

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TIKTOK INC.,
Petitioner,

v.

NTECH PROPERTIES, INC.,
Patent Owner.

Case No. IPR2024-01340
U.S. Patent No. 8,145,704

PATENT OWNER'S RESPONSE

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PATENT OWNER'S EXHIBIT LIST

Exhibit	Description
2001	Declaration of Dr. Michael T. Goodrich, Ph.D. in Support of Patent Owner's Preliminary Response
2002	Business Wire, "stimTV Network Wins Emmy Award from the National Television Academy; Technology & Engineering Emmy Award for Best Use of 'On Demand' Technology" (Jan. 10, 2007)
2003	National Television Academy, "National Television Academy Announces Emmy Winning Achievements: Honors Bestowed at 58th Annual Technology & Engineering Emmy Awards" (Jan. 8, 2007)
2004	M.J. Freedman, et al., "Geographic Locality of IP Prefixes," Internet Measurement Conference, 153-158 (2005)
2005	I. Poese, et al., "IP Geolocation Databases: Unreliable?" ACM SIGCOMM Computer Communication Review, Vol. 41, No. 2 (April 2011)
2006	Information Security Office Webpage – Separation of System Resources Guideline, available at https://security.berkeley.edu/separation-system-resources-guideline , dated Nov. 18, 2024
2007	J. William, "6 Reasons Why You Should Start Using A Multi Server Environment," available at https://www.temok.com/blog/multi-server-environment/ , dated Nov. 7, 2019
2008	Petition for <i>Inter Partes</i> Review of U.S. Patent No. 9,923,947, <i>TikTok, Inc. v. NTECH Properties, Inc.</i> , No. IPR2024-01343, Paper 2 (P.T.A.B. Aug. 23, 2024)

Exhibit	Description
2009	B. Gleeson, et al., “RFC 2764: A Framework for IP Based Virtual Private Networks,” available at https://www.rfc-editor.org/rfc/rfc2764 , dated Feb. 2000
2010	Intentionally Omitted
2011	Intentionally Omitted
2012	Intentionally Omitted
2013	Intentionally Omitted
2014	Declaration of Michael T. Goodrich, Ph.D. in Support of Patent Owner's Response
2015	Tech Target webpage, definition of “streaming media” available at https://www.techtarget.com/whatis/definition/streaming-media , dated June 10, 2025
2016	Deposition transcript of Dr. Kevin Almeroth, <i>Tiktok Inc. v. NTECH Properties, Inc.</i> , IPR2024-01340 and IPR2024-01342, taken on May 30, 2025
2017	Thesaurus webpage, definition of “including” available at https://www.thesaurus.com/browse/including , dated May 31, 2025
2018	Vocabulary webpage, definition of “together with” available at https://www.vocabulary.com/dictionary/together with , dated May 31, 2025
2019	Lenovo webpage, “Data Signal Basics: What You Need to Know,” available at https://www.lenovo.com/us/en/glossary/data-signal/?orgRef=https%253A%252F%252Fwww.google.com%252F , dated June 10, 2025

Exhibit	Description
2020	Excerpts from Microsoft Computer Dictionary (5th ed. 2002)
2021	Learnit webpage, “Networking data and signals” available at https://www.learnit.com/blog/networking-data-and-signals#:~:text=In , dated June 10, 2025
2022	Merriam-Webster webpage, definition of “access” available at https://www.merriam-webster.com/dictionary/access , dated May 31, 2025
2023	Information Security Office webpage – Separation of System Resources Guideline, available at https://security.berkeley.edu/separation-system-resources-guideline , dated Nov. 18, 2014
2024	Temok webpage, “6 Reasons Why You Should Start Using A Multi Server Environment,” available at https://www.temok.com/blog/multi-server-environment/ , dated Nov. 7, 2019
2025	Intentionally Omitted
2026	Intentionally Omitted
2027	Oxford Advanced Learner's Dictionary webpage, definition of “access” available at https://www.oxfordlearnersdictionaries.com/us/definition/english/access_2 , dated June 10, 2025
2028	PC Mag webpage, definition of “access” available at https://www.pcmag.com/encyclopedia/term/access , dated June 5, 2025

Exhibit	Description
2029	Customerly webpage, “Media Channel” available at https://www.customerly.io/glossary/media-channel/ , dated May 13, 2025
2030	Microsoft Learn webpage, “media Element,” available at https://learn.microsoft.com/en-us/previous-versions/windows/desktop/wmp/media-element , dated April 25, 2023
2031	ScyllaDB webpage, “Real Time Data” available at https://www.scylladb.com/glossary/real-time-data/ , dated May 6, 2025

I. INTRODUCTION

Patent Owner respectfully requests that the Board find the Challenged Claims of the '704 Patent patentable because neither Whitehead (Ex. 1003) nor Cristofalo (Ex. 1004), alone or in combination with Marcus '904 (Ex. 1005), teaches the claimed inventions.

Independent Claims 19 and 23 are patentable over Grounds 1 and 2 because Whitehead does not disclose a user selecting a “media stream” from a “plurality of media streams” or a publisher that assembles the selected media stream with other media elements, and Petitioner does not argue that Marcus '904 cures this deficiency. Pet. at 51. In Whitehead's system, when a user selects a “custom media channel,” the system either plays a pre-generated custom media channel or generates the custom media channel in real time. In the former embodiment, no additional media elements are selected and assembled with the alleged selected media stream. In the latter embodiment, there is no existing “media stream” available to be selected and assembled with other media elements.

Independent Claim 1 is also patentable over these grounds because Whitehead does not disclose accessing a plurality of media streams or using the media streams to modify the content of the streams provided to the client in the manner recited in the Challenged Claims. Instead, Whitehead uses discrete, stored media elements to form custom media channels.

Independent Claims 19 and 23 are also patentable over Ground 3 because Cristofalo does not disclose a ***publisher*** that provides individual customized media programming to a client, and Marcus '904 does not cure Cristofalo's deficiency. Instead, Cristofalo's alleged ***aggregator*** provides the alleged customized media program when it selects advertisements based on user profile information and inserts them into the programming selected for presentation. Cristofalo at ¶¶ [0045]-[0050], Fig. 4. Marcus '904 does not resolve Cristofalo's deficiency because, like Cristofalo, Marcus '904 teaches assembling customized media programming at an aggregator, and the record evidence contradicts Petitioner's conclusory, hindsight-laden argument that a POSITA would have executed Marcus '904's algorithm at Cristofalo's publisher.

Independent Claim 1 is also patentable over Ground 3 because, *inter alia*, Petitioner's rationale for combining the two references is insufficient.

II. OVERVIEW OF THE '704 PATENT

The '704 Patent describes and claims a publisher that provides individual customized media programming in response to a selection of a media stream from a list of media streams. *See* '704 Patent at Abstract, 2:61-3:1, Claims 19 and 23. The selection of one of the media streams causes the publisher to generate individual customized media programming by assembling the selected media stream with other media elements selected based on user data. *See id.* at 11:24-25, 11:60-12:34, 13:13-

22. The result is a customized and tailored feed for each user, as illustrated in Figure 1.

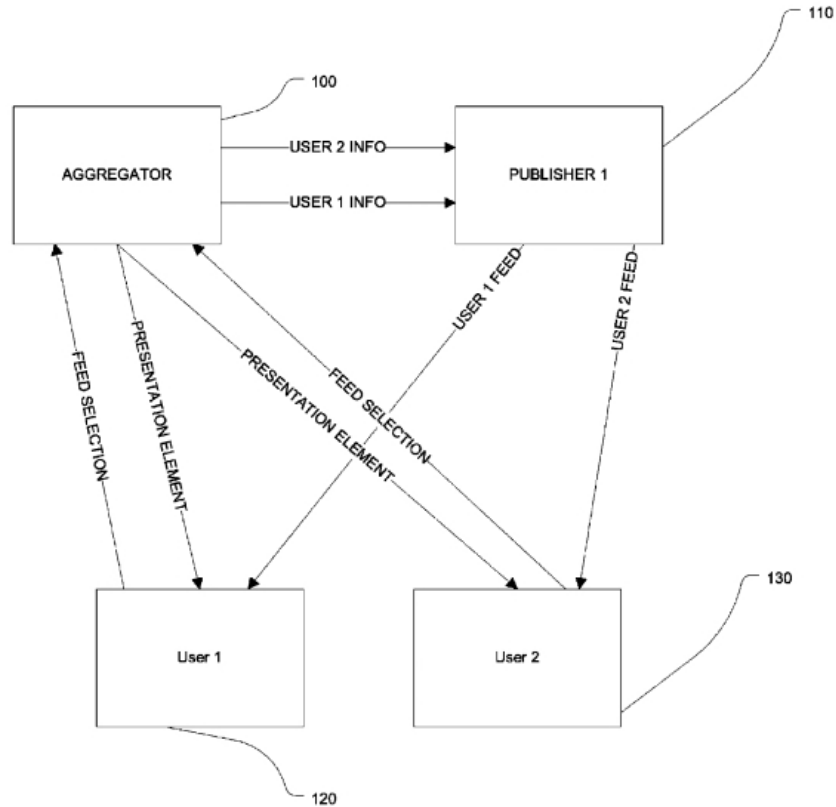


Fig. 1

'704 Patent at Fig. 1; *see also id.* at 2:44-3:5 (disclosing that the publisher selects and concatenates media elements with the selected feed based on each user's user information), 5:21-47 (disclosing that the publisher server's processor executes software to provide media programming); *see also* Ex. 2014 ("Goodrich PO Resp. Decl.") at ¶¶ 30-32.

III. LEVEL OF ORDINARY SKILL IN THE ART

A person of ordinary skill in the art (“POSITA”) at the relevant time period between 2006 and 2007 would be one having a bachelor’s degree in computer science, computer engineering, or an equivalent, or two years of professional experience in the field of distributed computing. More education can supplement for less professional experience, and vice versa. Goodrich PO Resp. Decl. at ¶¶ 15-19.

IV. CLAIM CONSTRUCTION

A. “Media Stream” (All Challenged Claims)

The plain and ordinary meaning of the term “media stream” is: *a continuous sequence of media data*. This construction is dispositive for at least Claims 19 and 23 in Grounds 1 and 2 because Whitehead does not disclose a user selecting a media stream (*i.e.* a continuous sequence of media data) and providing media programming by **assembling the selected media stream and other media elements**. See § VI.A, *infra*; Goodrich PO Resp. Decl. at ¶ 33.

At institution, the Board found that combining an “existing” media stream assembled with other media elements was not commensurate with the scope of the claims. See Paper 7 at 12-13 (finding that “claim 19 does not recite combining an ‘existing’ channel with other media elements”). NTECH respectfully disagrees with the Board’s conclusions because the intrinsic and extrinsic records preclude applying

such an interpretation to the claimed “media stream” for least the following reasons. Goodrich PO Resp. Decl. at ¶ 34.

The plain language of the claims confirms that the term “media stream” refers to an (existing) continuous sequence media data because each claim requires that the “media stream” be assembled with other media elements. *See, e.g.,* ’704 Patent at Claim 19 (reciting (1) that a user is presented with a “plurality of media streams” and selects “one of the media streams,” and that (2) the publisher “receiv[es] the output signal” including, *inter alia*, “data indicative of the selection” and “assemble[s] the selected media stream and the other media elements in the temporal sequence”). This language, requiring the assembly of “other” media elements, with the media stream would make little sense if “the selected media stream” did not also include media data. *See* Goodrich PO Resp. Decl. at ¶ 35.

Antecedent basis confirms that the media stream must also include a plurality of media elements at the time selected from “a plurality of media streams.” *See Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1356-57 (Fed. Cir. 1999) (noting the importance of an antecedent basis in claim construction). Because “the selected media stream” derives antecedent basis from “a plurality of media streams” and the “selection,” “the media stream” is the **same** media stream selected from those presented. Ex. 2016 (Almeroth Tr.) at 76:5-77:7. Therefore, at the time the media stream is selected from the plurality of media streams, the media stream

must include media data to be assembled with other media elements selected and ordered based on user data. Goodrich PO Resp. Decl. at ¶ 36.

Dictionary definitions of “media stream” from around the time of the invention confirm that the term refers to a continuous sequence of media elements. These definitions show that the term is known in the art to refer to a continuous sequence of media elements. *See* Ex. 2020 at 332 (defining “media stream” as a “***continuous sequence of*** audio or audio-and-video through a network”) (emphasis added); *see also* Ex. 2015 at 1 (defining “media stream” as “[s]treaming media is video or audio content sent in compressed form over the internet”); Goodrich PO Resp. Decl. at ¶ 37.

The specification also uses the term “media stream” in concert with this plain and ordinary meaning because it consistently refers to a media stream as including media data. *See Wi-LAN USA, Inc. v. Apple Inc.*, 830 F.3d 1374, 1382 (Fed. Cir. 2016) (“Consistent use of a term in a particular way in the specification can inform the proper construction of that term.”) (citations omitted). The ’704 Patent introduces the term “media stream” with reference to one of the inventor’s earlier patents, Marcus156 (Ex. 1008). ’704 Patent at 5:44-47 (disclosing that “U.S. Patent No. 6,032,156 [Marcus156] provides exemplary methods of generating a media stream”). These methods include arranging a sequence of media elements (or otherwise assets) to create a media stream. Goodrich PO Resp. Decl. at ¶¶ 38-39.

Marcus156 describes a system that is “capable of arranging assets in an order, and creating transitions between assets, to create a concatenated stream of audiovisual programming that has transitions that appear to the viewer to have been edited by a human editor.” Marcus156 at 14:14-18. These “assets,” or “media elements” (e.g., video clips or audio elements), are stored in a library and are sequenced together to generate what the '704 Patent refers to as a media stream. *Id.* at 1:63-64, 2:58-64, 4:39-41, 9:23-32.

Nor is there evidence that the inventor meant the claims to cover more than the ordinary meaning of media stream, such as a placeholder devoid of media content. *See Nystrom v. TREX Co.*, 424 F.3d 1136, 1145 (Fed. Cir. 2005) (“In the absence of something in the written description and/or prosecution history to provide explicit or implicit notice to the public . . . that the inventor intended a disputed term to cover more than the ordinary and customary meaning revealed by the context of the intrinsic record, it is improper to read the term to encompass a broader definition”) (citations omitted). There are no examples of a “media stream” in the '704 Patent that would support re-defining the term “media stream” in such a way, so it would be improper to expand the scope of the claims to cover a media stream selection that is something other than the existing media stream itself. Goodrich PO Resp. Decl. at ¶ 40.

In view of the foregoing, “media stream” means *a continuous sequence of media data*. *Id.* at ¶ 41.

B. “An Output Signal Including Data Indicative of the Selection and of User Data” (Independent Claim 19)

At institution, the Board correctly found that “an output signal including data indicative of the selection and of user data” means a single signal includes **both** data indicative of the selection and user data. *See* Goodrich PO Resp. Decl. at ¶ 42.

The word “including” in the claim language confirms that an “output signal” requires both data types. Indeed, the word is synonymous with “together with” which signifies that two things are “combined.” Ex. 2017 at 1; Ex. 2018 at 1. Based on the wording, “data indicative of the selection” is together with the “user data” in “an output signal.” Thus, under a plain reading, “an output signal” requires both data types in a single signal. Goodrich PO Resp. Decl. at ¶ 43.

That the claims require a single signal with data indicative of the selection **and** user data is also consistent with the specification. The specification discloses that in response to selection of one of the media streams in a list, “**a signal** is sent via network 200 to server 220 **including data indicative of a selection of a feed and user information.**” ’704 Patent at 3:53-64 (emphasis added). Accordingly, the specification contradicts Petitioner’s contention that “[n]othing in the specification or prosecution history compels a narrower read that imports a formatting requirement into the claim language.” Pet. at 23-24. On the contrary, the

specification confirms that a signal is encoded with and transmits both data types from the aggregator to the publisher. *See* '704 Patent at 3:53-64 (describing that the signal is provided from one server to another via network 200). Indeed, a “signal” is “a form of transmission that conveys information between devices or locations.” Ex. 2019 at 2; *see also* Ex. 2021 at 1 (“*Signals* are the electric or electromagnetic impulses used to encode and transmit data.”); Goodrich PO Resp. Decl. at ¶ 44.

Petitioner's contention that the plain meaning does not require both data types in a “single message” is unhelpful and confusing particularly because Petitioner does not indicate what does and does not constitute a “message.” Pet. at 23; *see also* Ex. 2016 (Almeroth Tr.) at 62:15-63:6. The independent claim recites a “signal” not a “message,” so Petitioner's plain meaning argument does not address the claim language. *See* Goodrich PO Resp. Decl. at ¶ 45.

To the extent Petitioner intends to equate the term “message” with the claimed “signal,” Petitioner's argument violates Federal Circuit precedent. Pet. at 23 (alleging that “data indicative of the selection” and “user data” can be “outputted at different times” and do not need to be transmitted “simultaneously or consecutively”). While the word “a” is typically understood to mean “one or more,” subsequent recitations of the term must refer back to the same element previously introduced. *Convolve, Inc. v. Compaq Comp. Corp.*, 812 F.3d 1313, 1321 (Fed. Cir. 2016). Accordingly, the reference “the output signal” (received by the publisher

from the aggregator) refers to the same “one or more” output signals introduced earlier in the claim. *See Salazar v. AT&T Mobility LLC*, 64 F.4th 1311, 1315-16 (Fed. Cir. 2023). There is not somehow “the output signal” referring to “an output signal” with only data indicative of the selection **or** user data received that is received by the publisher.

Accordingly, “an output signal” refers to a single signal that encodes and transmits from the aggregator to the publisher **both** the data indicative of the selection and user data. Goodrich PO Resp. Decl. at ¶ 46.

C. “Accessing by the Aggregator”

In the context of the intrinsic record, the term “accessing by the aggregator” in “accessing by the aggregator over a network the plurality of media streams” refers to the aggregator using media streams. This construction is dispositive for at least Independent Claim 1 in Grounds 1 and 2 because Whitehead’s alleged aggregator uses individual media elements, not media streams. *See* § VI.C, *infra*; Goodrich PO Resp. Decl. at ¶ 47.

Dictionary definitions of the term “access” confirm that the term refers to being able to use something. Ex. 2022 at 2 (defining “access” to mean “to be able to use”); Ex. 2027 at 1 (“access something (computing) to open a computer file or use a computer system”), Ex. 2028 at 1 (“[T]he opportunity for use of a resource” and “[t]o store data on and retrieve data from a disk or other peripheral device”). In

the context of computing, the term to refer to being able to obtain and use computer files, data, etc. See Goodrich PO Resp. Decl. at ¶ 48.

Consistent with the dictionary definitions, the specification describes an embodiment where the aggregator obtains and uses media streams to modify the content of the streams. See '704 Patent at 9:43-10:47. In the embodiment, media streams are provided to the aggregator for modification:

[M]ultiple streams, which may be customizable or predetermined, are provided to an aggregator; based on user information, such as user actions or user profile, ***the streams are modified***, if they are customizable.

Id. at 10:30-33 (emphasis added). The aggregator extracts the metadata that identifies the character of the streams' content and facilitates switching between the media streams to modify the stream content:

This customization approach may employ ***appropriate stream metadata to identify the 'character' of the stream's content*** and local caching to ***facilitate aesthetically-suitable switching***.

Id. at 9:48-54 (emphasis added).

[M]odify the contents of a stream with any combination of switching (with or without caching) between media feeds such as video RSS feeds to the aggregation location.

Id. at 9:18-23 (emphasis added); see also Goodrich PO Resp. Decl. at ¶ 49.

Independent Claim 1 is directed to the above embodiment. *SIMO Holdings Inc. v. Hong Kong uCloudlink Network Tech. Ltd.*, 983 F.3d 1367, 1379 (Fed. Cir. 2021) (“[I]t is often the case that different claims are directed to and cover different disclosed embodiments. The patentee chooses the language and accordingly the scope of his claims.”) (citations omitted). The independent claim recites that the aggregator receives “data relating to a plurality of a media streams” and based in part on the data “determin[es] . . . a temporal sequence of media programming comprising the media streams” and “provid[es] . . . to the client media programming in the determined temporal sequence.” ’704 Patent at Claim 1. Dependent Claim 18 further recites “caching by the aggregator the media streams prior to providing the elements in the media programming, whereby switching between streams.” *Id.* at Claim 18; Goodrich PO Resp. Decl. at ¶ 50.

In view of the foregoing, “accessing by the aggregator . . . the plurality of media streams” is not simply a conduit for streams to traverse. Paper 7 at 23, 26. To the contrary, the aggregator’s “access[.]” does more with the media streams through its use of these streams to modify stream content. Goodrich PO Resp. Decl. at ¶ 51.

V. THE ASSERTED REFERENCES

A. Whitehead (Grounds 1 and 2)

Whitehead does not disclose a publisher providing media programming (assembled with the selected media stream and other media elements based on user data). Goodrich PO Resp. Decl. at ¶¶ 52-55. Whitehead's custom media channels 170 are provided either by (1) selecting a characteristic (e.g., attribute) corresponding to the channel that causes the creation of the custom media channel 170; or (2) selecting a pre-generated custom media channel that is simply presented. *See, e.g.*, Whitehead at 16:1-14. Neither embodiment involves a user selecting an existing media stream and a publisher assembling the existing media stream with other user-specific media elements.

In fact, there is no media stream that is part of custom media channels 170. The custom media channel 170 is made up of individual media content items that are assembled based on playlist 205, as depicted below:

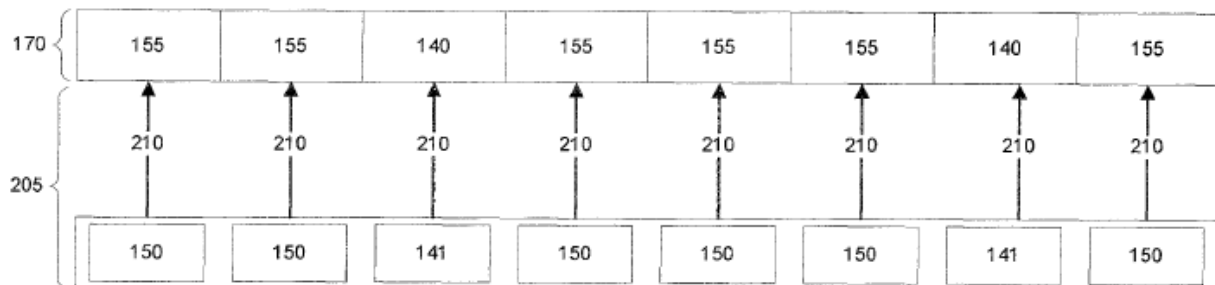


FIG. 2

Id. at Fig. 2. The custom media channel is specific to each user, as its individual media content items are selected from a database based upon profile 160. *Id.* at 5:9-13, 5:24-55, *id.* at 8:34-38 (“[T]he particular advertising content 140 and/or media content 155 included in custom media channel 170 depends at least in part on a custom channel profile 160 . . .”).

B. Cristofalo (Ground 3)

Cristofalo's final media programming is generated by the alleged *aggregator* (identified as receiving system 104). Goodrich PO Resp. Decl. at ¶¶ 58-59. Cristofalo discloses a system including transmitting system 102, receiving system 104, and user profiling system 106. Cristofalo at ¶ [0020]. In this system, receiving system 104 assembles media objects (advertisements) with a user's selected programming. *Id.* at ¶¶ [0045]-[0050], Fig. 4. For example, receiving system 104 can receive multiple advertisements from transmitting system 102, select advertisements based on the user's profile, and assemble the advertisements with the selected programming (e.g., Monday Night Football) that is then presented to the client. *Id.* at ¶ [0049], Fig. 4.

VI. GROUND 1: THE CHALLENGED CLAIMS ARE PATENTABLE OVER WHITEHEAD

A. Whitehead Does Not Disclose the Publisher Receiving “Data Indicative of the Selection” and Provide[ing] Media Programming” By “Assembl[ing] the Selected Media Stream and the Other Media Elements” (Independent Claims 19 and 23)¹

At institution, the Board preliminarily found that the independent claims do not require that an “existing” media stream is combined with other media elements. See Paper 7 at 12-13. However, this finding impermissibly expands the scope of the ’704 Patent. See § IV.A, *supra*. Under the plain and ordinary meaning of “media stream” (*i.e.* a continuous sequence of media data), a media stream is selected and assembled with user-specific media elements to generate the client’s “media programming.” Whitehead does not disclose such a feature. See Goodrich PO Resp. Decl. at ¶¶ 60-61

Whitehead discloses two distinct embodiments, neither of which discloses the publisher receiving a selected media stream and assembling that media stream with other media elements to provide media programming. In Whitehead, the user’s

¹ Because Petitioner asserts substantially the same arguments and evidence for Independent Claim 23 since “Claim 23 recites most of the same limitations as [C]laim 19” (Pet. at 35, 70), NTECH’s Claim 19 arguments also apply to Claim 23 unless otherwise indicated.

selection of “custom media channels 170” (allegedly, the “individual custom media programming”) causes the system to either (1) play a pre-generated custom media channel (the “pre-generated embodiment”) or (2) generate a custom media channel in real-time (the “real-time embodiment”). *See, e.g., Whitehead at 16:1-20; Goodrich PO Resp. Decl. at ¶ 61.*

In the pre-generated embodiment, the selection of the already created custom media channel 170 simply causes its presentation without the publisher “providing” “media programming” (created by assembling the selected media stream with user-specific media elements). In Whitehead’s real-time embodiment, the user’s selection of a custom media channel is not a selection of a “media stream” because there is no existing media stream for the user to select or for the publisher to assemble with user-specific media elements. Although Petitioner presents two “Media Feed Mapping[s],” each is deficient for these reasons. *See Pet. at 12-15; Goodrich PO Resp. Decl. at ¶¶ 62-63.*

1. Media Feed Mapping 1: Custom Media Channels are Not Selected and Incorporated Into Media Programming

In “Media Feed Mapping 1,” Petitioner alleges that “custom media channels 170 are themselves the claimed ‘plurality of media streams.’” *Pet. at 12 (emphasis omitted).* In this mapping, the claimed invention is patentable over Whitehead because neither of its embodiments, discloses a user selecting a “media stream,” as properly construed, and assembling the media stream with other user-specific media

elements to provide to the user “media programming.” *See* § IV.A, *supra*; Goodrich PO Resp. Decl. at ¶ 64.

In Whitehead's the real-time embodiment, the user's selection of custom media channel 170 causes the mixing server to generate the custom media channel in real-time. Whitehead at 11:43-49 (“That is, a playlist 205 may be generated and a custom media channel 170 may be created in real-time or near real-time when a user ‘tunes’ to the channel 170 or otherwise selects the channel 170 for viewing through playback device 115.”). In this embodiment, a user tunes to a channel, and the custom channel is generated. *See* Goodrich PO Resp. Decl. at ¶ 65.

Whitehead uses the term channel in the same way as used in the art to refer to “[a] path or link through which information passes between two devices,” but it does not imply the existence of any content delivered by the channel. Ex. 2020 at 94; Ex. 2029 at 1 (“A media channel, also known as a communication channel, refers to the medium through which information, news, entertainment, education, data, or promotional messages are disseminated.”). Unlike a “media stream,” a channel is simply a conduit for content to pass through and does not carry the implication that it includes any media data at any given time. Whitehead at 11:45-49 (disclosing that “a custom media channel 170 may be created in real-time or near real-time when a user ‘tunes’ to the channel 170 or otherwise selects the channel 170”); Goodrich PO Resp. Decl. at ¶ 66.

That is why, when a custom media channel is generated in real-time, the channels are presented according to “names or identifiers selected by a user when creating channel profiles 160,” or “according to attributes” like “baseball” or “weather,” or organized into other groups or structures. Whitehead at 16:5-14. The selection of one of these characteristics from the menu is not a “media stream” under the proper construction and cannot be concatenated with additional media elements, as is required by the Challenged Claims. Goodrich PO Resp. Decl. at ¶ 67.

Accordingly, in the real-time embodiment, there is no media stream selected that results in the creation of custom media channel 170 as in the manner claimed, *i.e. selecting a media stream* and “provid[ing] media programming . . . including ***the assembled media stream*** and other media elements.” ’704 Patent at Claim 19 (emphasis added); Goodrich PO Resp. Decl. at ¶ 68.

In Whitehead’s pre-generated embodiment, pre-generated custom media channels 170 and their media elements are listed in the menu for selection and playback. Whitehead at 16:14-21 (disclosing that “particular ***items of media content 155 included in a custom media channel 170 may be listed in the menu***” where “a user may interactively browse and ***select one or more clips, i.e., items of media content 155, for playback***”) (emphasis added); Goodrich PO Resp. Decl. at ¶ 69.

Where custom media channels 170 are pre-generated, the user’s selection of the channel is not fed to a publisher that assembles the channel with additional media

elements, it simply plays the pre-generated channel. Whitehead at 11:5-12:7 (“Embodiments are also possible in which a custom media channel 170 is created and stored prior to a user's request to access the channel 170.”). Rather than the user's selection identifying a feed that is then concatenated with other media elements, the user's selection merely plays the already created custom channel. *See id.* at 16:66-17:17 (disclosing either playing stored files according to a playlist or determining in real-time which media content is necessary and retrieving that content from a library); Goodrich PO Resp. Decl. at ¶¶ 70-71.

2. Media Feed Mapping 2: The User Does Not Select Media Feeds from Content Sources

In “Media Feed Mapping 2,” Petitioner alleges that “each custom media channel 170 generated by mixing server 130 corresponds to a ‘media stream’ from a different content source.” Pet. at 13; Goodrich PO Resp. Decl. at ¶ 72.

Petitioner's Mapping 2 ultimately shares the same deficiency as “Media Feed Mapping 1” because it still relies on the user's “selection” of a custom media channel 170 from a menu of available media channels. Pet. at 12-16. As discussed above, the user's selection of a custom media channel does not result in Whitehead's system providing “media programming” under one of Whitehead's embodiments. *See* § VI.A.1, *supra*. Thus, even if content sources 135 provide “media streams,” there is no sense in which the user's selection of a custom media channel selects a Content Source's “media stream.” Rather, the user still selects the custom media channel

170 from the menu, which causes the system to either generate the custom channel in real-time (in which case, the user's selection of a characteristic does not correspond to an existing media stream that can be concatenated with other media elements) or play the pre-generated custom media channel (in which case, the system does not assemble this existing custom channel with other media elements based on user data to then provide the "media programming"). Goodrich PO Resp. Decl. at ¶ 73.

B. Whitehead Does Not Disclose Nor Render Obvious "Providing an Output Signal Including Data Indicative of the Selection and of User Data" (Independent Claim 19)

Claim 19 is also patentable because Whitehead does not disclose a publisher receiving "an output signal including data indicative of the selection and of user data" from an aggregator. '704 Patent at Claim 19. The plain reading of "output signal" refers to a single signal including "data indicative of the selection" *and* "user data," which is from the aggregator. See § IV.B, *supra*; Goodrich PO Resp. Decl. at ¶ 74.

Whitehead provides no such signal from its content processing device (the alleged "aggregator"). Instead, Whitehead's system sends profiles 160 (allegedly, "user data") from profile server 165. In view of Whitehead's deficiencies, Petitioner presents different "Output Signal" mappings of Whitehead onto this limitation, but none have merit. See Pet. at 16-24; Goodrich PO Resp. Decl. at ¶ 75.

As a preliminary matter, each mapping fails for the same reason: there is no “output signal” with “user data” that is provided **after** “receiving a signal having data indicative of a selection of one of the media streams.” The “data indicative of **the** selection” in the “output signal” derives antecedent basis from “data indicative of **a** selection of one of the media streams” in the “receiving a signal.” See ’704 Patent at Claim 19 (“receiving a signal having data indicative of a selection of one of the media streams” and then “providing an output signal including data indicative of the selection and of user data”). Because of antecedent basis, this “output signal” is sent **after** receiving the user’s selection. On the other hand, Whitehead’s profiles 160 (the alleged user data) are the impetus for the creation of the custom media channels and are, therefore, sent **before** it is possible to select a custom media channel. See Goodrich PO Resp. Decl. at ¶¶ 76, 78-83.

While each mapping fails because of the abovementioned deficiency, they also fail for the reasons that follow. With respect to Mapping 1, Petitioner concedes (1) that the “output signal” must include **both** data indicative of a user selection and user data and (2) that Whitehead does not disclose such an output signal. See Pet. at 16-17. Petitioner, however, makes a number of arguments attempting to explain why a POSITA would have modified Whitehead in one way or another. Each proposed modification, however, is based entirely on impermissible hindsight gleaned from the inventor’s disclosure, not record evidence. Goodrich PO Resp.

Decl. at ¶¶ 77, 84-95. In regards to the Mapping 2, Petitioner rewrites the claims to remove the requirement that the output signal include both types of data and that it is provide by the aggregator. Pet. at 21-24. However, this mapping facially fails because “an output signal” is sent from the aggregator and requires both data types. Goodrich PO Resp. Decl. at ¶¶ 77, 96-98.

1. Each of Petitioner's Output Signal Mappings Fail Because Whitehead's Profiles 160 Are Provided *Before* a Custom Media Channel Selection, the Challenged Claims Require User Data to be Sent *After* Selection

In Petitioner's “output signal” mappings, Petitioner either (1) proposes that it would have been obvious to move profile server 165 to content processing device 110 to send profiles 160 in a “channel request,” or (2) rewrites the claim to not require “output signal” to include both data indicative of the selection and user data in a single request. *See, e.g.*, Pet. at 17-19, 21-24. But regardless of where Whitehead's profiles 160 are sent from and whether the claimed “output signal” includes both the selection and user data (it does), Whitehead's system provides profiles 160 ***before*** custom media channels 170 are selected as the profiles are used to generate the channels. Therefore, Whitehead does not disclose “providing an output signal including . . . user data” ***after*** “receiving a signal having data indicative of a selection of one of the media streams” under either embodiment. '704 Patent at Claim 19; *see also* Goodrich PO Resp. Decl. at ¶¶ 78-83.

Whitehead's pre-generated embodiment does not reach the claim limitation because pre-generated custom media channels 170 are selected ***after*** profiles 160 were already provided to mixing server 130. Indeed, Whitehead discloses that mixing server 130 receipt of profile 160 "***trigger[s]***" the creation of a custom media channel and is used in the creation. Whitehead at 12:8-17 ("a database trigger in a database storing profiles 160 may cause a message for mixing server 130 to be sent" and "cause[s] mixing server 130 to invoke a process for creating or modifying one or more custom media channels 170 based on a profile 160 provided in the message"). Based on Whitehead's disclosure, profile server 165 (regardless of where it is located) sends profiles 160 to mixing server 130 in a message before custom media channels 170 are created and available for selection.

Because Whitehead's system already transmits the necessary data to create the custom media channel, it would be superfluous to include the same information again upon the request to play a now available custom media channel. *In re Omeprazole Pat. Litig.*, 536 F.3d 1361, 1380 (Fed. Cir. 2008) (affirming nonobviousness holding where the challenger failed to provide evidence of a need for proposed modification and the district court therefore concluded a POSITA would have no reason to make it). And where there are profiles 160 updates, Whitehead's system updates the profiles along with the corresponding custom channels before a user selects the now updated pre-generated custom media channel

See Whitehead at 16:1-3 (describing that profiles 160 may be updated to “administer custom media channels 170”), Fig. 5 (depicting updating profiles 160 at step 515 (re-directs to 310) before selecting the custom media channel at step 520). In this case, mixing server 130 receives a message from profile server 165 that profile 160 has been updated and queries media content to determine whether new media content 155 can be included in the custom media channel. See *id.* at 11:61-12:7.

Whitehead's real-time embodiment fares even worse. In this embodiment, the user selects a characteristic (e.g., an attribute from profile 160 listed in the menu). See § VI.A.1, *supra*. Because a characteristic does not satisfy “media stream” under the proper construction, there is no “presenting a plurality of media streams” for which “data indicative of a selection of one of the media streams” would be received and an “output signal” provided. '704 Patent at Claim 19.

Even if the plain and ordinary meaning of “media stream” was not adopted (it should be), a selection of a profile 160 characteristic introduces a plethora of new issues. Independent Claim 19 lists “user data” separate from “data indicative of the selection” with “an algorithm” using both “the selection and the user data” to “select a temporal sequence of media programming comprising the selected media stream.” See *Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1254 (Fed. Cir. 2010) (“Where a claim lists elements separately, ‘the clear implication of the claim language’ is that those elements are ‘distinct component[s]’ of the patented

invention.”) (citations omitted). Nothing in the intrinsic record overcomes the clear implication that “user data” and “data indicative of the selection” are distinct components, and nothing is shown on how a profile characteristic can satisfy either or both distinct components. See ’704 Patent 8:20-23 (describing “data indicative of the selection” as “data indicative of the content element, such as a video, still photo, song or other audio element”).

Petitioner does not identify any disclosure in Whitehead that corresponds to “data indicative of the selection” in the “output signal” and used in “the algorithm” along with “user data” to generate Whitehead’s custom media channel 170. *Nichia Corp. v. Document Sec. Sys., Inc.*, No. 2020-2261, 2022 WL 1218036, at *4 (Fed. Cir. Apr. 26, 2022) (expressing that a petition must specify where each element is found in the prior art). Instead, Petitioner states in broad strokes, and without specifying any particular element, that “mixing server 130 receives . . . a request to create a custom media channel” (allegedly, “the output signal”) and uses “the user selection of a particular custom media channel” (allegedly, “using the selection”). Pet. at 26-27.

Petitioner’s cited evidence does not fill in the gaps. See Pet. at 27 (citing Whitehead at 11:40-58, 13:35-46). These passages describe generating a custom channel’s playlist **using only profile 160** (allegedly, “user data”). See *id.* (citing Whitehead at 11:40-58, 13:35-46). And, as described above, the only message

received by the mixing server that “trigger[s]” the creation of the custom media channel *is* the profile message from profile server 165 (see Whitehead at 12:8-17). See Pet. at 16 (wrongly asserting that a request from content processing device 110 “‘trigger[s]’ mixing server 130 ‘to create one or more custom media channels 170’”).

2. Output Signal Mapping 1: Petitioner's Proposed Modifications of Whitehead are Based on Improper Hindsight

Although Petitioner's “Output Signal Mapping 1” is based on a correct reading of the claim—where the claimed output signal must include both data indicative of the selection and user data—Whitehead neither discloses nor renders obvious a custom channel request including “data indicative of the selection and of user data.” See Pet. at 17-18; Goodrich PO Resp. Decl. at ¶¶ 84-95.

Petitioner concedes that Whitehead does not disclose including profiles 160 (allegedly, the “user data”) in a user's request for a custom channel from the content processing device, as profiles 160 are from profile server 165 and sent in a separate message. Pet. at 17-18, 21 (stating that “Whitehead's profile server 165 . . . transmits a message to mixing server 130 containing that profile 160” (citing Whitehead at 11:40-12:17)); *id.* at 27 (alleging that profiles 160 are “user data”); *id.* at 21 (acknowledging that mixing server 130 receives profiles 160 from profile server 165). Given that Whitehead does not disclose this limitation, Petitioner alleges that it would have been obvious to include profiles 160 in a custom channel request

provided from the content processing device 110 to the mixing server. Pet. at 17-18. Petitioner's arguments are meritless for the reasons discussed below.

First, and foremost, profiles 160 are sent in a message to mixing server 130, which triggers the creation of custom media channels. Because profile 160 is provided to mixing server 130 **before** the custom media channels are created, mixing server already has profile 160 when the channel is available for selection from the menu. Thus, it would be entirely unnecessary to send profiles 160 with the custom media channel selection.

Second, Petitioner's arguments for its proposed modifications misuse common sense to supply a missing limitation without meeting the relatively strict standard for single-reference obviousness grounds. See Pet. at 17-20 (asserting "processing efficiency," "user's geographic location," and moving profile server 165 to content processing device 110 arguments). In *Arendi S.A.R.L. v. Apple Inc.*, 832 F.3d 1355 (Fed. Cir. 2016), the Federal Circuit considered whether and under what circumstances common sense (as opposed to record evidence and motivation to combine) could be used to supply a missing claim limitation. *Id.* at 1361-62. The court explained that invoking common sense to supply a missing limitation may be proper when "the limitation in question [is] unusually simple and the technology particularly straightforward." *Id.* at 1362. Petitioner has not attempted to make that showing.

Instead, Petitioner presents a *post-hoc* rationalization for its proposed modification, arguing that Whitehead, as modified, would provide more efficient processing or “simplify processing and communications.” Pet. at 18-19; *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007) (stating that a “factfinder . . . must be cautious of arguments reliant upon *ex post* reasoning”) (citation omitted). However, after-the-fact identification of the benefits flowing from a particular invention does not prove that it would have been obvious to make the modification at the time of the invention. *Otsuka Pharm. Co. v. Sandoz, Inc.*, 678 F.3d 1280, 1296 (Fed. Cir. 2012) (“The inventor’s own path itself never leads to a conclusion of obviousness; that is hindsight. What matters is the path that the person of ordinary skill in the art would have followed, as evidenced by the pertinent prior art.”) (citations omitted). Instead, when using common sense arguments like these to fill in gaps of a single reference obviousness argument, it is incumbent on the petitioner to “explain the ‘common knowledge and common sense’ on which it relied,” and Petitioner’s arguments—addressed in detail directly below—do not (and are not alleged) to meet this standard. *Arendi*, 832 F.3d at 1362 (citations omitted).

Petitioner’s first argument—that it would improve “processing efficiency” to include “at least some ‘*user data*’ . . . in the request . . . because mixing server 130 would be able to start creating custom media channel 170 even before receiving the remainder of profile 160”—is flawed. Pet. at 18. For one, Petitioner’s argument

assumes the conclusion because it has not established that including user data in a request **would** improve processing efficiency in Whitehead's system, let alone that such a benefit was "common knowledge." *Arendi*, 832 F.3d at 1362. In fact, Petitioner's argument neglects to consider the impact of mixing server 103 receiving user data in dribs and drabs, as this argument contemplates. Pet. at 18 (arguing that it would be beneficial to receive some user data with the request and the rest of the user data later). But the alleged reason for doing so—"because mixing server 130 would be able to start creating custom media channel 170 even before receiving the remainder of profile 160" (*id.*)—crumbles under the weight of the evidence that shows profiles 160 are sent before the creation, and, in fact, trigger the creation of the custom media channel. See § VI.B.1, *supra*; Whitehead at 12:8-17.

Petitioner's second argument—that a "user's geographic location (e.g., by looking up the geolocation of an IP address)" "could automatically" be included in the custom channel request—is also meritless because it concerns what a POSITA *could have* done, not what it *would have done*. Pet. at 18-19; Ex. 1002 ¶ 89 (repeating verbatim the petition language); *Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1073 (Fed. Cir. 2015) ("[O]bviousness concerns whether a skilled artisan not only *could have made* but *would have been motivated to make* the combinations or modifications of prior art to arrive at the claimed invention.") (citation omitted). Again, Petitioner does not provide any evidence demonstrating that including the

user's geolocation along with a request for a custom media channel was known to have the benefits it claims, let alone that those benefits were "common knowledge." *Arendi*, 832 F.3d at 1362.

Furthermore, Petitioner's argument again assumes the conclusion, *i.e.*, that the "geographic location [sic] of interest to the user" is subject to change depending on where the user travels. Pet. at 18. But there is no support for this conclusion. Whitehead already allows a user to specify "geographic locations of interest to the user." Whitehead at 7:3-18. If the user indicates that she is interested in Washington DC and New York City, one cannot also presume that she is interested in the various rural and suburban areas of New Jersey, Delaware, and Maryland just because she passes through those locations as she travels between those two cities. If the user travels to a new location **and** is actually interested in generating a custom channel associated with that location, Whitehead provides all of the necessary tools for the user to update its profile associated with the new location.

Also, a POSITA would not have had reason to include a user's IP geolocation because (1) Whitehead provides no suggestion to do so and (2) Petitioner has not established that IP geolocation was a reliable tool for improving convenience and accuracy. Goodrich PO Resp. Decl. at ¶¶ 94-95. To the contrary, at the time of the invention, a POSITA would have understood that IP addresses were poor proxies for geographic locations, as the location accuracy was inadequate and the databases

were difficult to manage. *Id.* at ¶ 95 (citing Ex. 2004 at 5, Fig. 2), (citing Ex. 2005 at 1). In light of these difficulties and inaccuracies, geolocation of IP addresses would not have been an improvement of “convenience and accuracy,” as Petitioner suggests. Pet. at 19.

Petitioner's third argument—that it would have been obvious to “implement profile server 165 as part of content processing device 110”—is also the product of hindsight. *Id.* Initially, Petitioner argues that Whitehead “recognizes that various functionalities in Figure 1 can be combined or shifted between system components.” *Id.* However, Whitehead does not disclose that the **profile server** can be shifted to the **content processing device**. Whitehead at 2:52-59 (disclosing that the “media player” may be a TV or software), 4:10-26 (disclosing that mixing server and VOD server could be integrated into a single server), 6:35-46 (custom channel profiles may be created by a user of computer 105 or at content processing device 110), 15:16-22 (a playback application may be located at client 105, content processing device 110, or mixing server 130), 19:44-63 (same). Moreover, even if Whitehead included a “generic” statement about the moving functionality from one location to another—it does not—such statements would not suffice to demonstrate that a POSITA would “‘envisage’ the specific combination [Petitioner] urges.” *BlephEx, LLC v. Myco Indus., Inc.*, 24 F.4th 1391, 1401 (Fed. Cir. 2022) (citation omitted).

Petitioner further argues that “[m]aintaining profiles 160 on content processing device 110 would simplify processing and communications,” but it relies on only the conclusory, parroting testimony of its expert for support. Pet. at 19 (citing Ex. 1002 at ¶ 90). A declaration that “merely repeats, *verbatim*, the conclusory assertion for which it is offered to support” is “entitled to little or no weight.” *Xerox Corp. v. Bytemark, Inc.*, No. IPR2022-00624, Paper 9 at 15 (P.T.A.B. Aug. 24, 2022) (precedential) (citations omitted).

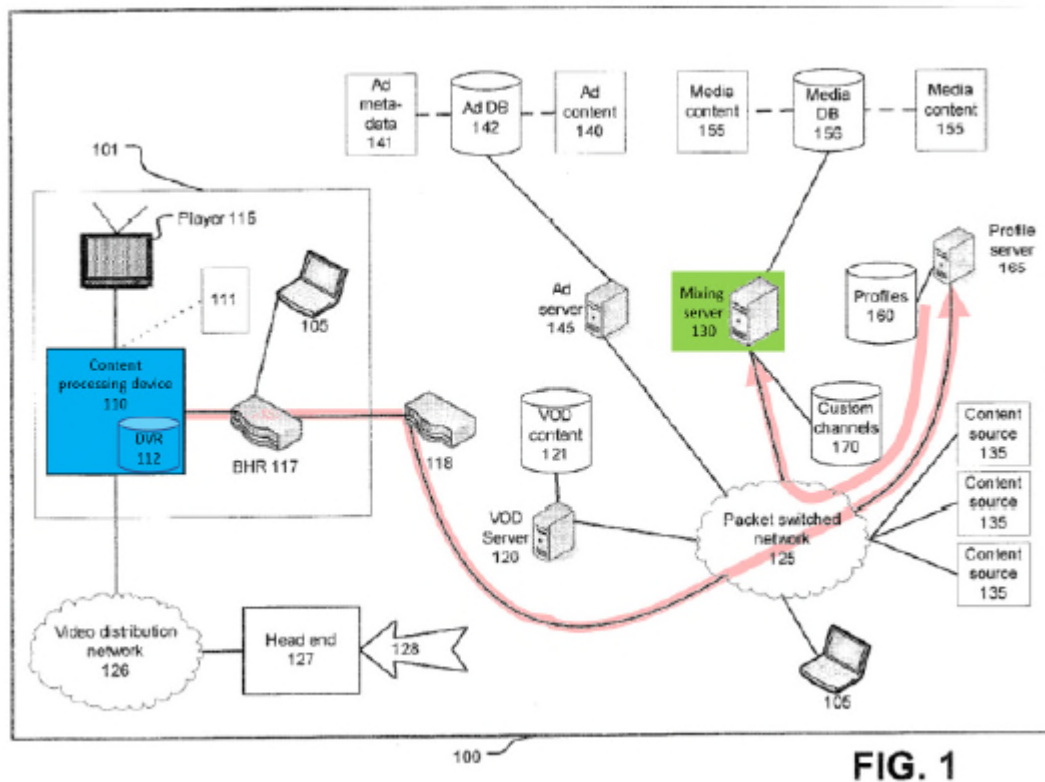
In fact, for security reasons alone, profile server 165 would be maintained separate from content processing device 110. Specifically, to reduce the risk of compromising profiles 160, containing users’ personnel information, a POSITA would have kept profile functionality on profile server separate from content processing device 110. *See, e.g.*, Ex. 2023 at 2 (stating that “[c]ritical services storing, processing and transmitting covered data should be hosted on separate physical or logical servers to reduce the risk of a compromised service”); Ex. 2024 at 2; Goodrich PO Resp. Decl. at ¶ 92; *see also id.* at ¶ 93.

In view of the different functionality and security precautions, a POSITA would not have been motivated to implement profile server 165 as part of mixing context server 130.

3. Output Signal Mapping 2 and “Combining”: Petitioner’s Arguments are Inconsistent with the Plain Language of the Claims

The proper construction of “output signal” rejects Petitioner’s “Output Signal Mapping 2” and “Combining” arguments that rewrite the claim so that the “output signal” need not include both the user data and user selection sent from the aggregator. Pet. at 21-22 (alleging that “profile server 165 . . . transmits a message to mixing server 130 containing that profile 160 (‘user data’);” *see also id.* at 23 (alleging that there is no claim requirement that the “data indicative of the selection and of user data” “be transmitted simultaneously or consecutively.”); Goodrich PO Resp. Decl. at ¶¶ 96-98.

Specifically, each argument relies on Whitehead’s profile server 165 providing profiles 160 to the alleged publisher via a message. Pet. at 21 (alleging that “Whitehead’s profile server 165 then *transmits a message* to mixing server 130 containing profile 160 (‘user data’)” (Output Signal Mapping 2); *id.* at 22 (alleging that it would have been obvious for content processing device 110 to send an identifier to profile 160); *id.* at 23-24 (“Combining” argument, same). Petitioner’s annotated Whitehead Figure 1 (below) depicts profile server 165 providing profiles 160 to mixing server 130 via a message (pink arrow):



Pet. at 21.

Because Whitehead’s content processing device 110 (allegedly, the aggregator) does not provide the profiles to the alleged publisher via a signal that also includes the data indicative of the selection, Petitioner’s “Output Signal Mapping 2” and “Combining” argument do not even facially meet the plain reading of an aggregator providing “an output signal” including **both** the data indicative of the selection and user data. See § IV.B, *supra*.

* * *

For at least the foregoing reasons, Whitehead does not disclose nor render obvious “providing an output signal including data indicative of the selection and of

user data.” Therefore, Petitioner fails to demonstrate that Whitehead discloses or renders obvious Independent Claim 19 and its dependents.

C. Whitehead Does Not Disclose Accessing a Plurality of Media Streams (Independent Claim 1)

Independent Claim 1 is patentable because Whitehead does not disclose “accessing by the aggregator . . . the plurality of media streams” under the correct constructions of both “media streams” and “accessing.” See §§ IV.A & IV.C, *supra*. Rather than use a plurality of **media streams** to determine a temporal sequence of media programming **comprising the media streams**, Whitehead uses individual **media elements** stored in a database to form custom media channels. Goodrich PO Resp. Decl. at ¶¶ 99-103.

Whitehead’s mixing server at most acts as a conduit through which content sources 135 passes through on its way to media database 156. However, a conduit does not satisfy “accessing by the aggregator . . . the plurality of media streams” under the correct construction. See § IV.C. Where the ’704 Patent’s aggregator obtains and uses the “plurality of media streams” to modify the content of these streams (*see id.*), Whitehead’s mixing server uses media elements to form custom media channels from scratch. Goodrich PO Resp. Decl. at ¶ 100.

Whitehead discloses storing **media elements**, such as video clips, in a database and its alleged aggregator forming a custom media channel from those media elements. Whitehead at 5:24-55, 8:53-59. Petitioner acknowledges Whitehead’s

disclosure of using only media elements when asserting that custom media channels 170 include only individual media content items. Pet. at 38 (stating that Whitehead “generates a playlist 20[5] identifying **media content 155** and an order for that **media content 155 in custom media channel 170.**”) (emphasis added); Ex. 2030 at 1 (defining a “media element” as “specifi[ying] one of the media items in a playlist.”). The content sources 135 that these media content items are from are not streamed in the custom media channel. Petitioner again concedes this point when stating that: “mixing server 130 **streams custom media channel 170 . . .** consisting of ‘concatenat[ed]’ **media content 155 and/or advertising content 140.**” Pet. at 39 (emphasis added); Goodrich PO Resp. Decl. at ¶ 101.

In Whitehead's system, content sources 135 provide content to a media database, which stores and tags individual “media elements” (e.g., video clips). Whitehead at 5:9-16, 8:42-51. Accordingly, regardless of whether Whitehead's content sources 135 provide media in the form of media streams, broadcast TV, video clips, audio clips—or any other type of media—that media is still stored in the form of individual media elements within Whitehead's media database 156, and custom media channels are still built from those individual media elements. *Id.* Thus, even if content sources 135 were “broadcast television channels” (Pet. at 37) or the “media stream” of Marcus '904, Petitioner's argument still fails because Whitehead's alleged aggregator (mixing server 130) does not use content sources

135; it uses media elements from media database 156. *See* Goodrich PO Resp. Decl. at ¶ 102.

For at least the foregoing reasons, Whitehead does not disclose using a plurality of media streams to “determin[e] . . . a temporal sequence of media programming comprising the media streams” and “provid[e] . . . to the client media programming in the determined temporal sequence.” ’704 Patent at Claim 1; Goodrich PO Resp. Decl. at ¶ 103.

D. The Dependent Claims

Because Petitioner fails to show that the independent claims are unpatentable over Whitehead, Petitioner also fails to show that the dependent claims are unpatentable. Additional reasons for the patentability of the dependent claims are set forth below.

1. Dependent Claim 13: Whitehead Does Not Disclose “Providing Predetermined Media Programming” and “Media Programming Responsive to the User information” During First and Second Time Periods

Dependent Claim 13 is patentable for the same reasons Independent Claim 1 is patentable over Whitehead and for the additional reasons that follow. Dependent Claim 13 recites that “in response to the received selection, providing predetermined media programming during a first time period, and providing media programming responsive to the user information in a second time period after the first time period.” ’704 Patent at Claim 13. Rather than furnish two different media programming at

different time periods, Whitehead provides only a single custom media channel 170. Petitioner does not dispute this but argues that it would have been obvious to modify Whitehead's system to play a non-personalized advertisement before playing the requested custom media channel. Pet. at 46; Goodrich PO Resp. Decl. at ¶¶ 104-107.

Petitioner's argument is the product of hindsight because it does nothing more than retrace the steps of the inventor. *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F. 3d 1358, 1364 (Fed. Cir. 2008) ("In retrospect, [the inventor's] pathway to the invention, of course, seems to follow the logical steps to produce these properties, but at the time of invention, the inventor's insights, willingness to confront and overcome obstacles, and yes, even serendipity, cannot be discounted."). The only location in the record where this limitation is disclosed is in the '704 Patent itself. See, e.g., '704 Patent at 7:49-54 ("In one embodiment, in response to the received selection of a feed, the publisher provides a predetermined feed during a first time period, and provides a feed responsive to the received client information in a second time period. Thus, the same initial feed may be provided to all users who make a particular selection.").

Petitioner reasons that because there may be a delay between the time the user selects Whitehead's custom media channel and the time that it is actually played back, it would have been obvious to furnish a predetermined advertisement

(allegedly, the “first feed”) before furnishing the custom media channel. *See* Pet. at 46. However, Petitioner does not attempt to estimate how long such a delay would be expected to take in Whitehead’s system or demonstrate that any such delay would be on the right order of magnitude to make it **obvious** to fill that time with an advertisement. Petitioner has not, therefore, provided “a detailed explanation of the significance of the evidence” as required under 37 C.F.R. § 42.22(a)(2).

Moreover, Petitioner’s argument regarding claim 13 does not meet the relatively high bar for using common sense to support a single-reference obviousness ground. *See Arendi*, 832 F.3d at 1362 (holding that invoking common sense “to supply a limitation that was admittedly *missing* from the prior art ought to be treated as the exception, rather than the rule”). As the Federal Circuit held in that case, this exception exists only when the “limitation in question [is] unusually simple and the technology particularly straightforward” and when the missing limitation does not “play[] a major role in the subject matter claimed.” *Id.*

Petitioner’s proposed modification does not meet this standard. Indeed, given that Whitehead states that the custom media channel may be delivered in or close to real-time, it is reasonable to infer that a POSITA would **not** have found it obvious to delay the delivery of the custom media channel in order to play a non-personalized advertisement. As discussed above, Whitehead discloses that its custom media channels 170 are meant to improve over “generic” and “predetermined”

programming, and Petitioner does not explain why a POSITA would have, nevertheless, delayed the delivery of such programming when it can be provided “in real-time or near real-time,” which, Petitioner admits, is a “short interval.” See Whitehead at 1:37-40, 11:45-47; Pet. at 28; Ex. 2031 at 1 (describing “real-time” as “available immediately or almost immediately”); Goodrich PO Resp. Decl. at ¶ 107.

For at least the foregoing reasons, NTECH respectfully requests that the Board determine that Claim 13 is patentable over Whitehead.

**2. Dependent Claim 18: Whitehead Does Not Disclose
“Caching by the Aggregator Media Streams” and
“Switching Between Streams”**

Dependent Claim 18 is patentable because Whitehead’s mixing server 130 does not cache media streams and switch between these media streams. Rather than cache a plurality of *media streams*, Whitehead stores individual media elements. And rather *than switch between cached streams* to modify these existing media streams, Whitehead generates new custom media channels using only individual media elements. See Goodrich PO Resp. Decl. at ¶ 108.

As established above, individual media content items 155 (media elements) are stored in a database and accessed by mixing server 130 to generate custom media channels 170. See § VI.C, *supra*; Whitehead at 5:9-13 (describing that “[m]edia metadata 150 and media content 155 may be stored in a media database 156”). Because Whitehead’s mixing server 130 does not cache media streams, it does not

switch between these media streams to provide customization of streams, as in the manner required by the claims. '704 Patent at Claims 1, 18; *see, e.g., id.* at 10:12-18 (describing that “any given feed to the aggregator is dynamically switchable . . . [b]ased on user information, such as a record of browsing or a user profile furnished to the source, and suitable algorithms, the stream may be customized.”); Goodrich PO Resp. Decl. at ¶ 109.

3. Dependent Claim 24: Whitehead Does Not Disclose “the Step of Providing Media Programming Compris[ing] Switching at Least Between the Selected Media Stream and the Second Media Stream in Accordance With the Temporal Sequence”

Dependent Claim 24 is patentable because Whitehead does not provide media programming comprising the selected media stream, let alone switching to a second media stream in accordance to a temporal sequence. *See* Goodrich PO Resp. Decl. at ¶¶ 110-111.

Petitioner's skipping argument highlights Whitehead's deficiencies. Specifically, Petitioner argues that Whitehead's system “switch[es] between content elements” in playlist 205 by “skip[ping] to another item of media content.” Pet. at 35-36. But skipping between items of media content in custom media channel is not switching media streams altogether. Indeed, when a user skips items of media content, they are still provided the same playlist. This is also true when a user skips to advertising content. Whitehead at 8:28-41, Fig. 2. The advertisements are

individual media elements of the custom channel (*i.e.* media element 140), not a “second media stream,” as Petitioner contends. Pet. at 35; Whitehead at Fig. 2 (depicting media element 140).

VII. GROUND 2: THE CHALLENGED CLAIMS ARE PATENTABLE OVER WHITEHEAD IN VIEW OF MARCUS '904

Ground 2 challenges the independent claims and their dependents with the addition of Marcus '904, this reference is used only for its algorithm that, according to Petitioner, “receiv[es], select[s], order[s], and assembl[es] different media streams.” Pet. at 51 (alleging that a “POSITA would have modified Whitehead’s mixing server 130 to incorporate Marcus '904’s algorithm (running on Marcus '904’s receiver)”). Petitioner’s assertion that “Marcus '904 further renders obvious that Whitehead’s content providers 135 are ‘media streams’” (Pet. at 54) does not resolve the deficiencies noted above with custom media channels containing only individual media elements. Therefore, Ground 2 fails for the same reasons Ground 1 fails. See Goodrich PO Resp. Decl. at ¶¶ 112-113.

VIII. GROUND 3: THE CHALLENGED CLAIMS ARE PATENTABLE OVER CRISTOFALO IN VIEW OF MARCUS '904

At institution, the Board expressed concerns with Petitioner’s arguments and proposed rationale for the Challenged Clams under the likelihood of success institution standard. See, *e.g.*, Paper 7 at 29, 30, 31, 33, 34. If Petitioner could not

meet its burden under the lower institution standard, it cannot meet its burden here under the higher preponderance of the evidence standard for the reasons that follow.

A. Cristofalo in View of Marcus '904 Does Not Disclose a *Publisher* That “Assemble[s] the Selected Media Stream and the Other Media Elements” (Independent Claims 19 and 23)

Independent Claims 19 and 23 are patentable over Cristofalo and Marcus '904 because neither reference discloses generating customized media programming at a publisher, and Petitioner does not adequately explain why a POSITA would have found it obvious to implement Marcus '904's algorithm at Cristofalo's publisher. '704 Patent at Claim 19;² Goodrich PO Resp. Decl. at ¶¶ 114-115.

² Applicant clarified during prosecution that in Claim 23, the publisher performs the assembly and provisioning steps. Ex. 1019 at 121 (during prosecution of a family member application reciting similar claim limitations, the Applicant clarified that it is the publisher, not the aggregator, that assembles and provides the media programming). Because the publisher performs Claim 19's and Claim 23's assembles and provides media programming steps, NTECH's analysis for Claim 19 applies equally to Claim 23.

1. Cristofalo's Alleged Aggregator Assembles the Final Media Programming Provided to the User

Cristofalo's alleged aggregator (receiving system 104) finalizes its final media programming provided to the user, not the alleged publisher (transmitting system 102). As Petitioner admitted in IPR2024-01343, Cristofalo's *receiving system 104* "receive[s] multiple, multiplexed media objects and select[s] the *appropriate media object for inclusion in the programming*." Ex. 2008 at 9 (emphasis added). By Petitioner's own admission, Cristofalo's transmitting system does not generate the final media programming provided to the user. Goodrich PO Resp. Decl. at ¶ 116

Petitioner's admission is consistent with Cristofalo's disclosure, which discloses that the receiving system generates the final media programming. See Cristofalo at ¶ [0049] ("Upon receiving the multi-object programming [advertisements] signal, the receiving system 104 then selects specific media objects for decompression, composition and presentation based upon the user's profile (Block 408)."); see also *id.* at ¶¶ [0045]-[0048]. As described with respect to Figure 4, for example, Cristofalo states that after a user selects desired programming (e.g., "Monday Night Football" (see Pet. at 44)) at step 404, the *receiving system* receives media objects (e.g., advertisements) at step 406, selects advertisements based upon the user profile at step 408, and composes the final media programming at step 410. Cristofalo at Fig. 4; see also *id.* at ¶¶ [0045]-[0050]. Accordingly, Cristofalo's final media programming is assembled at the receiving end, where advertisements are

included with the selected programming based on user profile information. *See id.* at ¶¶ [0048]-[0049]; Goodrich PO Resp. Decl. at ¶¶ 117-118.

Although Petitioner argues that transmitting system 102 does the assembly, that argument is based on a misrepresentation of Cristofalo's "programming signal." *See* Pet. at 66-67 (identifying Cristofalo's "programming signal"); Goodrich PO Resp. Decl. at ¶¶ 119-120. As established above, the "programming signal" contains advertisements that are received by the receiving system. *See, e.g.,* Cristofalo at ¶¶ [0048]-[0050]; *see also id.* at ¶ [0036] (a "programming signal" contains "media objects (the convertible roof and the hard top roof)" advertisements). Indeed, as Petitioner admits elsewhere, Cristofalo's receiving system is the component that "receive[s] multiple, multiplexed media objects and ***select[s] the appropriate media object for inclusion in the programming.***" Ex. 2008 at 9 (emphasis added).

Thus, the Petition's citation to Cristofalo's "programing signal" shows at best that transmitting system 102 selects and sends advertisements to receiving system 104. *See* Pet. at 66 (asserting that "transmitting system 102 generates media programming consisting of media objects based on the user's choice and user profile information"). However, the transmitting system does not select, order, and concatenate these advertisements ***with the selected programming*** to generate the final media programming in Cristofalo, as in the manner required by the Challenged Claims. *See* Goodrich PO Resp. Decl. at ¶ 121.

For at least the foregoing reasons, Cristofalo does not disclose the claimed publisher “provi[ding] media programming . . . including the assembled media stream and other media elements.” ’704 Patent at Claim 19; *see also id.* at Claim 23; Goodrich PO Resp. Decl. at ¶ 122.

2. Petitioner Fails to Provide Adequate Rationale as to Why a POSITA Would Have Implemented Marcus ’904’s Algorithm at Cristofalo’s Transmitting System

Petitioner also fails to present sufficient rationale for why a POSITA would have implemented Marcus ’904’s algorithm at Cristofalo’s transmitting system. Petitioner’s rationale is founded on Marcus ’904 providing “**additional disclosure** of targeting media programming to specific users” that could “benefit[]” Cristofalo. Pet. at 56-57 (alleging that Marcus ’904 provides “additional disclosure of targeting media programming” which allegedly leads to “better customization”) (emphasis added). However, none of that “additional disclosure” suggests performing Marcus ’904’s algorithm as a publisher. Goodrich PO Resp. Decl. at ¶¶ 123-126.

At institution, the Board expressed concerns with Petitioner’s rationale, calling it “vague” or “nebulous.” *See* Paper 7 at 32-33 (noting that Petitioner’s rationale hinges on Marcus ’904’s “**additional disclosure**” of targeting media programming) (emphasis added). These disclosures may contain additional details about how to generate media programming, but they do not suggest generating media programming at a publisher instead of an aggregator, which is the deficiency

in Cristofalo that Marcus '904 is meant to cure. Where, as here, the necessary reasoning is absent, the Board cannot “simply assume that ‘an ordinary artisan would be awakened to modify prior art in such a way as to lead to an obviousness rejection.’” *Plantronics, Inc. v. Aliph, Inc.*, 724 F.3d 1343, 1354 (Fed. Cir. 2013) (citation omitted).

Indeed, the record evidence does not suggest the incorporation of Marcus '904's algorithm at Cristofalo's transmitting system (Pet. at 56-57) because, like Cristofalo, Marcus '904 disclose assembling media programming at a receiver, not a transmitter. Pet. at 56 (“Marcus '904's **algorithm (running** on Marcus '904's **receiver)** for receiving, selecting, ordering, and assembling different media streams [sic] (both for content and advertising)"); *id.* at 66-67 (“Marcus '904 addresses the lack of detail in Cristofalo regarding targeting by transmitting system 102 **by describing a receiver 100** that ‘collects media’ from different ‘media source[s]’ and ‘assembles a program from the collected media.’”) (emphases added) (citing Marcus '904 at ¶ [0030]) (emphases added). Marcus '904's **receiver** “selects media elements from the media streams for inclusion in the programming based upon the user data,” “arranges the selected data elements into an order based upon the user data,” and concatenates the result. Pet. at 67 (citing Marcus '904 at ¶ [0040]). Because the evidence does not support incorporation at the transmitting end, it is unexplained why additional disclosure of targeting media programming would have motivated a

POSITA to modify Cristofalo's transmitting end. Goodrich PO Resp. Decl. at ¶¶ 124-125.

Aside from the lack of evidence, Petitioner's rationale is also vague because it could "swallow all of patent law." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 217 (2014) (citation omitted). That a reference provides additional disclosure is no different than merely stating that the reference provides technology that another reference could take advantage of, which does not meet the *KSR* standard. The Board's decision in *Medivis, Inc. v. Novard Corp.*, No. IPR2023-00042, Paper 35 at 24 (P.T.A.B. Mar. 6, 2024) is instructive on this point. In *Medivis*, the Board found that the petitioner's rationale of a reference taking advantage of technology disclosed in another reference did meet the *KSR* standard. *Id.* The Board concluded that an advantage of the technology approach does not meet *KSR*'s "articulated reasoning" standard because it is "so vague and broad that it could be applied to combine any two references." *Id.* (citing *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 418 (2007)) (further citation omitted). Likewise, Petitioner additional disclosure on targeting media programming approach does not meet *KSR*'s "articulated reasoning" standard as it too is "so vague and broad that it could be applied to combine any two references." *Medivis*, Paper 35 at 24 (citation omitted).

Even if Petitioner's rationale was not vague (which is not the case), it is still irrelevant because Cristofalo "already" details how it assembles final media programming, including targeted advertisements, and therefore a POSITA would have found such an implementation entirely "unnecessary." *See In re Schweickert*, 676 F. App'x 988, 995 (Fed. Cir. 2017) (determining that the proposed modification is "unnecessary" because the reference "already" performs the function); Paper 7 at 32 (asserting that "Patent Owner's argument rings true because Cristofalo already teaches pushing advertising and programming to users" at the receiving end). Cristofalo details that receiving system 104 includes demultiplexers 204 for selecting advertisements based on user profiles, a synchronization unit for "coordinat[ing]" and "synchroniz[ing]" the advertisements, and a composition generator 210 for "compos[ing] . . . a composite presentation signal," *i.e.* user-specific targeted programming. Cristofalo at ¶¶ [0029]-[0032]; *see also id.* at ¶ [0036] (disclosing that the receiving system accesses a region indicator (which user profiling system utilizes) "to determine which of the received data packets the demultiplexer 204 is to select"); *id.* at ¶ [0034]; Goodrich PO Resp. Decl. at ¶ 126.

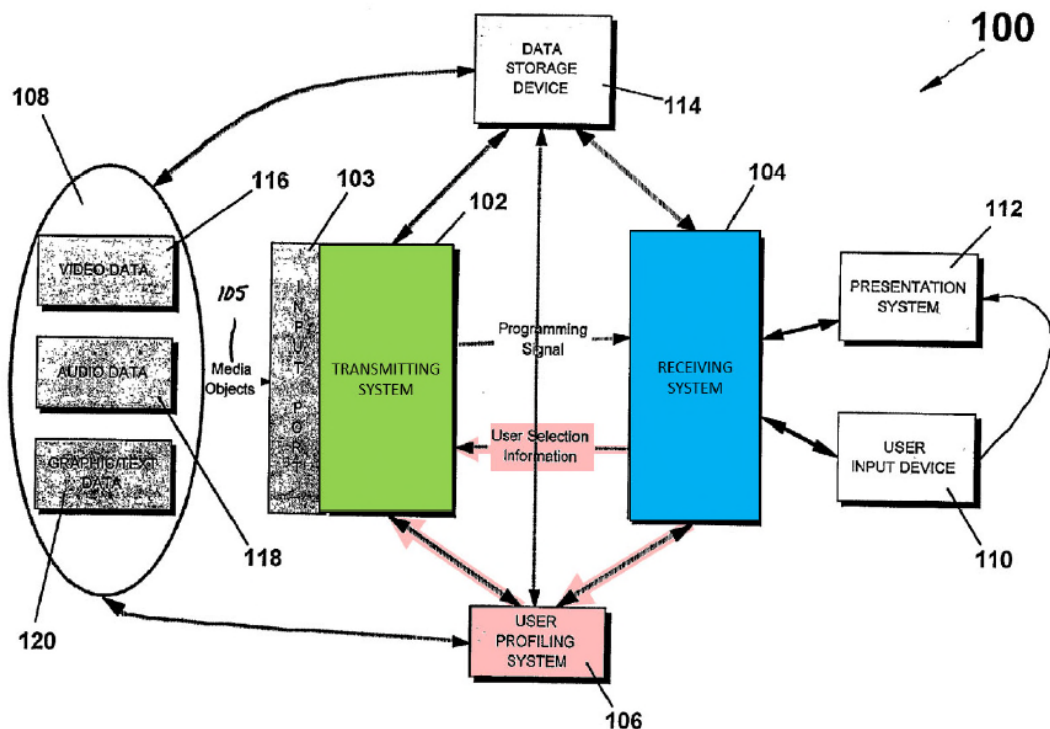
In view of the above, the necessary reasoning with underlying evidentiary support for incorporating Marcus '904's algorithm at Cristofalo's transmitting system is absent here. Therefore, the Board must "guard against the dangers of

hindsight bias” presented here and hold the Challenged Claims Patentable over Cristofalo. *Plantronics*, 724 F.3d at 1354.

B. Cristofalo Does Not Disclose Nor Render Obvious “Providing an Output Signal Including Data Indicative of the Selection and of User Data” (Independent Claim 19)

Claim 19 is also patentable because Cristofalo does not disclose nor render obvious a publisher receiving “an output signal including data indicative of the selection and of user data” from an aggregator. ’704 Patent at Claim 19; see Goodrich PO Resp. Decl. at ¶¶ 127-133.

Cristofalo’s lack of disclosure is showcased in Petitioner’s annotation reproduced below where a user profile system provides user profile information:



Pet. at 62 (highlighting in pink user profile system 106 that provides user profile information). Thus, in this annotation, receiving system 104 (the alleged “aggregator”) does not provide both the “data indicative of the selection **and** of user data,” let alone in a single “output signal” as required under the correct construction. ’704 Patent at Claim 19 (emphasis added); *see* § IV.B, *supra*.

The fact that profiling system 106 might be “co-located” (Pet. at 62) with transmitting system 102 does not mean that sending user profile information from **receiving system 104** to **user profiling system 106** is tantamount to sending profile information from a **receiving server 104** to **transmitting system 102**. Cristofalo at ¶ [0037]. Two separate servers remain separate servers even when they are on the same network and/or in physical proximity. A profile server, such as user profiling system 106 that stores users’ personal information, would be separated from a media server, such as transmitting system 102, to reduce the risk of comprising users’ personnel information. *See* Goodrich PO Resp. Decl. at ¶ 129 (citing Ex. 2023 at 2 (stating that “[c]ritical services storing, processing and transmitting covered data should be hosted on separate physical or logical servers to reduce the risk of a compromised service”)); Ex. 2024 at 2). However, regardless of these separate servers, Cristofalo does not disclose, and Petitioner does not contend, that the “user’s choice of programming” and “information on programs selected by the user” are

sent in a single output signal, as required by the proper construction. *See* Pet. at 61-62; § IV.B, *supra*.

Petitioner's alternative argument that it would have been obvious to include both information sets in a single message does not rectify Cristofalo's deficiency. *See* Pet. at 63 (alleging that a "message ***could*** contain both" user profile information (the user's geographical information, for example) and user selection) (emphasis added). Petitioner once again advances a legally deficient "*could* contain" obviousness argument that fails for the same reasons it failed in Ground 1. § VI.B.2, *supra* (showing that Petitioner's "could" argument is legally deficient and that IP addresses are poor proxies for determining geographic locations such that a POSITA would not have used a user's IP geolocation for customizing programming).

Furthermore, there are no processing delays associated with "retrieving or correlating profile information" because receiving system 104 generates the final media programming and has the necessary user profile information. *See* Pet. at 63 (relying on eliminating "processing and delay[s]" as a reason to include user profile information with the user selection to be sent to transmitting system); § VIII.A.1, *supra* (establishing that Cristofalo's receiving system generates the final media programming). In particular, Cristofalo explains that the receiving system determines user profile information and thereafter allows a user to select their desired programming such that when advertisements are pushed to the receiving

system it can select ones based on the user profile information. *See* Cristofalo at ¶¶ [0045]-[0046]. For at least these reasons, there is no possibility of processing delay in waiting for user profile information because (1) the transmitting system does not generate the final media programming; and (2) user information is provided before user selection. A POSITA, therefore, would not have found it obvious to include user profile information and a user choice in “a single message.” Pet. at 63; Goodrich PO Resp. Decl. at ¶¶ 131-132.

In view of the foregoing, Cristofalo does not disclose nor render obvious a publisher receiving “an output signal including data indicative of the selection and of user data,” as claimed. *Id.* at ¶ 133

C. Cristofalo in View of Marcus '904 Does Not Disclose Nor Render Obvious Independent Claim 1

1. “Receiving by an Aggregator Data Relating to a Plurality of Media Streams” (Independent Claim 1)

As the Board correctly determined, Cristofalo’s “user identifiers” are not “data relating to a plurality of streams,” and Marcus '904 does not cure that deficiency. Paper 7 at 33; Pet. at 71; *see also* Goodrich PO Resp. Decl. at ¶ 134.

Cristofalo’s “user identifiers” represent data about *users* that Cristofalo’s system uses to “select a specific media object” (advertisements) from received “multi-object programming data.” Cristofalo at ¶ [0048]. For example, a user identifier may indicate that a given user is a Coca-Cola drinker, and when the

receiving system receives the multi-object programming data it can select a particular media object out of several possible media objects (e.g., a Pepsi advertisement) to push to the user. *Id.* This user data exists independently of, and does not relate to, any particular media stream or streams. *See* Goodrich PO Resp. Decl. at ¶ 135.

Petitioner seems to recognize this when tersely referring to “user identifiers” as “data,” not “data relating *to a plurality of streams.*” Pet. at 71. Accordingly, Cristofalo’s “user identifiers” are not the claimed “data related to the plurality of media streams.” Goodrich PO Resp. Decl. at ¶ 136.

**2. Cristofalo in View of Marcus ’904 Does Not Disclose
“Media Programming Comprising the Media Streams”**

Independent Claim 1 is also patentable because Cristofalo’s “media objects” (advertisements) in view of Marcus ’904 are not “media streams” included in “a temporal sequence of media programming” with the “media programming in the determined temporal sequence” provided to the client. ’704 Patent at Claim 1 (“determining by the aggregator a temporal sequence of media programming comprising the media streams”); *see also* § IV.C, *supra* (establishing that independent claim 1 is directed to and covers an embodiment where the aggregator obtains and uses media streams to modify the content of the streams). Rather, Cristofalo’s media objects are individual media elements. *See* Goodrich PO Resp. Decl. at ¶¶ 137-141.

Individual media elements are inserted into a playlist and specify one of the media items in the playlist. *See* Ex. 2030 at 1 (defining a “media element” as “specifi[ying] one of the media items in a playlist.”). Cristofalo’s individual advertisement media objects are inserted into the selected programming, *i.e.* to generate the final media programming. *See, e.g.*, Cristofalo at ¶¶ [0048]-[0049]. Thus, Cristofalo’s final media programming is made up of individual advertisement media objects rather than an advertisement stream. Goodrich PO Resp. Decl. at ¶ 138.

Petitioner’s contends that Cristofalo’s media objects “when combined with Marcus ’904” are media streams.” *See* Pet. at 71-72. This contention, however, does not (1) show how this combination transforms individual media objects into media streams; nor (2) how the combination provides “media programming comprising the media streams.” Indeed, Marcus ’904 itself uses only individual media elements to form its media programming. Marcus ’904 provides both advertising content and programming content to a receiver that selects individual advertisement content items and assembles with the programming content. *See* Marcus ’904 at ¶ [0048] (describing that “[a]t block 510, a media stream containing content . . . is received by receiver,” “[a]t block 520, a media stream containing advertisement is” and at “block 530, the receiver assembles programming”), Fig. 5. In Marcus ’904, like Cristofalo, individual advertisement items are selected and

assembled into media programming. Accordingly, neither Marcus '904's nor Cristofalo's systems uses advertisement media streams to modify the content of the streams and provide them to the client, as in the manner required by Independent Claim 1. § IV.C, *supra*; Goodrich PO Resp. Decl. at ¶¶ 139-140.

In view of the foregoing, a Cristofalo-Marcus '904 combination does not show that Cristofalo's "media objects" (individual advertisement media objects) are "media streams" with "a temporal sequence of media programming comprising the media streams" provided to a client. *See* Goodrich PO Resp. Decl. at ¶ 141.

3. Petitioner's Rationale Fails for Largely the Same Reasons its Fails for Independent Claims 19 and 23

Petitioner provides the same rationale for Independent Claim 1 as provided for Independent Claims 19 and 23. *See* Pet. at 55-58. Therefore, Petitioner's rationale fails for largely the same reasons it fails for those claims: Petitioner's additional disclosure rationale is vague and Cristofalo already provides details on how its system generates user-specific targeted programming. *See* § VIII.A.2, *supra*; Paper 7 at 33 (expressing that "Petitioner relies on the same rationale to combine for all claims, so the concerns [the Board] express[es] . . . for claim 19 also apply to claim 1"); Goodrich PO Resp. Decl. at ¶ 142.

D. Dependent Claims

Because Petitioner fails to show that Independent Claim 1 is unpatentable over Cristofalo in view of Marcus '904, Petitioner also fails to show that the dependent

claims are unpatentable. Additional reasons for the patentability of the dependent claims are set forth below.

1. Dependent Claim 13: Cristofalo in View of Marcus '904 Does Not Disclose “Providing Predetermined Media Programming” and “Media Programming Responsive to the User information” During First and Second Time Periods

Dependent Claim 13 is patentable for the same reasons Independent Claim 1 is patentable over the Cristofalo-Marcus '904 combination. *See* Goodrich PO Resp. Decl. at ¶¶ 143-144. Dependent Claim 13 is also patentable because the Cristofalo-Marcus '904 combination only provides one media programming: the user-specific final media programming. *See* § VIII.A.1, *supra* (establishing that receiving system 104 selects and inserts advertisements with the selected programming and final media programming is provided to the client). Dependent Claim 13, however, requires providing two streams of media programming to the client (predetermined and user-specific). '704 Patent at Claim 13; *see also id.* at Claim 1 (“providing by the aggregator to the client media programming.”).

Petitioner ignores that a “predetermined media programming” and “media programming responsive to user information” must **both** be provided to the client. *See* Pet. at 77. Here, Petitioner asserts that the desired programming plays initially “during a first time period” and “the other media elements only play once they are reached ([during] a second time period . . .).” *Id.* But the desired programming

and “other media elements” (advertisements) are part of the same user-specific final media programming provided to the client. See Cristofalo at ¶ [0050] (explaining that “[t]he process then continues with synchronizing the various objects and presenting the programming (Block 410)”). That is, only the user-specific final media programming—the selected programming and targeted media objects (advertisements)—is provided. Missing from the Petition, and Cristofalo, is the identification of “predetermined media programming” that is “provid[ed] . . . during a first time period.” ’704 Patent at Claim 13.

2. Dependent Claim 18: Cristofalo in View of Marcus ’904 Does Not Disclose “Caching by the Aggregator the Media Streams” and “Switching Between Streams”

Dependent Claim 18 is patentable because Cristofalo in view of Marcus ’904 does not disclose “caching” “media streams” and “switching between streams” to thereby provide “media programming comprising the media streams.” ’704 Patent at Claims 1, 18; see Goodrich PO Resp. Decl. at ¶¶ 145-146. For this claim, Petitioner states that “Cristofalo combined with Marcus ’904 renders obvious generating the custom media programming by caching media streams and switching between streams.” Pet. at 80. But Petitioner does not explain how or why these references would or could be combined to arrive at the claimed invention. *Metalcraft of Mayville, Inc. v. The Toro Co.*, 848 F.3d 1358, 1367 (Fed. Cir. 2017) (“Without any explanation as to how or why the references would be combined to

arrive at the claimed invention, we are left with only hindsight bias that *KSR* warns against.”) (citation omitted). Nor could Petitioner provide the requisite explanation for several reasons.

First, Petitioner’s “additional disclosure of targeting media programming to specific users” is insufficient for the reasons discussed in Section VIII.A.2 above. Pet. at 56-57. **Second**, Petitioner’s conclusory statement fails to show how individual media objects are “media streams” when combined with Marcus ’904, let alone ones cached and switched between in Cristofalo’s system. *Id.* at 71-72 (asserting that Cristofalo’s media objects are “media streams” when combined with Marcus ’904). **Third**, Cristofalo simply selects individual advertisement media objects for inclusion in desired programming (e.g., Monday Night Football), there is no caching and switching between these programs, let alone media objects. § VIII.C.2, *supra*; see Goodrich PO Resp. Decl. at ¶ 146. Thus, Petitioner’s statement that the combination renders obvious Dependent Claim 18 is legally insufficient, conclusory, and unsupported by Cristofalo.

IX. CONCLUSION

For at least the foregoing reasons, the Board should hold patentable the Challenged Claims.

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CERTIFICATE OF COMPLIANCE WITH 37 C.F.R. § 42.24

The undersigned hereby certifies that the foregoing **PATENT OWNER'S RESPONSE** has 13,173 words in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24(b). This word count was prepared using the Microsoft Word word-processing system used to prepare this paper.

Dated: June 10, 2025

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CERTIFICATE OF SERVICE

The undersigned certifies, in accordance with 37 C.F.R. § 42.6(e), and pursuant to agreement by the parties that filing with the Board through the Patent Trial and Appeal Case Tracking System (P-TACTS) and e-mailing an electronic copy to counsel of record for Petitioner constitutes electronic service, service was made on Petitioner as detailed below.

<i>Date of service</i>	June 10, 2025
<i>Manner of service</i>	Electronic Filing and Electronic Mail (jimglass@quinnemanuel.com; ogizivojnovic@quinnemanuel.com; junzheng@quinnemanuel.com; qe-bytedance-ntech-iprs@quinnemanuel.com)
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