1G]	converting, by the server system, the universal playback control command into corresponding programming code to control playing of the video content on the display device by the particular media player, wherein converting the universal playback control command includes selecting from among a plurality of specific commands, each of which represents a corresponding playback control command for a respective media player; and
[1H]	storing, in a database associated with the server system, information for transmission to or retrieval by the display device, wherein the information specifies the video file to be acted upon, identifies the particular media player for playing the video content, and includes the corresponding programming code to control playing of the video content on

Designation	Claim Language
	the display device by the particular media player in accordance with the universal playback control command.
Claim 2	
[2A]	2. The method of claim 1 including:
[2B]	checking, in the server system, the identity of the media player identified in the one or more signals from the personal computing device;
[2C]	loading an appropriate set of protocols or application programming interfaces from a library based on the identity of the media player; and
[2D]	converting the command from the personal computing device into corresponding code to control the media player.
Claim 3	
3	3. The method of claim 1 wherein converting the command into corresponding programming code to control the media player includes using information in a look-up table.
Claim 4	
4	4. The method of claim 3 wherein the look-up table stores a plurality of specific commands, each of which represents, respectively, a corresponding command for a different media player.
Claim 5	
5	5. The method of claim 1 wherein the universal command represents an instruction to play the video content, to stop playing the video content or to pause playing the video content.
Claim 6	
6	6. The method of claim 1 wherein the video content is an interactive video game.
Claim 7	
7	7. The method of claim 1 wherein the video content is streaming media.
Claim 8	
8	8. The method of claim 1 wherein the synchronization code is uniquely associated with the display device on which the video content is to be played.
Claim 9	
9	9. The method of claim 8 wherein the synchronization code is different from an IP address associated with the display

Designation	Claim Language
	device and is different from a MAC address associated with the display device.
Claim 10	
10	10. The method of claim 8 wherein assigning a synchronization code includes assigning a randomly generated code to the display device each time the display device connects to the server system.
Claim 11	
[11A]	11. A system for controlling playing of video content on a display device that loads any one of a plurality of different media players, the system comprising:
[11B]	a server system;
[11C]	a first database storing a relationship between a personal computing device and the display device based on a synchronization code assigned by the server system to the display device and received by the server system in a message from the personal computing device, wherein the personal computing device is separate from the server system and separate from the display device; and
[11D]	a second database;
[11E]	wherein the server system is configured to receive one or more signals from the personal computing device, the one or more signals specifying a video file to be acted upon and identifying a particular media player for playing the video content, the one or more signals further including a universal playback control command for controlling playing of the video content on the display device,
[11F]	one or more non-transitory computer-readable media storing instructions that when executed by the server system, cause the server system to perform operations including converting the universal playback control command into corresponding programming code to control playing of the video content by the particular media player, wherein converting the universal playback control command includes selecting from among a plurality of specific commands, each of which represents a corresponding playback control command for a respective media player;

Designation	Claim Language
[11G]	the server system being further configured to store in the second database information for transmission to or retrieval by the display device, wherein the information specifies the video file to be acted upon, identifies the particular media player for playing the video content, and includes the corresponding programming code to control playing of the video content on the display device by the particular media player in accordance with the universal playback control command.
Claim 12	
[12A]	12. The system of claim 11 including:
[12B]	A library storing protocols or application programming interfaces,
[12C]	wherein the server system is configured to check the identity of the media player identified in the one or more signals from the personal computing device, load an appropriate set of protocols or application programming interfaces from the library based on the identity of the media player, and convert the command from the personal computing device into a corresponding programming code to control the media player.
Claim 13	
[13A]	13. The system of claim 11 including:
[13B]	a look-up table storing a plurality of commands each of which is for a particular type of media player,
[13C]	wherein the server system is configured to convert the command into corresponding programming code to control the media player based on information in the look-up table.
Claim 14	
14	14. The system of claim 11 wherein the look-up table stores a correspondence between the universal command and a plurality of specific commands, each of which is for a different media player.
Claim 15	
15	15. The system of claim 14 the server system is configured to convert the universal command by selecting from among the plurality of specific commands stored in the look-up table.
Claim 16	

Designation	Claim Language
16	16. The system of claim 11 wherein the universal command represents an instruction to play the video content, to stop playing the video content or to pause playing the video content.
Claim 17	
17	17. The system of claim 11 wherein the video content is an interactive video game.
Claim 18	
18	18. The system of claim 11 wherein the video content is streaming media.
Claim 19	
19	19. The system of claim 11 wherein the synchronization code is uniquely associated with the display device on which the video content is to be played.
Claim 20	
20	20. The system of claim 19 wherein the synchronization code is different from an IP address associated with the display device and is different from a MAC address associated with the display device.
Claim 21	
21	21. The system of claim 19 wherein the server system is configured to assign as the synchronization code a randomly generated code each time the display device connects to the server system.
Claim 22	
[22A]	22. An automated machine-implemented method of presenting video content on a display device that loads any one of a plurality of different media players, the method comprising:
[22B]	displaying, by the display device, a synchronization code that was assigned to the display device by a server system, the server system subsequently storing, based on a message from a personal computing device that is separate from the server system and the display device, an association between the display device and the personal computing device, the message from the personal computing device including the synchronization code;
[22C]	retrieving, by the display device from the server system, first information that specifies a first video file to be acted upon,

Designation	Claim Language
	that identifies a first media player for playing the first video file, and that indicates corresponding programming code to control playing of the first video file on the display device by the first media player in accordance with a first playback control command, wherein the server system previously received, from the personal computing device, one or more signals specifying the first video file, identifying the first media player and including the first playback control command;
[22D]	obtaining, by the display device, over the Internet the first media player for playing the first video file;
[22E]	loading the first media player in the display device;
[22F]	executing the first playback control command with respect to the first video file using the first media player;
[22G]	subsequently retrieving, by the display device from the server system, second information that specifies a second video file to be acted upon, that identifies a second media player different from the first media player for playing the second video file, and that indicates corresponding programming code to control playing of the second video file on the display device by the second media player in accordance with a second playback control command, wherein the server system previously received, from the personal computing device, one or more signals specifying the second video file, identifying the second media player and including the second playback control command;
[22H]	obtaining, by the display device, over the Internet the second media player for playing the second video file;
[22I]	loading the second media player in the display device; and
[22J]	executing the second playback control command with respect to the second video file using the second media player.
Claim 23	
23	23. The method of claim 22 wherein the display device comprises a television set with a display screen.
Claim 24	
24	24. The method of claim 22 wherein the display device comprises a laptop or personal computer.
Claim 25	

Designation	Claim Language
25	25. The method of claim 22 wherein each of the first and second commands represents an instruction to play the respective video file, to stop playing the respective video file or to pause playing the respective video file.
Claim 26	
26	26. The method of claim 22 wherein the display device checks whether the respective media player needed to play the particular one of the video files already is loaded in the display device before obtaining a copy of the media player over the Internet.