

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC., LG ELECTRONICS U.S.A., INC., and VIZIO, INC.

Petitioners,¹

v.

MULTIMEDIA TECHNOLOGIES PTE. LTD.,

Patent Owner.

Case IPR2024-00354
U.S. Patent No. 10,419,805

PATENT OWNER SUR-REPLY

¹ VIZIO, Inc. filed a petition in IPR2024-00699 and was joined as petitioner in this proceeding.

TABLE OF CONTENTS

	Page
I. INTRODUCTION	1
II. GROUNDS 1 AND 2: THE CLAIMS ARE PATENTABLE BECAUSE MELNYCHENKO AND CHEN DO NOT SUGGEST ORGANIZING DATA ACCORDING TO A PRE-DEFINED FORMAT CORRESPONDING TO SUBSERVICES	2
A. The prior art’s organizing data according to a pre-defined format <u>corresponding to file types</u> cannot suggest the claims’ organizing data according to a pre-defined format <u>corresponding to subservices</u>.....	2
B. The proper construction of “pre-defined format” and “uniform format” provide an additional reason for patentability	6
III. GROUND 2: CLAIMS 3 AND 12 ARE PATENTABLE BECAUSE MELNYCHENKO, CHEN, AND LEE-1 DO NOT SUGGEST SERVING EPG INFORMATION IN A READ-ONLY FORMAT.....	10
IV. GROUND 3: CLAIMS 4 AND 13 ARE PATENTABLE BECAUSE MELNYCHENKO, CHEN, LEE-1, AND LEE-2 DO NOT SUGGEST PROVIDING MEDIA METADATA PERSONALIZED FOR A USER.....	12
A. “Media data personalized for a user” means “the content of the metadata is personalized for a user”	12
B. The combination does not suggest “media data personalized for a user” as correctly construed.....	13
V. MELNYCHENKO AND CHOI ARE NOT “PRINTED PUBLICATIONS” UNDER 35 U.S.C. § 311(B)	14
VI. CONCLUSION	16

TABLE OF AUTHORITIES

Page(s)

CASES

<i>Apple Inc. v. Motorola, Inc.</i> , 757 F.3d 1286 (Fed. Cir. 2014)	8
<i>Becton, Dickinson & Co. v. Tyco Healthcare Group</i> , 616 F.3d 1249 (Fed. Cir. 2010)	8
<i>Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.</i> , 800 F.3d 1375 (Fed. Cir. 2015)	15
<i>In re Klopfenstein</i> , 380 F.3d 1345 (Fed. Cir. 2004)	15
<i>Lynk Labs, Inc. v. Samsung Electronics Co., Ltd.</i> , CAFC No. 23-2346 (Fed. Cir. 2023)	14
<i>Pause 22 Technology LLC v. TiVo Inc.</i> , 419 F.3d 1326 (Fed. Cir. 2005)	8
<i>Phillips v. AWH Corp.</i> , 4 15 F.3d 1303 (Fed. Cir. 2005)	13
<i>TQ Delta, LLC v. Cisco Systems, Inc.</i> , 942 F.3d 1352 (Fed. Cir. 2019)	11
<i>VLSI v. Patent Quality Assurance LLC</i> , CAFC No. 23-2298 (Fed. Cir. 2023)	14

STATUTES

35 U.S.C. § 311	14
35 U.S.C. § 316	10

AGENCY DECISIONS

Xerox Corp. v. Bytemark, Inc.,
IPR2022-00624, Paper 12 (PTAB Feb. 10, 2023)..... 10, 11

I. INTRODUCTION

As explained in the Patent Owner Response, the claims of U.S. Patent No. 10,419,805 (the “’805 Patent) recite methods of organizing metadata received from multiple types of subservices based on a pre-defined format corresponding to each of the subservice types. By contrast, the prior art organizes metadata of different file types based on a pre-defined format corresponding to each of the file types. The Reply does not challenge that the prior art combinations all organize by file type format—not by subservice format as claimed—and the validity of the Challenged Claims should be confirmed for this reason alone.

Moreover, the proper construction of “organizing...according to a pre-defined format corresponding to *each of the plurality of subservices*” requires a pre-defined format for each subservice type—i.e., a predefined format for the VOD subservice, a predefined format for the EPG subservice, and a predefined format for the media subservice. Organizing by file type format cannot suggest these predefined formats for each subservice. The Board should therefore confirm the patentability of the Challenged Claims.

II. GROUNDS 1 AND 2²: THE CLAIMS ARE PATENTABLE BECAUSE MELNYCHENKO AND CHEN DO NOT SUGGEST ORGANIZING DATA ACCORDING TO A PRE-DEFINED FORMAT CORRESPONDING TO SUBSERVICES

Every independent claim requires “organizing... the data according to a pre-defined format corresponding to each of the plurality of subservices.” Although Patent Owner has proposed a construction for “organizing... the data according to a pre-defined format corresponding to each of the plurality of subservices,” the Board need not adopt this construction for Patent Owner to prevail in this IPR. Regardless of the construction of this term, the claims unambiguously require organizing by a format *corresponding to subservices*. The prior art teaches organizing by a format *corresponding to file types*. File types are not subservices, and thus the prior art cannot suggest the claims.

A. The prior art’s organizing data according to a pre-defined format corresponding to file types cannot suggest the claims’ organizing data according to a pre-defined format corresponding to subservices

Even if the Board does not adopt Patent Owner’s construction of the term “organizing... the data according to a pre-defined format corresponding to each of

² Since the Petition does not rely on Kim or Lee-1 for the organizing step, the Challenged Claims are patentable over Ground 2 for the same reasons as Ground 1.

the plurality of subservices,” the plain claim language still unambiguously requires organizing data according to a format *corresponding to subservices*. Here, there is no dispute that the prior art (Chen) does not organize by a format corresponding to subservices—instead, Chen organizes by a format *corresponding to file types*.

POR, 30-31; Reply, 20-22 (only arguing that Chen discloses a pre-defined format and not disputing that the pre-defined format corresponds to file types). Patent Owner’s Response presented rebutted expert testimony and supporting evidence that a file type format is completely unrelated to a subservice format. POR, 29-33. Because a file type format is not a subservice format, the prior art cannot disclose or suggest the challenged claims.

The Reply’s only response to this serious deficiency is that “Multimedia’s argument improperly argues Chen separately, when the Petition relied on a combination of references.” Reply, 24. Because Melnychenko teaches multiple subservices and Chen teaches organizing, Petitioners’ argument goes, the combination of Melnychenko and Chen teaches organizing by subservices. Reply, 24-26. But Petitioners do not explain why a POSITA would modify Chen’s teaching of organizing by file type format to organize by subservices, when these disclosures are unrelated and there is no rationale to do so. Indeed, Petitioners and Dr. Lippman allege that Chen itself teaches multiple subservice sources, yet do not dispute that—despite this teaching—Chen does not organize by subservices.

Reply, 26. Chen’s failure to organize by subservices when it allegedly teaches multiple subservices is further evidence that organizing by subservices is not obvious in view of Chen’s teaching to organizing by file types. And Petitioners’ failure to explain why a POSITA would make the required modification when it is neither taught nor suggested by the prior art fatally undermines their argument.

Moreover, pages 31-32 of Patent Owner’s Response squarely addresses why Chen combined with Melnychenko does not suggest organizing by subservices. Patent Owner has not argued Chen separately as the Reply at 24 alleges. Rather, the Reply entirely ignores Patent Owner’s arguments directed to the combination of Chen and Melnychenko. As explained on pages 31-32, the prior art combination does not support Petitioners’ inference. Even when combined with Melnychenko, Chen does not suggest organizing according to subservices because a “single subservice type may provide data of multiple file types” and “a single file type may be used by multiple subservices.” POR, 31-32. When a single subservice has multiple file types and a single file type is shared between multiple subservices, there is no correlation or correspondence between file types and subservices. *Id.* Thus, “even if Chen’s teachings are applied to Melnychenko, a POSITA would at most organize files received from each subservice according to a format based on the type of the file.” *Id.* Neither the Petition nor Dr. Lippman’s original declaration explains why the critical step—organizing data according to a format

corresponding to subservices—would be obvious based on (1) organizing by file type format and (2) multiple subservices, when these two disclosures are completely unrelated in the identified prior art.

Attempting to salvage their invalidity theory, Petitioners introduce Dr. Lippman's Reply Declaration to argue that "Chen's teachings represent a general technological principle" and should "not limited to the exemplary content of MP3, JPEG, and MPEG-4." Reply, 25. But the Reply Declaration fails to address Chen's teachings and Dr. Lippman's own deposition testimony and is not persuasive. Chen explicitly teaches multiple signal sources 310-330 each providing media of a different file type MP3, JPEG, or MPEG-4, as shown in Fig. 3. Thus, Chen teaches the same type of subservice (media) providing data in three different file types. POR, 29-31. And Dr. Lippman conceded in deposition that multiple file types may be used by a single subservice. Ex. 2012, 34:14-36:10 ("I suppose you could consider an MP3 to be video on demand...Video content can be represented or formatted as MPEG-1, MPEG-2, MPEG-4. Well, yeah."). Even if Chen is not limited to "MP3, JPEG, and MPEG-4," Dr. Lippman's Reply Declaration suffers from the same defect as Petitioners' assertions addressed above by failing to explain why a POSITA would modify Chen's teaching of organizing by file type format to organize by subservice format, when these disclosures are unrelated and there is no rationale to do so. Dr. Lippman asserts that Chen itself teaches multiple

subservice sources, but notably does not assert that Chen organizes according to a format corresponding to subservices. If Chen teaches multiple subservices but does not teach organizing according to a format corresponding to subservices, that is evidence that organizing by a format corresponding to subservices is not obvious in view of the prior art combination. Dr. Lippman (and Petitioners) fail throughout to explain why a POSITA would make the required modification when it is neither taught nor suggested by the prior art and have thus not shown that the modification is obvious in view of the prior art combination.

B. The proper construction of “pre-defined format” and “uniform format” provide an additional reason for patentability

Patent Owner’s construction of “pre-defined format” provides an additional reason why the claims are distinguishable over the prior art. As stated in the Patent Owner Response, “organizing...the data according to a pre-defined format *corresponding to **each of the plurality of subservices***” refers to organizing data according to (1) a pre-defined format corresponding to a VOD subservice, (2) a pre-defined format corresponding to an EPG subservice, and (3) a pre-defined format corresponding to a media subservice. POR, 19-21. The claims explicitly state that “the plurality of subservices comprises a video-on-demand (VOD) subservice, electronic programming guide (EPG) subservice, and a media subservice.” Thus, “organizing...the data according to a pre-defined format

corresponding to *each of* the plurality of subservices” requires organizing according to a VOD subservice format, organizing according to an EPG subservice format, and organizing according to a media subservice format. When the claims recite three subservices and further require organizing according to a format corresponding to *each of* the three subservices, then the data must be organized according to three formats—one for each subservice. This is also consistent with the embodiments disclosed in the specification (POR, 20-21) and the passages cited by the Reply at 7. Ex.1001, 30:1-5 states that EPG data is ordered in a pre-defined EPG format, and Ex.1001, 34:49-60 teaches that media data is organized in a pre-defined media format. Notably, the ’805 Patent never discloses that data from the three subservice sources (VOD, EPG, and media) are organized according to a single pre-defined format for all three subservices, as would be required by Petitioners’ erroneous construction.

Petitioners and Dr. Lippman argue that the claims’ use of the phrase “a pre-defined format” permits a single predefined format. Reply, 9-10, 11 (“Rather, both claim limitations are presented in singular form (‘a pre-defined format’ and ‘a uniform format’).”). But their analysis ignores the remaining claim language. The claims do not simply recite “a pre-defined format”—rather, the claims require “a pre-defined format *corresponding to each of the plurality of subservices*” where “the plurality of subservices” is further defined as “a video-on-demand (VOD)

subservice, electronic programming guide (EPG) subservice, and a media subservice.” It is this remaining claim language—ignored by Petitioners and their declarant—that requires organizing based on the VOD, EPG, and media subservice types. *See Pause 22 Technology LLC v. TiVo Inc.*, 419 F.3d 1326, 1334 (Fed. Cir. 2005) (“In construing claims[,] we must give each claim term the respect that it is due.”); *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1305 (Fed. Cir. 2014).

The claims’ treatment of “uniform format” is also consistent with this construction of “pre-defined format.” First, Petitioners do not appear to dispute that the terms “pre-defined format” and “uniform format” mean different things. Reply, 21; *see also* Institution Decision at 27 (*citing Becton, Dickinson & Co. v. Tyco Healthcare Group*, 616 F.3d 1249, 1254 (Fed. Cir. 2010)). The claims go on to state that “the pre-defined format comprises one of a VOD data model, an EPG data model and a media data model” and “each of the VOD data model, EPG data model, and media data model provide a uniform format for the plurality of subservices.” In other words, each pre-defined format comprises **one of** the data models, and **each of** the data models provides a uniform format. Thus, “‘uniform format’ does not mean that all three ‘pre-defined formats’ share a uniform format [but instead] refers to each ‘pre-defined format’ providing a ‘uniform format’ for that subservice.” POR, 21. The Reply argues at 10 that “the Board already considered and rejected this argument,” but this is a different argument than

presented in Patent Owner’s Preliminary Response. Whereas the Preliminary Response and Institution Decision addressed whether element [1.2.4] and the term “uniform format” requires three different data models, this argument is directed to whether element [1.2.1] and the term “pre-defined format” requires three different data models. For the above reasons, they do.

Patent Owner’s proposed claim construction provides an additional reason why the claims are patentable in view of Melnychenko and Chen. The independent claims require organizing data according to pre-defined formats corresponding to *each of* the VOD, EPG, and media subservices. POR, 24-28. In other words, VOD data received from a VOD subservice must be organized according to a pre-defined VOD format, EPG data received from an EPG subservice must be organized according to a pre-defined EPG format, and media data received from a media subservice must be organized according to a pre-defined media format. *Id.* The claim construction arguments advanced by the Reply ignore the words “*each of*” and should be rejected. *Id.* Under the proper construction, Figure 3 of Chen at most shows three formats each corresponding to a file type. But as explained above, there is no relationship between Chen’s file types and the subservices because each file type can be used across multiple subservices and each subservice can provide data in multiple file types. Thus, Petitioners’ only evidence of “a pre-defined format corresponding to each of the plurality of subservices”—Chen’s

Fig. 3 tables—cannot teach a format for a VOD subservice, a format for an EPG subservice, and a format for a media subservice as claimed.

For these reasons, the Melnychenko and Chen combination does not suggest organizing data according to a format corresponding to subservices as claims.

III. GROUND 2: CLAIMS 3 AND 12 ARE PATENTABLE BECAUSE MELNYCHENKO, CHEN, AND LEE-1 DO NOT SUGGEST SERVING EPG INFORMATION IN A READ-ONLY FORMAT

Petitioners bear the burden of proving unpatentability. 35 U.S.C. § 316(e). Here, the Petition baldly asserts—without identifying any supporting disclosure—that Kim’s EPG information is in a read-only format. POR, 42-44. The only “evidence” provided by the Petition is Dr. Lippman’s conclusory testimony that EPG “is served in a read-only format because its purpose is to provide information to the user about the broadcast program currently displayed and therefore may not be edited.” Ex. 1003, ¶281. Not only should Dr. Lippman’s opinion be entitled to no weight for failing to cite any underlying facts (*see Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 12 (PTAB Feb. 10, 2023) (*precedential*)), but it is also wrong. The Patent Owner Response showed that it was well known at the time of invention that EPG could be edited, and it was desirable to do so. POR, 43-44.

The Reply attempts to narrow Dr. Lippman’s testimony to “certain types of EPG information, such as the channel number, channel name, broadcast program title, and airtime.” Reply, 28. But like Dr. Lippman’s original testimony, Dr.

Lippman’s Reply testimony is just another conclusory assertion unsupported by underlying evidence and entitled to no weight (*Xerox*, IPR2022-00624 at *5)—and also incorrect. Dr. Surati testified based on “state of the art” evidence that it was known at the time of invention that EPG could be modified based on user-selected content, which would include channel number, channel name, broadcast program title, and airtime. Ex. 1021, 179:9-180:9.

Addressing the “state of the art” evidence cited by Dr. Surati, the Reply argues that that evidence discloses “the display of information in the EPG may be edited, not that the underlying EPG information is edited.” Reply, 29. This argument is based on a misreading of the reference. The reference does teach presenting program content in an EPG-like interface. Ex. 2013, 33:39-45; Ex. 1021, 175:23-177:12. But immediately preceding the teaching of the EPG-like interface is another teaching to populate a personalized EPG using recommended or user-selected content. Ex. 2013, 33:33-39. This disclosure confirms that it was known to personalize (thus, edit) EPG. Ex. 1021, 179:9-180:9.

There is no dispute that none of Petitioners’ prior art teaches EPG in a read-only format. The only “evidence” of EPG in a read-only format is Petitioners’ expert’s say-so that EPG could not be edited. *TQ Delta, LLC v. Cisco Systems, Inc.*, 942 F.3d 1352, 1362 (Fed. Cir. 2019) (“Untethered to any supporting evidence, much less any contemporaneous evidence, Dr. Tellado’s *ipse dixit*

declaration fails to provide any meaningful explanation...). The evidence, however, shows that editing EPG was well known at the time of invention. Petitioners have thus not met their burden of showing EPG in a read-only format.

IV. GROUND 3: CLAIMS 4 AND 13 ARE PATENTABLE BECAUSE MELNYCHENKO, CHEN, LEE-1, AND LEE-2 DO NOT SUGGEST PROVIDING MEDIA METADATA PERSONALIZED FOR A USER

A. “Media data personalized for a user” means “the content of the metadata is personalized for a user”

The Patent Owner Response established that “media metadata personalized for a user” means “the content of the metadata is personalized for a user.” POR, 14-16. The specification teaches that personalizing media metadata refers to modifying the content of the metadata. *Id.* And both experts confirm that modifying the content is a plausible interpretation of the claim language. *Id.*

The Reply argues that selecting media is sufficient to meet personalizing media metadata. Reply, 12-16. But the Reply does not identify a single embodiment in the ’805 Patent where personalization of the media metadata is made by selecting media rather than modifying metadata content. *Id.* At most, the Reply has Dr. Lippman’s testimony that selecting media is another plausible interpretation of the claim language. *Id.*

The Board has been presented with two competing and very different meanings of “media metadata personalized for a user.” Personalization by

modifying metadata content is plainly not the same as personalization by selecting media. When personalizing by selecting media, different users presented with the same media receive the same metadata, whereas when personalizing by modifying metadata content, different users presented with the same media receive different metadata. Thus, in the case of personalizing by selecting media, the content of the metadata is not personalized for a user. The specification discloses only personalizing by modifying metadata—not personalizing by selecting media. Thus, Patent Owner’s construction is correct.

Under the *Phillips* standard, if there are two competing constructions that are both plausible, the construction that preserves the validity of the claims must be adopted. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1327 (Fed. Cir. 2005) (en banc). That is the case here. The Board should adopt the construction that preserves the validity of the claims—Patent Owner’s.

B. The combination does not suggest “media data personalized for a user” as correctly construed

“Media data personalized for a user” means “the content of the metadata is personalized for a user”—not “personalizing media for a user and providing the metadata associated with that media.” The Reply, like the Petition, is directed to the second, incorrect construction and fails to show how the prior art renders obvious the first, correct construction. Reply, 30-34. The Petition and the Reply

exclusively cite evidence of personalization by selecting the media, not personalization by modifying the metadata content. Reply, 32 (arguing the “favorite channel settings are ‘personalized for [the] user’ because they are configured by the user in the channel setup menu.”). Selecting media, however, is not evidence of personalizing media metadata as properly construed. POR, 34-38. To the extent the Reply at 33-34 argues “that if different users select different favorite channels, the metadata for those users will be different,” this argument ignores the fact that different users presented with the same media will receive the same metadata. Thus, the content of the metadata is not personalized for a user.

For these reasons, Petitioners have not shown that any prior art combination personalizes media metadata for a user as claimed.

V. MELNYCHENKO AND CHOI ARE NOT “PRINTED PUBLICATIONS” UNDER 35 U.S.C. § 311(B)

Whether applications published after the priority date of the petitioned patent—but did not issue as patents—are available as prior art in IPRs under 35 U.S.C. § 311(b) is an open question before the Federal Circuit. *See, e.g., Lynk Labs, Inc. v. Samsung Electronics Co., Ltd.*, CAFC No. 23-2346 (Fed. Cir. 2023) and *VLSI v. Patent Quality Assurance LLC*, CAFC No. 23-2298 (Fed. Cir. 2023). As explained by the Response at 22-24, the term “printed publication” as it appears in §311(b) has a specific meaning that requires the publication to be publicly

available before the critical date of the patent. *In re Klopfenstein*, 380 F.3d 1345, 1348 n.2 (Fed. Cir. 2004) (“The statutory phrase “printed publication” has been interpreted to mean that before the [relevant] date the reference must have been sufficiently accessible to the public interested in the art...”). Here, neither Melnychenko nor Choi were publicly available before the ’805 Patent’s August 17, 2012 critical date and are thus not “printed publications.” If the Federal Circuit confirms that such applications are not available as prior art, then Melnychenko and Choi are disqualified as prior art in this IPR.

To the extent the Reply argues in footnote 8 that “Multimedia did not meet its burden to show that ’805 patent is entitled to its provisional date,” *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375 (Fed. Cir. 2015) places the burden of production on the ***petitioner*** to show that the petitioned patent is not entitled to its provisional date. *Id.* at 1378-79. Once the petitioner makes a *prima facie* showing, the burden of production then shifts to patent owner to show that the petitioned patent is entitled to its provisional date. *Id.* Here, Petitioners make no allegation that the ’805 Patent is not entitled to its provisional date. Pet., 9 (assuming a priority date of August 17, 2012, and failing to allege any claim element lacking written description support in the provisional). Thus, Petitioners have not met their required burden to shift the burden of production to Patent Owner to demonstrate that the ’805 Patent is entitled to its provisional date.

VI. CONCLUSION

For the foregoing reasons, the Board should confirm the patentability of the Challenged Claims.

Dated: January 10, 2025

Respectfully submitted,

By: /Minghui Yang/
Minghui Yang (Reg. No. 71,989)
CARMICHAEL IP, PLLC
8607 Westwood Center Drive
Suite 270
Tysons, VA 22181
Tel.: (703) 646-9247

*Counsel for Patent Owner
Multimedia Technologies Pte. Ltd.*

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITS

This Patent Owner Sur-Reply (“Sur-Reply”) consists of 3,491 words, excluding table of contents, table of authorities, certificate of service, this certificate, or table of exhibits. The Sur-Reply complies with the type-volume limitation of 5,600 words as mandated in 37 C.F.R. § 42.24. In preparing this certificate, counsel has relied on the word count of the word-processing system used to prepare the paper (Microsoft Word).

Respectfully submitted,

/Minghui Yang/

Date: January 10, 2025

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the following document was served by electronic service, by agreement between the parties, on the date below:

PATENT OWNER SUR-REPLY

The names and address of the parties being served are as follows:

<u>LG Electronics:</u> David L. McCombs Gregory P. Huh David O’Dell Jonathan Bowser HAYNES AND BOONE, LLP 2801 N. Harwood St., Suite 2300 Dallas, TX 75201 david.mccombs.ipr@haynesboone.com gregory.huh.ipr@haynesboone.com david.odell.ipr@haynesboone.com Jon.bowser.ipr@hanesboone.com	<u>Vizio:</u> Steven W. Hartsell Rex Hwang Sarah E. Spires Paul J. Skiermont Ryan A. Hargrave Michael D. Ricketts Skiermont Derby LLP 601 Elm Street, Suite 4400 Dallas, Texas 75201 VIZIO_SDTeam@skiermontderby.com shartsell@skiermontderby.com rhwang@skiermontderby.com sspires@skiermontderby.com
--	--

Respectfully submitted,

/Minghui Yang/

Date: January 10, 2025