

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HANSHOW AMERICA INC. and HANSHOW TECHNOLOGY CO., LTD.

Petitioners,

v.

SES-IMAGOTAG GMBH,

Patent Owner.

Case No. IPR2024-00188
U.S. Patent No. 11,405,669

**PETITIONERS' REPLY TO PATENT OWNER'S PRELIMINARY
RESPONSE**

LIST OF EXHIBITS¹

Exhibit	Description
1001	U.S. Patent No. 11,405,669
1002	Prosecution history of U.S. Patent No. 11,405,669
1003	Declaration of Dr. Manos M. Tentzeris
1004	US 2016/0134930 A1 by Swafford (“Swafford”)
1005	US 2017/0134690 A1 by Masumoto (“Masumoto”)
1006	US 2017/0171577A1 by Kipp (“Kipp”)
1007	JP2011-76222A by Takashi (“Takashi”)
1008	Certified translation of JP2011-76222A by Takashi (“Takashi”)
1009	WO 2008/073829 A2 by Clontz (“Clontz”)
1010	US 2018/0035018 A1 by Yamada (“Yamada”)
1011	<i>curriculum vitae</i> of Dr. Manos M. Tentzeris
1012*	Email titled “Hanshow v. SES-Imagotag // IPR2024-00188” from Esther Goldschlager on March 1, 2024

¹ Petitioners have noted new exhibits with “*”.

I. INTRODUCTION

In its March 1, 2024 email, the Board authorized Petitioners to submit this Reply. Ex. 1012. Patent Owner's ("PO") Preliminary Response ("POPR") mischaracterizes both the cited art and Petitioners' asserted grounds for invalidity. PO's claims that the Petition fails to address the "communication stage" limitation in element [1.3] or to identify the presence of the claimed "communication stage" in the prior art have no merit. Indeed, PO has since admitted that its argument relied on semantics—on the presence or absence of the word "stage." *See* Ex. 1012 at 2. PO's argument also ignores the Petition's description of the communication modules (the "communication unit" and "controller") in the video playback displays taught in Masumoto and the mutual communication activity between the prior art devices described in the Petition. *See, e.g.* Petition ("Pet."), 24-26 (citing Ex. 1004 [287, 315 & 421]; Ex. 1005 [17]). PO offers no construction for "communication stage" and does not dispute that the plain and ordinary meaning applies. *See* POPR, 19-31; Ex. 1012 at 2. Instead, PO relies on semantics to suggest deficiency where none exists.

The Board should reject PO's semantic arguments that the Petition fails to address the "communication stage" limitation of element [1.3] or to identify it in the prior art. Petitioners respectfully request institution of this *inter partes* review.

II. THE PETITION IDENTIFIES THE CLAIMED “COMMUNICATION STAGE” IN MASUMOTO AND MAPS THAT DISCLOSURE TO THE CLAIM LANGUAGE.

The '669 patent is directed to a system for synchronized video playback on a number of playback devices. Ex. 1001, 1:15-16. The playback devices communicate with each other or with a server according to known protocol implementations. *Id.* at 2:34-38, 3:59-60. Each claimed playback device has a memory and a communication stage to communicate with each other. *Id.* at 1:47-50.

The POPR acknowledges that the Petition cites to Masumoto's disclosure of a plurality of displays each comprising a communication module (a “**communication unit**” and a “controller”) when analyzing element [1.3]. *See* POPR, 20-21. This acknowledgement refutes PO's claims that the Petition fails to identify the “communication stage” in the prior art. The Petition clearly identifies the prior art teachings on the “communication stage” recited in element [1.3] and maps that disclosure to the language of the '669 patent claims. *See* Pet. 20-21, 24-27, 51-56.

For example, the Petition's analysis regarding element [1.3] cites and quotes Swafford as disclosing “continuous display shelf edge label device(s)” sending and receiving data between and amongst themselves and cites and quotes Masumoto as disclosing a “plurality of displays,” each of which “includes a communication unit that communicates via the network and a controller.” *See, e.g.,* Pet., 24-26 (citing Ex. 1004 [315 & 421]; Ex. 1005 [17]). First, by describing the communication between

the prior art devices, the Petition identifies the existence of “a communication stage” in each prior art device as recited in element [1.3]. PO’s contrary argument relies on semantics to the exclusion of common sense. As Dr. Tezteris confirms, any reader, including any POSITA, immediately recognizes the necessary presence of communication modules (the plain meaning of “communication stage”) in Swafford’s “shelf edge label devices” and Masumoto’s displays for the reasons described above. *See* Ex. 1003, ¶¶ 71-80.

Second, the Petition cites Masumoto as explicitly teaching displays each comprising a communication module (a communication unit and a controller) for mutual communication and maps those teachings to the claim language. *See* Pet., 24-26. The Petition states that “the plurality of displays A210-D240 in Masumoto correspond to a number of playback devices in [1.1]” and reproduces Fig. 2 of Masumoto illustrating the structure of the disclosed displays. *See* Pet., 20-21.

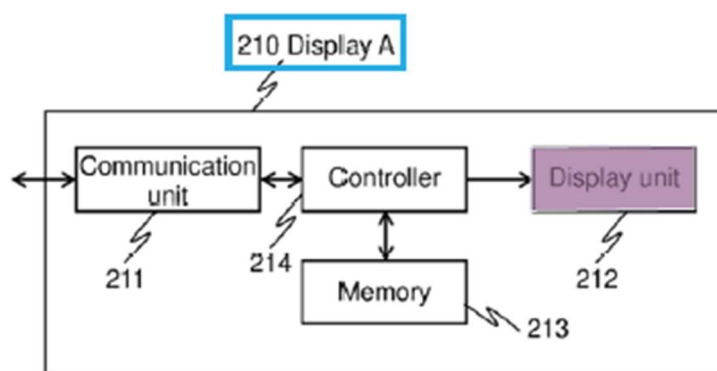


FIG. 2 of Masumoto

The Petition quotes Masumoto that “[e]ach of the plurality of displays includes a *communication unit* that communicates via the network and a *controller*” (together a communication module) and maps that disclosure to the “communication stage” in element [1.3], which the POPR designates as element [1.3a] (*see* POPR, v. & n.3). *See* Pet., 25. The Petition further notes Masumoto’s teaching that the displays transmit certain “specific information [regarding] a video signal,” and maps that teaching to the communication of video playback progress-data recited in element [1.3], which the POPR designates as element [1.3b]. *Id.* The Petition then quotes Masumoto’s teachings describing the activities of the controller in *each* display — including sending a request signal, receiving the “specific information” in response, and sending a “notification of correction” to the other display as needed — and maps these teachings to element [1.3]’s language about determining whether said playback progress is synchronous or asynchronous, which the POPR designates element [1.3c]. *See* Pet., 25-26; Ex. 1005, [0017]. Finally, the Petition emphasizes that the communication modules (communication unit and controller) in each display perform “*mutual*” synchronization, and that, while Masumoto uses the term master display “for convenience,” Masumoto teaches that any/each of the displays may be designated as and act as the so-called “master” display. *See* Pet. 34, 40, 52.

Based on these teachings, a POSITA would understand that Masumoto’s communication module in each display functions as the claimed “communication

stage” in each display to communicate data (such as the “specific information of a video signal,” *i.e.*, the video playback progress-data) to and from the other displays. *See* Pet. 25-27; Ex. 1003, 74-85. Thus, using the plain and ordinary meaning of “communication stage” discussed below, the Petition describes precisely how Masumoto teaches element [1.3].

III. PATENT OWNER’S RELIANCE ON SEMANTICS SHOULD BE REJECTED.

PO’s challenge to the Petition is effectively one of semantics—*i.e.*, specific use of the word “communication stage.” But the Federal Circuit has consistently rejected an overly literal and formalistic reading of prior art references, and the Board should reject the POPR’s mechanistic reading of the Petition and the prior art. *See Netflix Inc. v. DivX, LLC*, 84 F.4th 1371, 1377 (Fed. Cir. 2023) (“the Board should not take an overly mechanistic view of a petition and decline to address an argument because the petitioner did not present it with ideal vigor and clarity.”); *Adasa Inc., v. Avery Dennison Corporation*, 55 F.4th 900, 910 (Fed. Cir. 2022) (“While those elements must be arranged or combined in the same way as in the claim, the reference need not disclose the elements in the very same terms used by the patent”); *see also In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009) (“[T]he reference need not satisfy an *ipsissimis verbis* test.” (citing *In re Bond*, 910 F.2d 831, 832-33 (Fed. Cir. 1990))).

Further, the cases PO cites on this issue are inapposite and do not support its position. In contrast to the petition in *Advanced Lighting Concepts v. Mate LLC*, IPR2023-01266, at 23-24 (Feb. 13, 2024), this Petition contains no internal inconsistency in its arguments regarding element [1.3], and consistently maps Masumoto’s communication module (communication unit and controller) to the claimed “communication stage” [1.3a], and to the related steps of communicating video playback progress data [1.3b] and determining whether said playback progress is a/synchronous [1.3c]. *See* Pet. 24-27. Unlike *United Servs. Auto. Ass’n v. Auto Telematics Ltd.*, IPR2023-00770 at 30 (Nov. 7, 2023), this Petition explains how and why the specific disclosures in the prior art would be combined. *See* Pet. 51-56; Ex. 1003, 149-158.

Furthermore, unlike in *Netflix Inc. v. DivX, LLC*, 84 F.4th 1371 (Fed. Cir. 2023), the Petition does not cite or rely upon elements of the prior art unrelated to communicating data when analyzing element [1.3] and its “communication stage” limitation. *See* Pet. 24-27. And unlike *Intelligent Bio-Systems*, this Reply relies solely on existing arguments and grounds in the Petition and raises no new issues. *See Intelligent Bio-Systems, Inc. v. Illumina Cambridge, Ltd.*, 821 F.3d 1359, 1369-1370 (Fed. Cir. 2016).

Dr. Tentzeris’ detailed expert declaration also supports the Petition and describes how Masumoto teaches the claimed communication stage and its related

steps from element [1.3], including the POSITA's motivation to combine the references. Ex. 1003, 72-85, 149-158. This further distinguishes the Petition from *ActiveVideo Networks*, in which, while addressing invalidity contentions in litigation, the Court found "generic" testimony insufficient. *See ActiveVideo Networks, Inc. v. Verizon Comms., Inc.*, 694 F.3d 1312, 1328 (Fed. Cir. 2012).

Accordingly, using the plain and ordinary meaning of "communication stage," the Petition has satisfied element [1.3] including the "communication stage" limitation and identifies it in the teachings of Masumoto.

IV. THE PETITION INTERPRETS "COMMUNICATION STAGE" ACCORDING TO ITS PLAIN AND ORDINARY MEANING.

In an IPR, the Board construes claim terms using the standards applied in litigation. *See* 37 C.F.R. § 42.100(b) (2019). Claim terms are generally given their ordinary and customary meaning as understood by a POSITA in light of the intrinsic evidence (claim language, specification and prosecution history). The "ordinary and customary" meaning of a term "is its meaning to the ordinary artisan after reading the entire patent," as of the effective filing date of the patent application. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313, 1321 (Fed. Cir. 2005) (*en banc*). "There is a heavy presumption that claim terms are to be given their ordinary and customary meaning." *Aventis Pharm. Inc. v. Amino Chems. Ltd.*, 715 F.3d 1363, 1373 (Fed. Cir. 2013); *see also LG Electronics Inc., v. Jawbone Innovations, LLC*, IPR2023-01112, Paper 10 at 9-11 (Jan. 9, 2024) (granting institution after giving claim terms their plain and

ordinary meaning where the specification provided no clear alternate definition). In the ‘669 patent, the plain and ordinary meaning of the “communication stage” recited in element [1.3] is simply a “communication module or unit” that communicates data. *See* Ex. 1001, 1:49-50, 2:19-20, 3:24-28, 3:63-65; Ex. 1003, ¶¶75-76. There is no evidence to the contrary.

First, the claim language supports this interpretation. Specifically, claim 1 recites: “**each playback device (6A, 6B) comprises a memory** to store video data (9) representing said video, **and a communication stage** to communicate data with each other, wherein the devices (6A, 6B) are designed: to transmit video playback progress-data **via the communication stage** to the other device (6B, 6A).” Ex. 1001, 8:9-14 (emphasis added). Thus, as the claim expressly recites, each playback device includes two modules which function, respectively, as a memory to store video data and as a communication stage to communicate data with the other playback devices.

Claims 7 and 11 further confirm that the “communication stage” is part of each video playback device. *See* Ex. 1001, 8:51-55 (“each device is designed to ... **over its communication stage**”) and 9:7-9 (“**the communication stage** is designed ...”). Thus, a POSITA would understand based on the claim language that the recited communication stage is a communication module in each playback device designed to send data to, or receive data from, the other such devices. *See* Pet. 25-27; Ex. 1003, 75-80.

Second, the '669 patent's specification also supports this plain and ordinary meaning interpretation of "communication stage." The specification provides no express or implied special definition for the term; it mentions the "communication stage" just five times without showing it in any drawings and uses the term generically. Specifically, the specification reiterates the language of claims 1, 7, and 11 and states that "the server may use the **same** communication stage for downloading the video data to the devices" Ex. 1001, 1:49-50, 3:24-28, 3:63-65, 2:19-20 (emphasis added). The reference to "the **same** communication stage" refers to the communication stage recited in the claims as part of each playback device.

Thus, the intrinsic record establishes that the term "communication stage" should be interpreted according to its plain and ordinary meaning as a communication module or unit for communication present in each video playback device. PO offers no construction to the contrary.

PO has stated that it agrees that the plain and ordinary meaning of the term "a communication stage" should apply. Ex. 1012. And the POPR proposes no unique alternative construction for "communication stage." Nonetheless, PO argues "the Petition fails to specify where the recited 'communication stage' can be found in any of the asserted prior art" while still acknowledging the Petition's discussion of Masumoto, including its "communication unit" and "controller." *See* POPR 19-21. This argument suggests that the cited "communication unit" and "controller"

disclosures in Masumoto do not teach the “communication stage” recited in element [1.3]. But, as described in Section II, *supra*, PO’s argument is simply wrong. The semantics (“stage” vs. “unit”) make no difference, and the Petition’s interpretation of communication stage (and Masumoto’s disclosure) comports with the plain and ordinary meaning of “communication stage” as a communication module or unit.

Put simply, in the context of the ‘669 patent there is no meaningful difference between the “communication stage” recited in the claims and the communication module (“communication unit” and “controller”) disclosed in Masumoto. The intrinsic record supports Petitioners’ argument that the plain and ordinary meaning of “communication stage” in the ‘669 patent is a communication module or unit, and **PO offers no construction to suggest otherwise.**

Accordingly, the Board should reject PO’s semantic arguments that the Petition fails to address the “communication stage” limitation of element [1.3] or to identify it in the prior art; as detailed above, the Petition has identified in Masumoto the “communication stage” recited in element [1.3].

IV. CONCLUSION

Petitioners respectfully request institution of this *inter partes* review.

Date: March 11, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), I certify that on this 11th day of March, 2024, **Petitioners' Preliminary Reply to Patent Owner's Preliminary Response** was served by email on the following counsel for Patent Owner:

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