

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

COMCAST CABLE COMMUNICATIONS, LLC,
CHARTER COMMUNICATIONS, INC.,

Petitioners,*

v.

TOUCHSTREAM TECHNOLOGIES, INC.,
Patent Owner.

IPR2024-00322
Patent 8,356,251

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

*Charter Communications, Inc. filed a petition and a motion for joinder in IPR2024-01231 and has been joined as a petitioner in this proceeding.

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EXHIBITS

Previously Submitted:

- 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
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- 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
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- Ex. 1159: *TeamViewer: TeamViewer 3.0 Beta Published; Next Generation of the Popular Remote Support Software*, M2 PRESSWIRE, Aug. 27, 2007

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- Ex. 1161: *Expertcity's GoToMyPC Product Wins A People's Choice Award At Upside Events' Showcase 2001*, INTERNET WIRE, Feb. 1, 2001
- Ex. 1162: *TV2Me(R) Goes Global By Partnering With Leading Asian Online Entertainment Company; Manila-Based ESL Adds Sales and Marketing Muscle to Bring Pioneering Place Shifting Technology to Wider Market*, PR NEWSWIRE US, May 16, 2006
- Ex. 1163: *CES Innovations 2005 Award and Red Herring Finalist for 100 Most Innovative Companies are Latest Commendations for Sling Media*, BUS. WIRE, Nov. 11, 2004
- Ex. 1164: Final Written Decision, IPR2022-00795 (Sep. 27, 2023)
- Ex. 1165: Patent Owner Response, IPR2022-00795 (Jan. 13, 2023)
- Ex. 1166: Reserved
- Ex. 1167: *Progressive Networks Launches the First Commercial Audio-On-Demand System Over the Internet*, BUS. WIRE, Apr. 10, 1995
- Ex. 1168: *Progressive Networks' RealVideo Launched With Wide Industry Support*, PR NEWSWIRE EUROPE, February 10, 1997
- Ex. 1169: Reserved
- Ex. 1170: U.S. Pat. Application No. 61/477,998
- Ex. 1171: U.S. Pat. No. 8,904,289 to Strober (“the ’289 Patent”)
- Ex. 1172: Certified Copy of Prosecution History of U.S. Pat No. 8,904,289
- Ex. 1173: U.S. Pat. No. 9,767,195 (“the ’195 Patent”)
- Ex. 1174: Certified Copy of Prosecution History of U.S. Pat. No. 9,767,195

- Ex. 1175: U.S. Pat. No. 11,048,751 to Strober (“the ’751 Patent”)
- Ex. 1176: Certified Copy of Prosecution History of U.S. Pat. No. 11,048,751
- Ex. 1177: U.S. Pat. No. 8,356,251 to Strober (“the ’251 Patent”)
- Ex. 1178: Certified Copy of Prosecution History of U.S. Pat. No. 8,356,251
- Ex. 1179: Reserved
- Ex. 1180: Lett analysis of Danciu Claim 1 in view of Danciu Provisional
- Ex. 1181: Annotated Copy of Danciu Provisional in view of Danciu
- Ex. 1182: Stipulation Regarding Invalidity Defenses
- Ex. 1183: Transcript of Jury Trial, Volume 3 of 5, held July 19, 2023, Dkt No. 262; *Touchstream v. Google*, 6-21-cv-569 (W.D. Tex.)
- Ex. 1184: Google’s Rule 50(b) Renewed Motion for Judgment as a Matter of Law, dated September 20, 2023, Dkt No. 275; *Touchstream v. Google*, 6-21-cv-569 (W.D. Tex.)
- Ex. 1185: Touchstream’s Opposition to Google’s Rule 50(b) Renewed Motion for Judgment as a Matter of Law (Public Version), Dkt No. 287; *Touchstream v. Google*, 6-21-cv-569 (W.D. Tex.)
- Ex. 1186: Google’s Reply in Support of Rule 50(b) Renewed Motion for Judgment as a Matter of Law (Public Version), Dkt No. 292; *Touchstream v. Google*, 6-21-cv-569 (W.D. Tex.)

Submitted Herewith:

- Ex. 1187: Excerpt from SAMS, Modern Dictionary of Electronics, Sixth Edition, by Rudolf F. Graf
- Ex. 1188: Excerpt from McGraw-Hill Dictionary of Electronics and Computer Technology
- Ex. 1189: Excerpt from the Computer Glossary, the Complete Illustrated Dictionary, Seventh Edition, by Alan Freedman

- Ex. 1190: Excerpt from the Dictionary of Data Communications, Second Edition, by Charles J. Sippl
- Ex. 1191: Excerpt from Business Dictionary of Computers, by Jerry M. Rosenberg
- Ex. 1192: Excerpt from IBM Dictionary of Computing
- Ex. 1193: Excerpt from the Penguin Dictionary of Microprocessors, by Anthony Chandor
- Ex. 1194: Excerpt from Data Communications Dictionary, by Charles J. Sippl
- Ex. 1195: Excerpt from the Computer Glossary, the Complete Illustrated Dictionary, Ninth Edition, by Alan Freedman
- Ex. 1196: Excerpt from the McGraw-Hill Dictionary of Scientific and Technical Terms, Fifth Edition
- Ex. 1197: Deposition Testimony of Stephen B. Wicker, Ph.D. (Jan. 20, 2025)
- Ex. 1198: Expert Declaration of David B. Lett in Support of Petitioner's Reply to Patent Owner's Response to Petition

TABLE OF AUTHORITIES

Cases

<i>Arctic Cat, Inc. v. Polaris Indus. Inc.</i> , No. IPR2015–01783, 2017 WL 506027 (P.T.A.B. Jan. 30, 2017)	2, 7
<i>Bradium Techs. LLC v. Iancu</i> , 923 F.3d 1032 (Fed. Cir. 2019)	14
<i>Facebook, Inc. v. Windy City Innovations, LLC</i> , 973 F.3d 1321 (Fed. Cir. 2020)	7
<i>Nespresso USA, Inc. v. K-Fee Sys. GmbH</i> , No. IPR2023-00485, 2024 WL 4137278 (P.T.A.B. Sept. 10, 2024)	26
<i>Palo Alto Networks, Inc. v. Centripetal Networks, LLC</i> , 122 F.4th 1378 (Fed. Cir. 2024)	1, 13
<i>Polaris Indus. Inc. v. Arctic Cat, Inc.</i> , 724 Fed. App'x 948 (Fed. Cir. May 30, 2018)	2
<i>Taiwan Semiconductor Mfg. Co., v. Godo Kaisha IP Bridge I</i> , No. IPR2016-01246, 2018 WL 279638 (P.T.A.B. Jan. 3, 2018)	25
<i>Unwired Planet, LLC v. Google Inc.</i> , 841 F.3d 995 (Fed. Cir. 2016)	16, 17

I. INTRODUCTION

Comcast Cable Communications, LLC (“Petitioner”) respectfully submits this reply brief in support of its Petition for *inter partes* review of claims 1-26 of U.S. Patent No. 8,356,251 (“the ’251 Patent”) (Ex. 1001).

Patent Owner’s (“PO”) arguments for patentability should be rejected because PO improperly: focuses on the purported deficiencies of Mahajan in isolation, misapprehends how the Petition applies the teachings of Mahajan to the hardware elements of Danciu and Aldrey, and fails to rebut how the Petition’s actual combinations of Danciu-Mahajan and Aldrey-Mahajan render claims 1-26 obvious.

First, PO argues that the hardware architecture of Mahajan is incompatible with the claims. However, Mahajan’s architecture is not relied on in the asserted grounds; Danciu’s (or Aldrey’s) system is implemented in view of Mahajan’s teachings regarding command conversion. *Palo Alto Networks, Inc. v. Centripetal Networks, LLC*, 122 F.4th 1378, 1386 (Fed. Cir. 2024) (where obviousness is asserted based on a combination, the references “must be read together, not in isolation” and arguments that attack the references individually lack merit.). Furthermore, the architecture of Mahajan that PO discusses is only a preferred embodiment and Mahajan explicitly provides other examples including those that “may be practiced in distributed computing environments, where tasks are performed by remote processing devices that are linked through a communications

network.” Ex. 1114, [0018].

Second, PO repeatedly attacks the combinations as purportedly performing certain claim limitations in the wrong hardware element of Danciu and Aldrey. In so doing, PO applies the functionality of Mahajan’s server to the servers of Danciu and Aldrey. But this is a strawman, as the Petition explicitly sets forth that the server command teachings of Mahajan are applied to the remote control devices of Danciu and Aldrey, not their servers (Pet., 32, 67-68). *See, e.g., Arctic Cat, Inc. v. Polaris Indus. Inc.*, No. IPR2015–01783, 2017 WL 506027, at *9 (P.T.A.B. Jan. 30, 2017) (finding PO’s argument “unpersuasive because it is not responsive to the ground of unpatentability asserted by Petitioner.”) *remanded* 724 Fed. App’x 948 (Fed. Cir. May 30, 2018) (to address noninstituted grounds). When combined as set forth in the Petition, the combinations disclose all of the limitations of the independent claims of the ’251 Patent.¹

Third, PO takes an overly-narrow view of the disclosure of Mahajan as well as the field of endeavor and the particular problem addressed by the ’251 Patent, in an attempt to rebut the motivation to combine Mahajan with Danciu and Aldrey. But Mahajan is applicable both to the ’251 Patent’s field of endeavor and problem addressed (properly understood) and a POSITA would have had ample reasons to

¹ PO does not separately argue for the patentability of any of the dependent claims.

combine it with Danciu and Aldrey.

Finally, PO proposes a level of skill in the art that is lower and more ambiguous than that proposed by Petitioner seemingly in a bid to fit the background of its expert rather than conform to the subject matter of the '251 Patent.

For the reasons set forth in the Petition and as further explained herein, claims 1-26 should be cancelled.

II. ARGUMENT

A. Danciu-Mahajan and Aldrey-Mahajan Teach the Limitations of Claims 1 and 11

PO's primary argument is that Mahajan does not disclose certain limitations of independent claims 1 and 11 because of allegedly "substantial differences between Mahajan's architecture and the architecture required by claims 1–21 of the '251 patent." POR, 24-25. PO is incorrect because the Danciu-Mahajan and Aldrey-Mahajan combinations do not rely on Mahajan's architecture. When evaluated as actually set forth in the Petition, the combinations teach all of the limitations.

1. The Petition Relies on the Hardware Architecture of Danciu and Aldrey, not Mahajan

PO misrepresents Petitioner's argument. The Petition does not rely on the architecture of Mahajan to disclose the claimed architecture, nor does the Petition alter Danciu or Aldrey's architecture based on Mahajan. Rather, the Petition explains that in the Danciu-Mahajan combination, Danciu's system is implemented

using certain teachings of Mahajan. In particular, the Petition explicitly states “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.**” Pet., 31-32 (emphasis added). The hardware of the Danciu system is a three-element system (**remote control 14**, **servers 24A-24N**, and **controlled device 18**) virtually identical to that of the ’251 Patent.

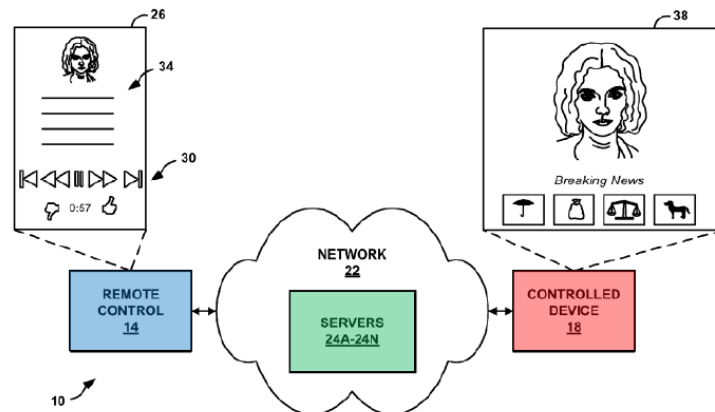
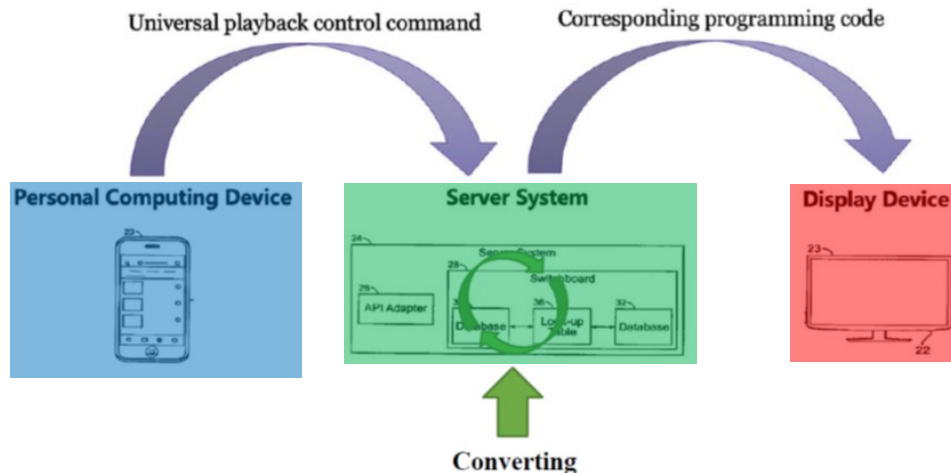


FIG. 1

Danciu’s system, Ex. 1112, Fig. 1 (annotated); Pet., 26

In attempting to contrast the ’251 Patent with Mahajan, PO included a figure of the ’251 system (annotated below) that actually demonstrates how the ’251 Patent architecture closely corresponds to that of Danciu (shown above). Each includes a **personal computing device** (such as Danciu’s remote control 14), a **server system** (such as Danciu’s servers 24A-24N), and a **display device** (such as Danciu’s controlled device 18).

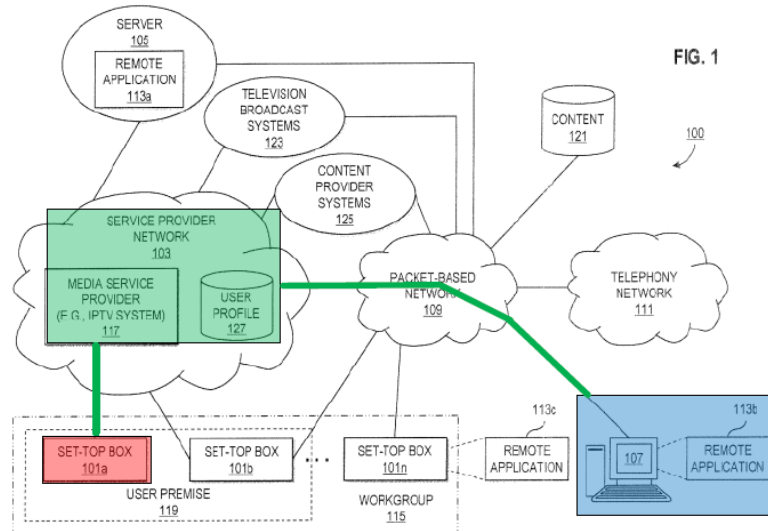


The '251 system, POR, 26 (annotated)

While the Petition does describe the operation of Mahajan's preferred server-client embodiment (when Mahajan is introduced to the combination in the discussion of element [1E], Pet., 28-31), this description is provided to explain the teachings of Mahajan regarding conversion between genericized/universal commands and platform specific media playback commands. The Petition does not rely on the server-client hardware of Mahajan to show the hardware elements of the claims.

Similarly, with regard to the Aldrey-Mahajan combination, the Petition describes that Aldrey's system is implemented using certain teachings of Mahajan. When Mahajan is introduced to the Aldrey combination in the discussion of element [1F], the Petition again briefly describes the operation of Mahajan's preferred server-client embodiment (Pet., 65-67) in order to explain the teachings of Mahajan. The Petition then states "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.**” Pet., 67 (emphasis added). The hardware of the Aldrey system is also a three-element system like that of claims 1 and 11:



Aldrey’s system, Ex. 1115, Fig. 1 (annotated); Pet., 64

In neither the Danciu-Mahajan combination nor the Aldrey-Mahajan combination does the Petition rely on the hardware architecture of Mahajan. PO’s arguments that compare Mahajan’s architecture to the ’251 Patent’s claims are irrelevant and should be disregarded.

2. The Petition Does Not Locate Mahajan’s Server-Command Teachings in the Servers of Danciu and Aldrey

Throughout the POR’s discussions of Mahajan, PO incorrectly analyzes the Petition’s combinations as if the teachings of Mahajan’s server (regarding conversion of platform specific commands into generic/universal commands) are

incorporated into the servers of Danciu and Aldrey. This misapprehension of the proposed combinations underlies, and renders fatally flawed, the POR's repeated arguments that the step of "converting, by the server system, the universal playback control command into corresponding programming code" (e.g., POR, 29-31) and the step of "receiving, in the server system, one or more signals ... further including a universal playback control command" (e.g., POR, 33-34) are not shown in the Petition because the steps purportedly occur in the wrong component.

As in *Arctic Cat*, where the Board faulted patent owner for arguing "as if Petitioner proposes to modify [the primary reference] to position [a claimed component] exactly as positioned in [the secondary reference]," here PO incorrectly positions the teachings of Mahajan's server commands in the servers of Danciu and Aldrey. *Arctic Cat*, 2017 WL 506027, at *8-9; *Facebook, Inc. v. Windy City Innovations, LLC*, 973 F.3d 1321, 1343 (Fed. Cir. 2020). In fact, the Petition expressly states that Mahajan's teachings regarding the generation of genericized/universal playback commands are implemented in Danciu's *remote control*, not Danciu's *server*. Pet., 32 ("A POSITA would have understood that

Mahajan’s server-command teachings could be implemented on Danciu’s remote control”).²

As discussed in the Petition, Mahajan’s server translates commands used by a local media player into generic universal commands that are then transmitted to Mahajan’s client. Pet., 29-31. Thus, when these teachings are implemented in Danciu’s remote control, it is the remote control that sends universal playback commands to Danciu’s server, thus disclosing the step of “receiving, in the server system, one or more signals ... further including a universal playback control command.” Pet., 25-27, 38-39. While PO’s expert argues that Mahajan lacks a “genericized interface” where a user may generate a generic command directly (Ex. 2025, ¶ 50), the claims do not recite that the universal playback control command is

² Petitioner has identified a typographical error in a later sentence on page 32 where “server” was accidentally replaced with “controlled device” thus resulting in the inaccurate statement that Danciu’s remote control would transmit generic commands to the controlled device. It is apparent that this was a typographical error because as explained on the prior page (Pet., 31), elsewhere in the Petition (e.g., Pet., 6-8, 25-27), and in Danciu (e.g., Ex. 1112, 4:46-55, 16:47-67, 17:13-43, Figs. 6-7), Danciu’s remote control transmits commands only to Danciu’s servers, which perform processing and then transmit commands to Danciu’s controlled device.

generated in any particular way at the personal computing device (*i.e.*, remote control), merely that the server receives the universal playback control command from the personal computing device. Ex. 1101, 11:35-41, 12:42-49.

The Petition also describes how, when the generic commands are received by Danciu's server, the media abstraction modules taught by Mahajan would operate at Danciu's server to translate the generic interface commands to commands specific to the interface of a media player (Pet., 41-42), thus showing that the step of "converting, by the server system, the universal playback control command into corresponding programming code" occurs at Danciu's server. The Petition further explains that commands "formatted for a particular device, as taught by Mahajan" (*i.e.*, commands converted from a generic format to a media player specific format), would be stored on Danciu's server for subsequent transmission to the display device. Pet., 42-43.

Similarly, with regard to Aldrey-Mahajan, the Petition states that Mahajan's teachings regarding the generation of genericized/universal playback commands are implemented in Aldrey's *end terminal*, not Aldrey's *server*. Pet., 67-68 ("A POSITA would have understood that Mahajan's server-command teachings could be implemented on Aldrey's end terminal remote control"). Thus, when Mahajan's teachings are implemented in Aldrey's end terminal, the end terminal sends universal playback commands to Aldrey's server, thus disclosing the step of

“receiving, in the server system, one or more signals ... further including a universal playback control command.” When the generic commands are received by Aldrey’s server, the Petition describes how the media abstraction modules taught by Mahajan would operate at Aldrey’s server to translate the generic interface commands to commands specific to the interface of a media player (Pet., 71-72), thus showing that the step of “converting, by the server system, the universal playback control command into corresponding programming code” occurs at Aldrey’s server. The Petition further describes that the commands formatted for Aldrey’s set-top box (*i.e.*, the particular media player) would be stored on Aldrey’s MSP server for transmission to the device. Pet., 72.

In addition to fundamentally misunderstanding the proposed combinations, PO ignores that Mahajan’s teachings are not strictly limited to a server-client implementation. To the contrary, Mahajan describes that its system may be deployed in different ways. Ex. 1114, [0017]-[0018]; Ex. 1198, ¶¶ 6-7. Mahajan’s server and client functionality may be distributed across different components in a computing environment without regard to the type or relative capability of those devices:

Various examples may be practiced in distributed computing environments, where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote memory storage devices. Further, the terms

server and client as used herein do not connote any relative capabilities of the two devices. The client may have more, less, or equal processing capabilities than the server. Rather, in this description, the names server and client describes [sic] the relative relationship of the two components. For example, a computing environment of a first or server device is remoted to a second or client device. **For ease of explanation the examples provided in this document relate to a single server and a single client; however, this is but one potential configuration.** It is to be appreciated that [] other implementations may include one or more servers supporting multiple clients. In some implementations a first computer may act as a server for a second computer, which acts as a server for a third computer.

Ex. 1114, [0018] (emphasis added); Pet., 41, 72; Ex. 1198, ¶¶ 7-8.

Mahajan repeats several times that its functionality can be distributed across multiple remote devices. Ex. 1114, [0058] (“The processes may also be practiced in a distributed computing environment where functions are performed by remote processing devices that are linked through a communications network.”); [0078] (“Typically, the functionality of the program modules may be combined or distributed as desired in various embodiments.”). The Petition cites all three of these paragraphs (18, 58, and 78) when explaining that Danciu’s or Aldrey’s servers can host media abstraction modules like that of Mahajan’s client (*i.e.*, modules that perform the conversion from the universal playback command to programming code for a specific media player). Pet., 41, 72. None of these paragraphs are addressed in

the POR or Dr. Wicker's declaration. In the POR, the only citations to paragraphs 18, 58, and 78 of Mahajan are in quotations of the Petition. POR, 37, 40. Dr. Wicker's declaration does not cite or address these paragraphs at all. PO's failure to address these paragraphs is striking given that the Board specifically discussed them in the Institution Decision. ID, 34-35.

Furthermore, Dr. Wicker conceded in deposition that distributed computing and controlling a computer system across a network were known to a POSITA at the time of the invention of the '251 Patent. Ex. 1197, 11:18-21, 20:22-22:21. Dr. Wicker also admitted that a POSITA would be able to implement the abstraction layer of Mahajan on a server in the network and that this would be consistent with Figure 1 of Mahajan. Ex. 1197, 17:4-20:21.

Mahajan further describes that its system is not limited to being implemented in traditional PC computers but rather may be realized in cell phones or mobile devices, and that such a device can act as a server or as a client:

Various examples may be implemented in computer system configurations other than a PC. For example, **various embodiments may be realized in hand-held devices**, multiprocessor systems, microprocessor-based or programmable consumer electronics, network PCs, minicomputers, mainframe computers, **cell phones and the like**. Further, as technology continues to evolve, various implementations may be realized on yet to be identified classes of devices. For example, as the cost of a unit of processing power continues to drop and wireless

technologies expand, **computing devices resembling today's cell phones** may perform the functionalities of today's PC, video camera, cell phone, and more **in a single mobile device. This single device may in one scenario act as a server and in another scenario act as a client.**

Ex. 1114, [0017] (emphasis added); Pet., 32, 68. When explaining that Mahajan's teachings would be implemented on Danciu's remote control, the Petition specifically cited paragraph 17. Pet., 32 ("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."); Ex. 1198, ¶ 9. The Petition similarly cites paragraph 17 when it explains that Mahajan's server-command teachings could be implemented on Aldrey's end terminal. Pet., 67-68. As with paragraph 18 of Mahajan, the POR and Dr. Wicker's declaration simply do not address paragraph 17 of Mahajan.

For all these reasons, the POR's arguments that Danciu-Mahajan and Aldrey-Mahajan cannot meet the "converting, by the server system, the universal playback control command into corresponding programming code" and the "receiving, in the server system, one or more signals ... further including a universal playback control command" limitations are based on a mischaracterization of the Petition's combinations. *Palo Alto Networks*, 122 F.4th at 1386; *Bradium Techs. LLC v. Iancu*,

923 F.3d 1032, 1050 (Fed. Cir. 2019). When analyzed as actually set forth in the Petition, Danciu-Mahajan and Aldrey-Mahajan teach the “converting” and “receiving” limitations of claims 1 and 11.

The POR also argues that the Petition’s statement that “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” fails to show a motivation to combine because it uses the word “could” instead of “would.” POR, 40. This argument is misplaced because the Petition already explained why a POSITA would be motivated to combine Mahajan and Danciu when Mahajan was earlier introduced (Pet., 31-33). The discussion that PO cites (Pet., 41) merely confirms that a POSITA would successfully make the combination (*i.e.*, that Media Abstraction Modules could operate at a server as explained by paragraphs 18, 58, and 78 of Mahajan discussed above) having *already* been motivated to do so as previously explained by the Petition.

3. Danciu-Mahajan and Aldrey-Mahajan teach “selecting from among a plurality of specific commands ... for a respective media player”

PO argues that the Petition fails to show that the asserted combinations teach “selecting from among a plurality of specific commands, each of which represents a corresponding playback control command for a respective media player.” POR, 31-33. PO again makes the mistake of applying Mahajan’s teachings regarding

generating generic/universal commands to the servers of Danciu and Aldrey, which is incorrect as explained above. Furthermore, to the extent that PO is arguing that converting Mahajan's universal commands to commands specific to the media player does not select from a plurality of commands for a plurality of different media players, that is also incorrect.

While the RTS mapping table 304 of Mahajan Figure 3 shows a mapping of a universal command (e.g., "StartPlayback") to a single platform specific command (e.g., "IMFMediaSession::Start"), Mahajan also describes how "other mapping tables can include multiple translations." Ex. 1114, [0041]; Pet., 40-42, 66-67. In particular, Mahajan provides an example of the client having two media players, QuickTime and Ogg, which would be supported in the mapping tables and a POSITA would have known how to implement such a translation routine. *Id.*; Ex. 1197, 53:13-54:19, 14:10-15:9. Mahajan teaches that in converting a generic command to a client-specific command, the mapping table would choose between a command corresponding to the QuickTime player or a command corresponding to the Ogg player, thus "selecting from among a plurality of specific commands, each of which represents a corresponding playback control command for a respective media player."

PO's further argument that Mahajan provides simplicity because "use of RTS abstraction modules means that neither the server nor the client needs to have

information about the media platform(s) of the other” is also misplaced. POR, 31-32. In Danciu-Mahajan and Aldrey-Mahajan, the server abstraction module and client abstraction module are located on different devices (e.g., on Danciu’s remote control and Danciu’s server, respectively) and, as in Mahajan, the device which sends the generic/universal commands (e.g., Danciu’s remote control) does not need to have information about the specific media player commands into which the other device (e.g., Danciu’s server) will convert the generic/universal commands.

B. A POSITA Would Be Motivated to Combine Danciu and Aldrey With Mahajan

PO also argues that a POSITA would not have been motivated to combine Mahajan with Danciu or Aldrey because Mahajan does not disclose “key limitations associated with the converting step” and the Petition purportedly fails to explain why a POSITA would combine the references. POR, 34-36. As explained above, the Petition provided clear motivations to combine. *See* Pet., 28-34, 65-69.

To the extent that PO is arguing that Mahajan would not be combined with Danciu or Aldrey because Mahajan is purportedly disparate or non-analogous art (POR, 35-36), PO is incorrect. Ex. 1198, ¶¶ 10-12. Art is analogous if it either (1) is from the same field of endeavor or (2) is reasonably pertinent to the particular problem addressed. *See, e.g., Unwired Planet, LLC v. Google Inc.*, 841 F.3d 995, 1000-1001 (Fed. Cir. 2016).

While PO seems to contend that the '251 Patent is limited to “remotely controlling a display device” (POR, 35), the title and first sentence of the '251 Patent’s specification broadly state that the disclosure “relates to play control of content on a display device.” Ex. 1101, 1:14-15; Ex. 1198, ¶ 13; *Unwired Planet, LLC*, 841 F.3d at 1001 (“The field of endeavor of a patent is not limited to the specific point of novelty, the narrowest possible conception of the field, or the particular focus within a given field.”). Furthermore, while in paragraph 37 of his declaration Dr. Wicker states that “Mahajan is not related to remotely controlling a display device” as the basis for his conclusion that a POSITA would not combine it with Danciu, in defining the level of skill in the art he opined that the relevant field was Internet-based video delivery systems, with no mention of remote control. *Cf.* Ex. 2025, ¶ 37 and ¶ 23.

In any event, Mahajan is related to remotely controlling the playing of content on a display device as it describes a system where the content on the display device is controlled using commands that are sent to a remote server, processed, and then sent back to control the display. Ex. 1114, [0001]-[0002], [0011]-[0014]; Pet., 9-10; Ex. 1198, ¶¶ 14-17. Mahajan is even titled “Systems and Methods For Managing Multimedia Operations In Remote Sessions.” Ex. 1114, cover. To the extent PO is contending that the pertinent problem addressed by the '251 Patent is “converting

the universal playback control commands,” that too is addressed by Mahajan. Ex. 1114, [0013]-[0014]; Pet., 9-10; Ex. 1198, ¶¶ 18-21.

Accordingly, Mahajan is analogous art to the ’251 Patent and a POSITA would have properly considered it.

C. Danciu-Mahajan Teaches the Limitations of Claim 22

PO alleges that Danciu-Mahajan does not teach “retrieving, by the display device from a server system, first information” and that the “first information ... identifies a first media player.” PO is wrong on both counts as explained below. Ex. 1198, ¶ 22.

1. Danciu teaches retrieving information from the server

PO argues that claim 22’s retrieving step “imposes a requirement of the display device taking an active step to retrieve the information from the server, as opposed to the server initiating the communication.” POR, 45.

The sole description regarding “retrieving” in the ’251 Patent’s specification is “[o]nce the message is retrieved by or sent to the display device 22, the display device proceeds to execute the command.” Ex. 1101, 6:60-62. A POSITA would have understood that information (*i.e.*, the message) on the ’251 Patent’s server system cannot be accessed directly by the display device, the server system must transmit the information to the display device. Ex. 1198, ¶¶ 23-24.

Danciu similarly discloses that applications 130 executing on processor 132 of controlled device 118 (*i.e.*, Danciu’s display device) may require data from the servers 24 and “[n]etwork module 136 is configured to transmit data/requests to and receive data/responses from one or more servers via network.” Ex. 1112, 12:50-13:3, 11:7-13, Fig. 4; Ex. 1102, ¶ 97; Pet., 7. Danciu further describes that network module 136 may communicate with the servers using hypertext transfer protocol (HTTP), which a POSITA would have known to implement a “get” command for retrieving data by a client from a server, and then providing the received data to the processor/application. Ex. 1112, 12:50-13:3; Ex. 1197, 33:17-35:11; Ex. 1198, ¶ 25. To the extent that PO is arguing that a request from the display device is an active step required to initiate the retrieving step, Danciu discloses it at least as much as it is disclosed in the ’251 Patent.

Also, in claim 22, communications between the server and display device are initiated before the retrieving step occurs, when the server assigns a synchronization code to the display device. Ex. 1101, 13:51-53. Similarly, in Danciu, communications between its servers and controlled device are initiated when a unique identification code (*i.e.*, synchronization code) is assigned as well as that the controlled device can initiate contact with Danciu’s servers for various other reasons. Ex. 1112, 4:21-45, 5:48-63; Pet., 5; Ex. 1198, ¶ 26.

2. Danciu teaches information that “identifies a first media player”

PO also argues that Danciu-Mahajan cannot meet the “retrieving ... first information that ... identifies a first media player” because Danciu does not contemplate swapping between media players using remote messages identifying particular media players. POR, 45-46. While acknowledging that Danciu teaches controlling the operation of YouTube, Hulu, and Netflix media players, PO alleges that a remote control session can only be initiated once a media player application has been loaded and thus that swapping media players is not possible. POR, 46. PO is incorrect as Danciu describes that a remote control session can be initiated before a media player is selected. Pet., 22; Ex. 1198, ¶ 27.

Tellingly, the POR provides no direct citations to Danciu in support of its argument and instead cites only to Dr. Wicker’s declaration. However, Dr. Wicker ignores portions of Danciu’s disclosure that contradict his conclusions. In particular, Dr. Wicker states:

Danciu only contemplates a user utilizing user interface 120 (e.g., traditional keypad, keyboard, mouse, etc.) to interact with controlled device 118 in order to navigate to a web page or to execute applications 130. Ex. 1112, 11:22–35; 11:65–67, 12:17–19. In particular, Danciu contemplates a user interacting with user interface 120 to execute a “video application or web browser for displaying video content from the World Wide Web (e.g., YouTube content, Hulu content, Netflix content, etc.).” Ex. 1112, 13:7–15. From this point, Danciu specifies

that a user may use the video application of applications 130 or the web browser to facilitate paring [sic] of controlled device 118 to the remote control, for instance by notifying a server that it is available to join a session. Ex. 1112, 13:16–23. *This implies* that the “video application” or “web browser” must be loaded (by a user via traditional user interface controls) before the controlled device 118 joins a session maintained by the server.

Ex. 2025, ¶ 74 (emphasis added). But this description of Danciu’s operation that purportedly “implies” that a remote control session can only be joined after a video application or web browser is loaded, ignores other sections of Danciu that make no mention of loading a video application or web browser before initiating a remote control session. For example, Danciu describes how a remote control and controlled device may be paired through the use of a QR code, without any reference to a video application or web browser. Ex. 1112, 4:36-45, 8:23-49, 13:27-32; Pet., 22; Ex. 1198, ¶ 28. Even in a section that Dr. Wicker cites, Danciu states that its controlled device may be “available to be joined to a session maintained by server 24 *upon powering on* or executing a video or web browser application.” Ex. 1112, 13:19-23 (emphasis added). While Danciu allows that “[a] user *may* utilize the video application of applications 130 or web browser of controlled device 118 to facilitate pairing,” Danciu also provides multiple other ways of initiating a remote control session. Ex. 1112, 13:16-19 (emphasis added).

PO further argues that Danciu's control information does not teach identification of media players "because control commands are not media player identifications." POR, 46-47. But Danciu's control information is not limited to playback control commands (e.g., play, pause, etc.) that are untethered from other information as PO assumes. In particular, Danciu describes that the storage device 92 inside its remote control "may store application instructions associated with a video application or web browser for displaying video content from the World Wide Web (e.g., YouTube content, Hulu content, Netflix content, etc.)." Ex. 1112, 13:7-11; Pet., 56-57. There would be no point to storing information specific to these particular media players if information identifying them weren't conveyed to the server and subsequently to the controlled device via Danciu's control information. Ex. 1198, ¶ 29. Danciu also states that "control information may include data intended to alter the operation of controlled device 18 (e.g., stop playback of content, *move to other content*, etc.)." Ex. 1112, 16:52-54 (emphasis added); Pet., 28. In order to instruct the controlled device to "move to other content," information identifying the content and associated media player must be included in the control information. Ex. 1198, ¶ 29.

PO's argument that the Petition is contradictory because it negates the need for command conversion and that generic commands cannot identify a media player also is incorrect. POR, 47. The claims are not limited to sending only commands

(and no other information) between the remote control, server, and display device. For example, claims 1 and 11 each recite sending “one or more signals” that “specify[] a video file,” “identify[] a particular media player,” and “include[] a universal playback control command.” Ex. 1101, 11:36-42, 12:44-49. Claim 22 similarly recites “one or more signals specifying the first video file identifying the first media player and including the first playback control command.” Ex. 1101, 14:13-15. As discussed above, Danciu’s control information includes more than just generic playback commands and the claims explicitly allow that such information may be sent along with playback commands. Thus, Danciu discloses control information that “identifies a first media player” and that would be included in messages to the controlled device to instruct it to switch players. Ex. 1198, ¶¶ 30-31.

D. Aldrey-Mahajan Teaches the Limitations of Claim 22

PO argues that Aldrey-Mahajan does not teach the limitation of “obtaining, by the display device, over the Internet the first media player for playing the first video file” and “loading the first media player in the display device.” POR, 50.

First, while titled a “remote application,” Aldrey explains that this software is resident on both Aldrey’s remote terminal (*i.e.*, the personal computing device) and Aldrey’s STB (*i.e.*, the display device). E.g., Ex. 1115, [0044], [0047], [0050] (remote application 209c is resident on STB 201). Ex. 1198, ¶¶ 32-33. Dr. Wicker

acknowledges this (Ex. 2025, ¶ 85) but argues that the remote application is not a media player (Ex. 2025, ¶ 86). However, Aldrey describes that remote application 209c can be overlaid on the display of STB 201, thus functioning as the media player, and that software can be loaded based on instructions from the remote application. Ex. 1115, [0044], [0052]-[0053], [0014], [0020], [0054], [0055], [0093].

Aldrey also describes that one of the types of media content displayed on the display may be “Internet services content (streamed audio, video, or pictographic media)” (Ex. 1115, [0020]-[0021], [0025]) which, as explained by Mr. Lett, would include plugin media players which would be downloaded as part of the web page or separately. Ex. 1102, ¶ 360; Ex. 1197, 11:22-14:9; Ex. 1198, ¶ 34.

E. PO’s Proposed Level of Ordinary Skill in the Art Is Ambiguous

While not expressly disputing Petitioner’s proposed level of ordinary skill in the art, PO proposes a different (and lower) level of skill. POR, 21. PO’s proposal should be rejected and Petitioner’s proposal should be adopted for at least the following reasons.

First, while the POR relies on Dr. Wicker to support its proposal, the level of ordinary skill set forth in Dr. Wicker’s declaration differs from that in the POR. In particular, while the POR’s proposal requires the POSITA to have “two years of professional experience with Internet-based video delivery systems,” Dr. Wicker states that they should have two years of professional “experience with, *or exposure*

to, Internet-based video-delivery system[s].” POR, 21; Ex. 2025, ¶ 23 (emphasis added). Also, the POR states that the POSITA should have “working proficiency with network architecture, including Internet-hosted server-client systems, and with computer programming” which is not mentioned in Dr. Wicker’s declaration at all. POR, 21; Ex. 2025, ¶ 23. In short, Dr. Wicker does not support PO’s level of skill.

Second, under the POR’s or Dr. Wicker’s definition, “experience with” or “exposure to” Internet-based video-delivery systems could be met merely by an individual being *a user* of such systems. In contrast, Petitioner’s proposal calls for “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.” Pet., 18-19 (emphasis added). This distinction is significant because the ’251 Patent claims deal with the hardware and internal workings of a network-based content delivery system which requires design and/or implementation knowledge far beyond that of a mere user of such systems. *See, e.g., Taiwan Semiconductor Mfg. Co., v. Godo Kaisha IP Bridge 1*, No. IPR2016-01246, 2018 WL 279638, at *4 (P.T.A.B. Jan. 3, 2018) (rejecting patent owner’s proposed level of skill as overly broad in that it could be met by someone with only general experience with semiconductor materials rather than experience with semiconductor processing, design, and development.).

PO's level of ordinary skill appears to be crafted primarily to encompass the limited experience of its expert. Dr. Wicker has never designed a content delivery system. Ex. 1197, 10:12-11:13. In contrast, Petitioner's expert, Mr. Lett, has more than twenty years of experience designing and implementing such systems, as well as experience working with persons who were POSITAs at the time of the invention of the '251 Patent. Ex. 1102 ¶¶ 6-14, 31. Thus, Mr. Lett's opinions on what the prior art would have taught a POSITA or motivated a POSITA to do are entitled to more weight than those of Dr. Wicker. *Nespresso USA, Inc. v. K-Fee Sys. GmbH*, No. IPR2023-00485, 2024 WL 4137278, at *6 (P.T.A.B. Sept. 10, 2024) (finding that although an expert possessed excellent credentials as a professor in the general field of mechanical engineering, his lack of relevant design experience resulted in his opinions being entitled to less weight than those of an expert with such experience.).

F. PO Does Not Make Any Arguments Regarding the Dependent Claims

PO does not advance any arguments that any dependent claim is independently patentable, thus they are rendered obvious by virtue of the independent claims being obvious.

III. CONCLUSION

Claims 1-26 should be canceled.

Dated: February 12, 2025

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CERTIFICATION UNDER 37 CFR § 42.24(d)

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for the foregoing PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE totals 5,582 words, as counted by the Word Count feature of Microsoft Word, which is less than the 5,600 allowed under 37 C.F.R. § 42.24(c)(1).

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6, I hereby certify that I caused a true and correct copy of the **PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE** and supporting evidence to be served via electronic mail to the following:

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