

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

v.

SES-IMAGOTAG GMBH,
Patent Owner.

IPR2024-00188
Patent 11,405,669 B2

Before JAMES P. CALVE, BRIAN J. McNAMARA, and
TERRENCE W. McMILLIN, *Administrative Patent Judges*.

McMILLIN, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

Hanshow America Inc. and Hanshow Technology Co., Ltd. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–15 (“the challenged claims”) of U.S. Patent No. 11,405,669 B2 (Ex. 1001, “the ’669 patent”). SES-Imagotag GmbH (“Patent Owner”) filed a Preliminary Response (Paper 8, “Prelim. Resp.”). With our authorization, Petitioner filed a Preliminary Reply to Patent Owner’s Preliminary Response (Paper 9 (“Reply”)) and Patent Owner filed a Preliminary Sur-reply (Paper 10 (“Sur-reply”)).

We have authority to determine whether to institute an *inter partes* review. *See* 35 U.S.C. § 314 (2018); 37 C.F.R. § 42.4(a) (2022). Under 35 U.S.C. § 314(a), we may not authorize an *inter partes* review unless the information in the Petition, the Preliminary Response, the Reply, and the Sur-reply “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” For the reasons that follow, we institute an *inter partes* review as to claims 1–15 of the ’669 patent on all grounds of unpatentability presented.

I. BACKGROUND

A. *Real Parties-in-Interest*

Petitioner identifies Hanshow America Inc. and Hanshow Technology Co., Ltd. as the real parties-in-interest. Pet. 1. Patent Owner identifies SES-Imagotag GmbH, SES-Imagotag SA, and SES-Imagotag Inc. as the real parties-in-interest. Paper 4, 2.

B. *Related Matters*

The parties identify the following proceeding related to the ’669 patent (Pet. 1; Paper 4, 2):

SES-Imagotag SA et al. v. Hanshow America Inc. et al., Case No. 1:23-cv-01667 (E.D.N.Y.).

C. The '669 Patent

The '669 patent is directed to:

A video playback system, comprising a number of playback devices to playback a video on their screens, each playback device comprises a memory to store video data representing said video, and a communication stage to communicate data with each other, wherein the devices are designed to transmit video playback progress-data via the communication stage to the other device and to determine based on the received progress-data whether it is in a synchronous or asynchronous playback progress with the other devices.

Ex. 1001, code (57). According to the '669 patent, “the method and the system of the invention provide a robust and reliable, instantaneous re-synchronization of the playback progress over the entire group of playback devices.” *Id.* at 7:60–63.

Figure 1 of the '669 patent is reproduced below.

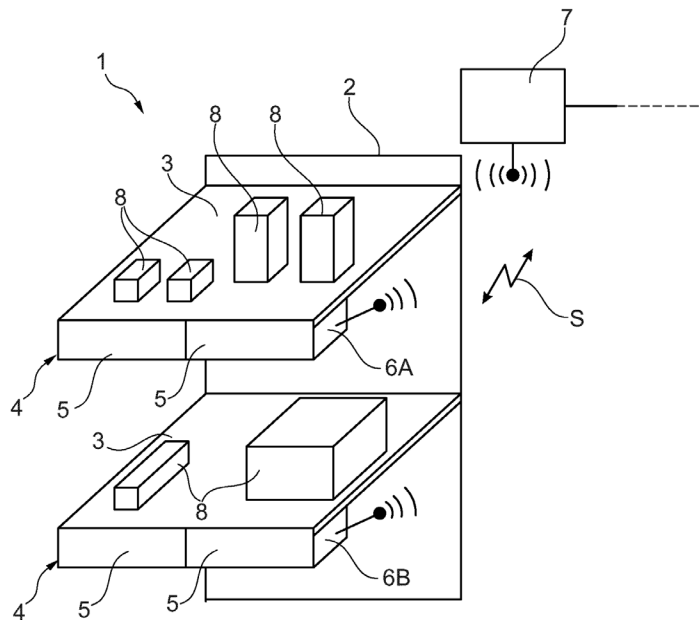


Fig. 1

Figure 1 depicts a video playback system 1 installed in a retail shop having a shelf 2 with two shelf floors 3 on which goods 8 are placed. *Id.* at 5:22–25. Figure 1 also shows two video screens 5 each attached along the entire length of the shelf rail as well as two identical playback devices 6A and 6B, which are connected to the screens 5. *Id.* at 5:25–31.

“The video content (film) to be displayed on the screens 5 is supplied by a server 7 via a radio signal to both devices 6A and 6B,” wherein “[t]he video content is delivered in form of compressed video data that are structured in frames labeled by frame numbers.” *Id.* at 5:32–36. According to the ’669 patent, “the server may use the same communication stage for downloading the video data to the devices, which is thereafter used for the transmission of playback progress-data.” *Id.* at 2:19–22; *see also id.* at 2:47–50 (“[A]ccording to a preferred embodiment of the invention the devices are designed to utilize a frame number that labels the frame that is currently played back as the progress-data to be transmitted.”). “According to a fundamental aspect of the invention, it is of particular advantage that the devices are designed to determine independently from a video distribution server, which distributed the video data to the devices, that they are in a synchronous or asynchronous playback progress.” *Id.* at 2:29–33. The ’669 patent further explains that “each device is designed to compare a frame number received with a frame number of the frame currently played back at the device and to determine an asynchronous playback progress if the difference in the frame numbers compared with each other exceeds a pre-determined threshold value.” *Id.* at 2:54–59.

The application that led to the ’669 patent claims priority to a PCT application that was filed on November 10, 2017, and entered the U.S.

national stage under 35 U.S.C. § 371(c) on May 8, 2020. Ex. 1001, codes (22), (86). We apply the November 10, 2017, date for qualifying the asserted references as prior art.

D. Illustrative Claim

Of the challenged claims, claim 1 is independent. Claims 2–15, directly or indirectly, depend from claim 1. Claim 1 is reproduced below with Petitioner’s and Patent Owner’s annotations added to identify each limitation.¹

1. [1.0] A video playback system (1), comprising [1.1] a number of playback devices (6A, 6B) to playback a video on their screens (5), [1.2] each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and [1.3a] a communication stage to communicate data with each other, wherein the devices (6A, 6B) are designed:

[1.3b] to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and,

[1.3c] to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

[1.4] wherein the display devices (6A, 6B) are designed to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen’s (5) display area overlapping with a video content or substituting a video content of said section.

Ex. 1001, 8:7–23; *see also* Pet. iv; Prelim. Resp. v & 1 n.3.

¹ We utilize the annotations, but have retained the paragraph formatting from the issued patent.

E. Cited Art

Petitioner relies on the following references:

U.S. Patent Application Publication No. 2016/0134930 A1, filed May 15, 2015, published May 12, 2016 (Ex. 1004, “Swafford”);

U.S. Patent Application Publication No. 2017/0134690 A1, filed Oct. 11, 2016, published May 11, 2017 (Ex. 1005, “Masumoto”);

U.S. Patent Application Publication No. 2017/0171577 A1, filed Dec. 9, 2015, published June 15, 2017 (Ex. 1006, “Kipp”); and

Japanese Unexamined Patent Application Publication No. P2011-76222A, filed Sept. 29, 2009, published Apr. 24, 2011 (Ex. 1007 (Japanese original), Ex. 1008 (English translation), “Takashi”).

F. Asserted Grounds

Petitioner challenges claims 1–15 of the ’669 patent based on the following grounds (Pet. 2–3):²

Claims Challenged	35 U.S.C. §	References
1–15	103 ³	Swafford, Masumoto
1–15	103	Masumoto, Kipp, Takashi

Petitioner filed a Declaration of Dr. Manos M. Tentzeris. (Ex. 1003) in support of its Petition. Patent Owner did not submit any testimony in support of its arguments, so the testimony of Dr. Tentzeris is unrebutted by any contrary testimony at this stage.

II. ANALYSIS

We consider Petitioner’s asserted grounds and Patent Owner’s arguments to determine whether Petitioner has met the reasonable likelihood standard for institution under 35 U.S.C. § 314(a).

² Petitioner argues that the Board should decline to exercise its discretion to deny institution. *See* Pet. 87–88. Petitioner also states that it is “stipulating that, should the Board institute this Petition, Petitioners will not pursue in the District Court the specific grounds asserted herein or any other ground that was raised or could have been reasonably raised in an IPR.” *Id.* at 88. Patent Owner does not challenge Petitioner’s argument relating to discretionary denial. *See generally* Prelim. Resp. Accordingly, and in view of Petitioner’s stipulation, it is not necessary to reach Petitioner’s discretionary denial arguments.

³ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102 and 103. Because the ’669 patent is based on a PCT application filed after March 16, 2013 (the effective date of the relevant amendments), the AIA versions of §§ 102 and 103 apply.

A. Legal Standards

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *See KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007).

The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) where in evidence, so-called secondary considerations.⁴ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We also recognize that prior art references must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994) (citing *In re Samour*, 571 F.2d 559, 562 (CCPA 1978)).

B. Level of Ordinary Skill in the Art

Citing testimony from Dr. Tentzeris, Petitioner contends a person of ordinary skill in the art “would have had at least a Master of Science Degree in an academic area emphasizing electrical engineering, computer engineering, wireless telecommunication systems, or an equivalent field (or a similar technical Master’s Degree, or higher degree),” or, alternatively, “a Bachelor’s Degree (or higher degree) in an academic area emphasizing electrical engineering, computer engineering, wireless telecommunication

⁴ The Petition states, “Petitioners are not aware of any evidence regarding secondary considerations of non-obviousness.” Pet 87. Patent Owner does not address secondary considerations. *See generally* Prelim. Resp.

systems, or an equivalent field with two or more years of work experience in electrical engineering, wireless telecommunication systems, computer engineering, or an equivalent field.” Pet. 8–9 (citing Ex. 1003 ¶ 33).

Petitioner further notes that “[a]dditional education in a relevant field or relevant industry experience may compensate for a deficit in one of the other aspects of the requirements stated above.” *Id.* at 9. Patent Owner does not dispute Petitioner’s proposed level of ordinary skill in the art at this time. Prelim. Resp. 18 n.5 (“For purposes of this [Preliminary Response] only, Patent Owner applies Petitioner’s articulation of the level of skill in the art.”).

For purposes of this Decision, we adopt Petitioner’s definition of the level of ordinary skill in the art.⁵ It is supported by the testimony of Dr. Tentzeris and not disputed by Patent Owner. Further, it appears consistent with what is reflected by the content of the applied prior art references. *Cf. Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001) (the applied prior art may reflect an appropriate level of skill).

C. Claim Construction

In an *inter partes* review, we construe claims using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

⁵ No matter how designated in this Decision, any determination (except our decision to institute trial) is preliminary and non-binding. We wish to have the full record as developed during trial before rendering any binding determination, finding, or conclusion.

37 C.F.R. § 42.100(b). Accordingly, our claim construction standard is the same as that of a district court. *See id.* Under the standard applied by district courts, claim terms are generally given their plain and ordinary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc). “There are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution.” *Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012).

Petitioner states in the Petition that “[b]ased on the evidence below and the prior art’s description of the claimed elements being similar to that of the ’669 patent specification, no formal claim constructions are necessary in this proceeding because ‘claim terms need only be construed to the extent necessary to resolve the controversy.’” Pet. 4 (quoting *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011)). Patent Owner does not dispute Petitioner’s contention. *See generally* Prelim. Resp.

In the Reply, Petitioner asserts that “the plain and ordinary meaning of the ‘communication stage’ recited in element [1.3] is simply a ‘communication module or unit’ that communicates data.” Reply 8 (citing Ex. 1001, 1:49–50, 2:19–20, 3:24–28, 3:63–65; Ex. 1003 ¶¶ 75–76). In response, Patent Owner argues that “Petitioner offers a brand-new claim construction for ‘communication stage,’” which “the Petition never offered,” and also that “Petitioner offers its new construction based exclusively on attorney argument without the benefit of evidence in support.” Sur-reply 6,

9. To the extent necessary to determine whether to institute trial, we address these arguments as part of our unpatentability analysis below. *See infra* § II.D.3.

For purposes of this Decision, we determine that no claim terms require express construction. *See, e.g., Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

If either party contends that explicit claim construction is necessary in order to make a final determination whether or not any challenged claim is unpatentable based on the arguments and evidence presented, it should clearly explain why during trial and provide a clear and unambiguous construction with supporting evidence including specifically identifying the challenges, claims, and limitations to which the construction is necessary. Specifically, there are two potential claim construction issues that the parties may wish to address during trial.

The first potential issue is whether “communication stage to communicate data with each other” as recited in claim 1 is a means-plus-function limitation that invokes 35 U.S.C. §112 (f). Neither party has contended that this a means-plus-function limitation even though it recites a means, “communication stage,” plus a function, “to communicate data with each other.” We appreciate that, because the word “means” is not recited, there is a rebuttable presumption that this phrase is not a means-plus-function limitation that invokes §112 (f). *See, Phillips v. AWH Corp.*, 415 F.3d 1303, 1310 (Fed. Cir. 2005) (en banc); *see also* MPEP § 2181.

However, the parties may wish to address whether the term “communication stage” has a sufficiently definite meaning such that it recites sufficient structure for performing the function of “to communicate data with each other” or claim 1 otherwise recites sufficient structure. Thus, the parties may wish to address whether the presumption has been rebutted. If either party contends that “communication stage to communicate data with each other” as recited in claim 1 is a means-plus-function limitation, the parties should also address whether the Specification of the ’669 patent adequately discloses corresponding structure that is linked with the function. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (en banc). If neither party contends that “communication stage to communicate data with each other” as recited in claim 1 is a means-plus-function limitation, this issue and the related issue of whether the Specification discloses corresponding structure need not be addressed during trial.

The second potential claim construction issue that the parties may wish to address during trial is the meaning of “designed to” in the context of claim 1. *See* Ex. 1001, 8:12–17 (“wherein the [playback] devices (6A, 6B) are ***designed: to transmit*** video playback progress-data via the communication stage to the other device (6B, 6A); ***and, to determine*** based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A)” (emphasis added)). The parties appear to have disregarded “designed to” in their consideration of claim 1 and to contend that claim 1 requires transmission and determination. *See* Pet. 26 (“Masumoto discloses that the displays transmit video playback progress-data, such as the frame number or the time stamp, between each other to determine synchronization/asynchronization.”); Prelim. Resp. 2

(“Petitioner does not mention—much less explain—when or how Masumoto’s master display transmits its own frame number or determines whether it is in sync with other displays as required by [1.3].”), 20, 24, 27. The parties may wish to address whether the proper scope of the claim does not require either transmission or determination but rather requires that the playback devices be *designed to* transmit and determine.

D. Obviousness Ground Based on Swafford and Masumoto

Petitioner contends that claims 1–15 would have been obvious in view of a combination of teachings of Swafford and Masumoto. Pet. 11, 17–56. Patent Owner opposes institution on this ground. Prelim. Resp. 19–37.

We provide summaries of Swafford and Masumoto and then analyze the arguments and evidence of the parties relating to this ground.

1. Swafford

Swafford is a U.S. patent application publication directed to “[s]ystems and methods for a merchandizing display related to a continuous display formed by electronic displays embedded along product shelves and on the packages stored on the product shelves.” Ex. 1004, code (57).

According to Swafford,

[a]n electronic label device may detect the presence of a consumer and send a trigger to the packages on its product shelf. The electronic label device may also send a trigger to surrounding electronic label devices. A streaming video may then be apportioned among displays on electronic label devices and the packages. Each of the displays may simultaneously output a different portion of the streaming video.

Id.

and packages 4250A-H and 4270A-H through network and hub 39100 discussed above in relation to FIG. 39.” *Id.*

Figure 39 of Swafford is reproduced below.

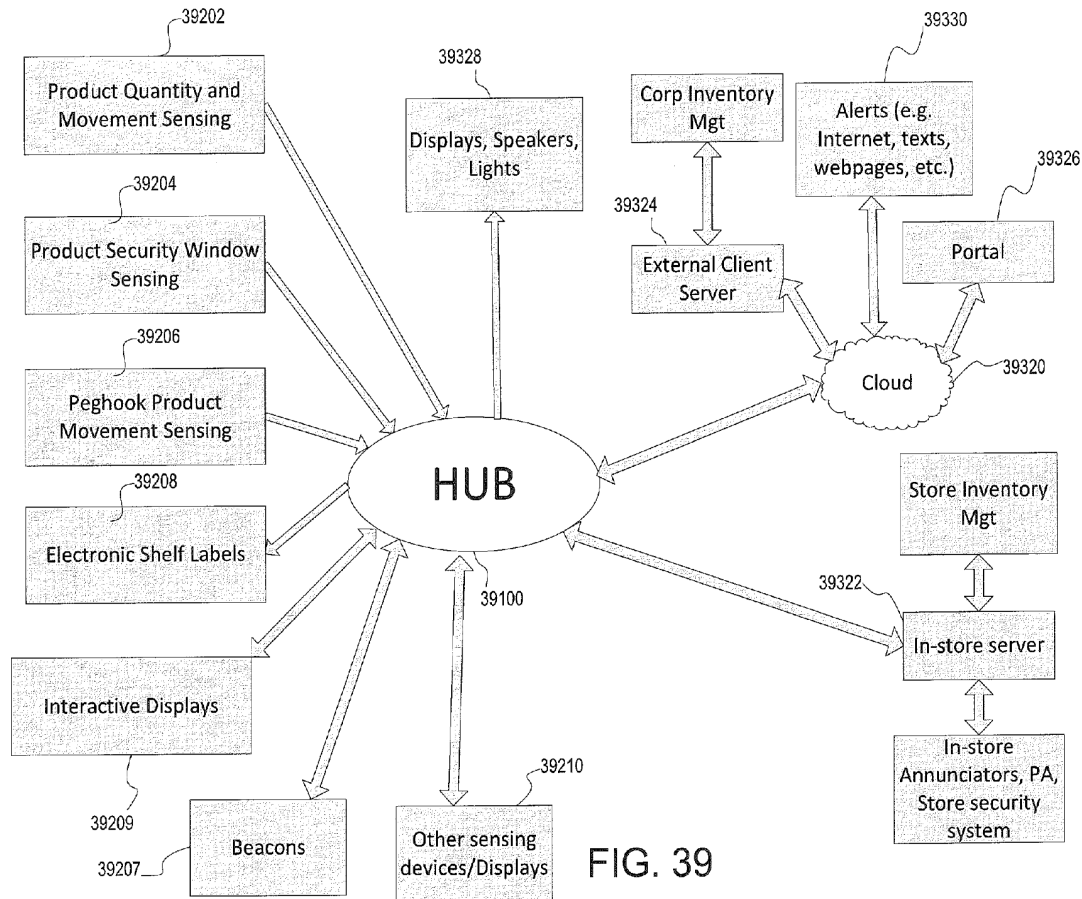


Figure 39 depicts a hub 39100, which “can be a centralized data routing and receiving device and can be interconnected with various devices.” *Id.* ¶ 325. For example, “a plurality of end-point devices 39202-39210 that can be associated with a product shelf can be configured to connect to the hub,” and “configured to transmit information to the hub or to receive information from the hub 39100.” *Id.* ¶ 326. Swafford states that the end-point devices can be continuous display shelf edge label devices. *Id.* ¶ 327. As shown in Figure 39, “[t]he hub 39100 can also be interconnected with a network,

which may include various servers 39322, 39324, 39326 and the cloud 39320.” *Id.* ¶ 328.

Figure 40 of Swafford is reproduced below.

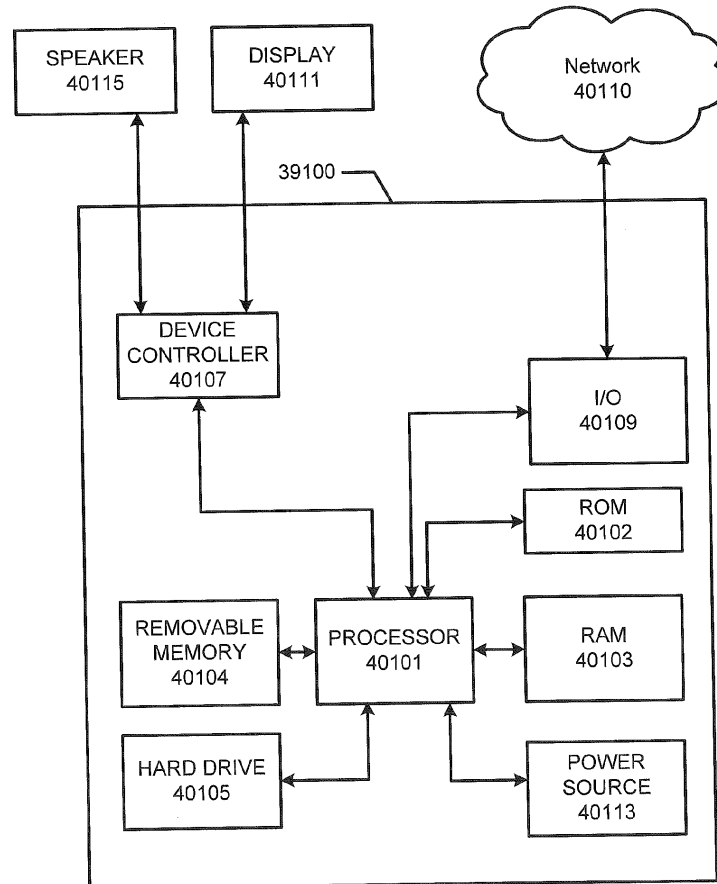


FIG. 40

Figure 40 depicts an “exemplary hub 39100 . . . which can be configured as a computing device.” *Id.* ¶ 329. The hub 39100 may include one or more processors 40101, one or more memories, such as “a read-only memory (ROM) 40102, random access memory (RAM) 40103, hard drive 40105, removable media 40104,” “one or more output device controllers 40107, such as a video or audio processor,” and “one or more network interfaces (such as a network interface circuit, a scanner interface circuit, and the like) to communicate with an external network.” *Id.* ¶¶ 329–332. According to

Swafford, “[t]he hubs 39100 can be placed on a facility ceiling or at the top of a shelving or merchandizing system,” and “the plurality of hubs could be configured to communicate with each other and determine which end-point devices each hub should communicate with.” *Id.* ¶ 334.

Swafford was published May 12, 2016, (Ex. 1004, code (43)) and Petitioner contends that Swafford qualifies as prior art under 35 U.S.C. §§ 102(a) and (b). Pet. 14. Patent Owner does not contest the prior art status of Swafford. *See generally* Prelim. Resp. We determine that Swafford qualifies as prior art under 35 U.S.C. § 102(a), because Swafford’s publication date of May 12, 2016, is before the effective filing date for the ’669 patent, which is November 10, 2017. Ex. 1001, code (22); Ex. 1004, code (43).

2. *Masumoto*

Masumoto is a U.S. patent application publication directed to “a multi-display apparatus for displaying a single image by combining a plurality of displays.” Ex. 1005, code (57). Masumoto describes “a multi-display apparatus that can match an image display timings and image display positions of the entire image by connecting an image transmission server and multiple displays to a network.” *Id.* ¶ 15. According to Masumoto,

The multi-display apparatus includes the plurality of displays connected to a network. Each of the plurality of displays includes a communication unit that communicates via the network and a controller. The controller sends a request signal requesting other display to transmit specific information of a video signal displayed on the other display, and receives the specific information from the other display. The controller gives notification of correction to the other display sending the specific information with a difference when the specific information received differs from specific information of a video signal that is supposed to be displayed.

Id. ¶ 17.

Figure 1 of Masumoto is reproduced below.

FIG. 1

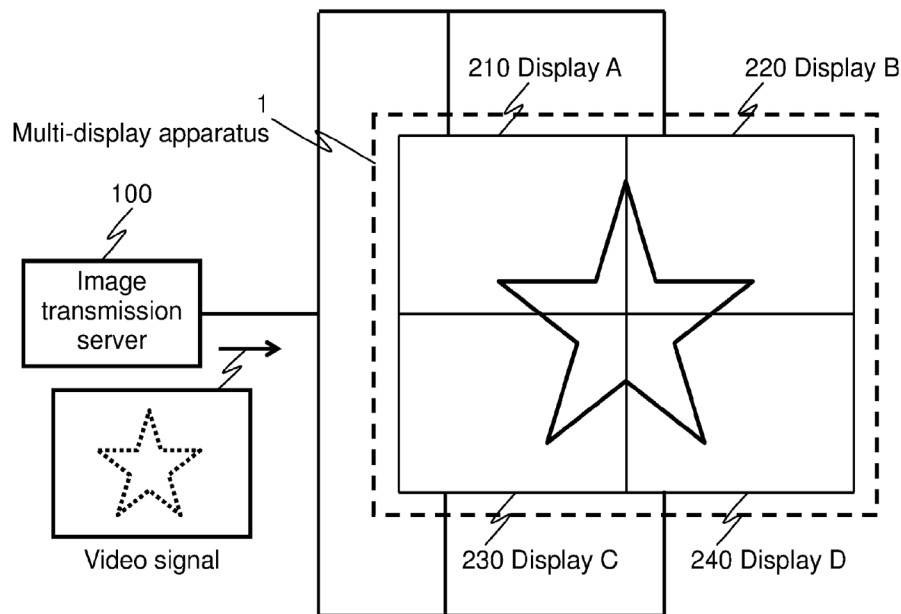


Figure 1 depicts “a configuration diagram of a multi-display apparatus,” where “[d]isplay A210 to display D240 are connected to image transmission server 100 via the network” and are also “capable of communication with each other via the network.” *Id.* ¶¶ 38, 39. According to Masumoto,

Image transmission server 100 sends same video signal to each of display A210 to display D240 simultaneously. Each of display A210 to display D240 cuts out and displays a portion in charge from the received image. By combining four displays A210 to D240, a single image is displayed.

Id. ¶ 39. Masumoto discloses that “a video signal is sent from image transmission server 100 in a streaming format or file format, and stored in each display.” *Id.*

Figure 2 of Masumoto is reproduced below.

FIG. 2

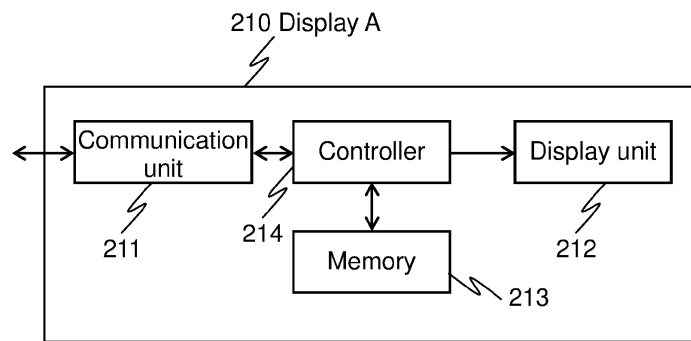


Figure 2 depicts “a block diagram illustrating a structure of each display,” e.g., display A210. *Id.* ¶ 40. “Display A210 includes communication unit 211 for communication via network, display unit 212 including a liquid crystal display panel, memory 213 for storing a range of data, and controller 214 for controlling these communication unit 211, display unit 212, and memory 213.” *Id.* According to Masumoto, “[d]ata stored in memory 213 is specifically a video signal sent from the image transmission server and a video signal for display is generated by cutting out a portion of this video signal.” *Id.*

Masumoto was published May 11, 2017, (Ex. 1005, code (43)) and Petitioner contends that Masumoto qualifies as prior art under 35 U.S.C. § 102(a). Pet. 16. Patent Owner does not contest the prior art status of Masumoto. *See generally* Prelim. Resp. We determine that Masumoto qualifies as prior art under 35 U.S.C. § 102(a), because Masumoto’s publication date of May 11, 2017, is before the effective filing date for the ’669 patent, which is November 10, 2017. Ex. 1001, code (22); Ex. 1005, code (43).

3. *Claim 1*

For the reasons that follow, we are persuaded that Petitioner establishes sufficiently for the purpose of this decision that the subject matter of independent claim 1 would have been obvious in view of the combination of Swafford and Masumoto.

[1.0] A video playback system (1), comprising

The Petitioner contends that the preamble of claim 1 is not limiting. Pet. 17 (“The preamble of claim 1 is not limiting because it merely states the purpose or intended use of the alleged invention. It does not define any of the claim limitations, which are set forth fully in the body of the claim (i.e., a video playback system).”). Nonetheless, Petitioner cites both Swafford and Masumoto and shows both cited references disclose video playback systems. *Id.* at 17–18.

Patent Owner does not discuss the preamble of claim 1 and, thus, does not dispute Petitioner’s contention that the preamble is not limiting or dispute that the cited art discloses the preamble. *See generally* Prelim. Resp.

We determine that the preamble is not limiting but, if it were, the cited art has been shown to teach it sufficiently for institution.

[1.1] a number of playback devices (6A, 6B) to playback a video on their screens (5),

Petitioner contends that both Swafford and Masumoto disclose this limitation. Pet. 18 (citing Ex. 1003 ¶¶ 57–64). With regard to Swafford, the Petition provides:

Specifically, Swafford discloses that “continuous display shelf edge label devices arranged in side by side (4210A and 4210B or 4210C and 4210D) orientation and stacked on top of

each other like shelves (4210A and 4210C or 4210B and 4210D), an array of continuous display shelf edge label devices may be configured, which can be configured to be combined together display a uniform image or video.” (Ex.1004, [0383], FIG. 42). Furthermore, FIG. 43 shows another example of one continuous display shelf edge label device 43001 which “can be provided with any number of displays.” (Ex.1004, [0388], FIG. 43).

Thus, each continuous display shelf edge label device 4210A - 4210D, 43001 corresponds to a playback device in [1.1] and the multiple continuous display shelf edge label devices are designed to display a video on their displays as in [1.1]. (Ex.1003, ¶60).

Id. (bracketed material in original). With regard to Masumoto, the Petition provides:

Additionally, Masumoto discloses a plurality of displays to playback a video on their display units by disclosing “a multi-display apparatus for displaying a single image by combining a plurality of displays.” (Ex.1005, [0017]). “Image transmission server 100 sends same video signal to each of display A210 to display D240 simultaneously.” (Ex.1005, [0039]). “All displays have the same structure.” (Ex.1005, [0040]). “[M]ulti-display apparatus 1 may be used for simultaneously displaying multiple video signal A and video signal B from image transmission server 100.” (Ex.1005, [0094]). Each display includes a display unit 212 to display a video and the display unit 212 includes “a liquid crystal display panel.” (Ex.1005, [0040], FIG. 2). Thus, the plurality of displays A210-D240 in Masumoto correspond to a number of playback devices in [1.1] and the plurality of displays A210-D240 are configured to display a video on their display units. (Ex.1003, ¶¶61-63).

Id. at 20–21 (bracketed material in original).

Patent Owner does not dispute the showing in the Petition for this limitation. *See generally* Prelim. Resp.

We determine that Petitioner has sufficiently shown for institution that the cited art teaches this limitation.

[1.2] each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and

Although the Petition states that “Masumoto discloses this element” (Pet. 21 (citing Ex. 1003 ¶¶ 69–70)), both Swafford and Masumoto are cited and discussed in the section of the Petition relating to this limitation. *See id.* at 21–24.

Figure 27 of Swafford is reproduced below.

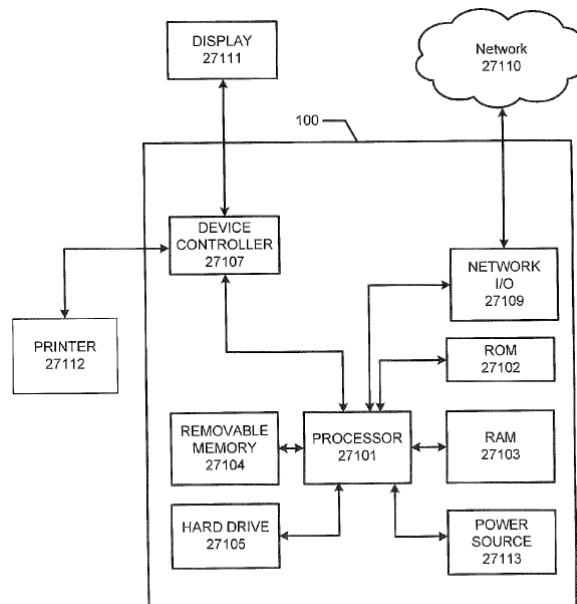


FIG. 27

Figure 27 of Swafford depicts the “general hardware elements that can be used to implement” the described devices. Ex. 1004 ¶ 264. With regard to Swafford, the Petition provides:

First, Swafford discloses that “[o]ne or more *memories 27102, 27103, 27104, and/or 27105* may include a stored address location and display data location data” and “[d]isplay data location data may be used by processor 27101 to format data to be displayed on display 27111.” (Swafford, [0265], FIG. 27). “Although shown in FIG. 27 as being outside of computing device 27100, display 27111 also may be integrated into a same physical housing and/or structure as computing device 27100.” (Swafford, [0265]).

“As shown illustratively in the examples of FIGS. 29-34B, display 27111 may be configured to be oriented along an entire edge of a shelf of a retailer.” (Ex.1004, [0266]). Thus, display 27111 may be the continuous display 34801 oriented along an entire edge of a shelf as shown in FIG. 34A and has one or more memories to store video data representing video. (Ex.1003, ¶67). Therefore, Swafford discloses that each continuous display 34801 includes one or more memories to display data location data that may be used to format data to be displayed on display. (Ex.1003, ¶68).

Pet. 22 (bracketed material in original).

Figure 2 of Masumoto is reproduced below.

FIG. 2

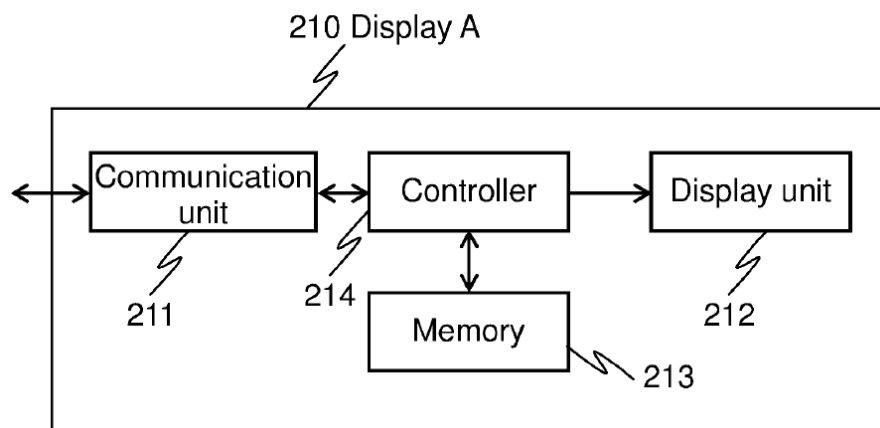


Figure 2 of Masumoto depicts “a block diagram illustrating a structure of each display.” Ex. 1005 ¶ 40. With regard to Masumoto, the Petition provides:

Additionally, Masumoto discloses that each display includes a memory to store video data representing the video by disclosing that “[d]isplay A210 includes communication unit 211 for communication via network, display unit 212 including a liquid crystal display panel, **memory 213 for storing a range of data**, and controller 214 for controlling these communication unit 211, display unit 212, and memory 213.” (Ex.1005, [0040]). “**Data stored in memory 213 is specifically a video signal** sent from the image transmission server and a video signal for display is generated by cutting out a portion of this video signal.” *Id.*

Pet. 23–24 (bracketed material in original).⁶

Patent Owner does not dispute the showing in the Petition for this limitation. *See generally* Prelim. Resp.

We determine that Petitioner has sufficiently shown for institution that the cited art teaches this limitation.

[1.3a] a communication stage to communicate data with each other, wherein the devices (6A, 6B) are designed:

[1.3b] to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and,

[1.3c] to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

⁶ We also note that claim 2 of Masumoto recites that “each of the plurality of displays has a memory.” Ex. 1005, 22.

Petitioner contends that “Swafford in view of Masumoto discloses this element.” Pet. 24 (citing Ex. 1003 ¶¶ 71–85); *see also id.* at 27 (“Swafford in view of Masumoto discloses each and every limitation of [1.3].”). With regard to Swafford, the Petition provides:

Specifically, Swafford discloses that “[e]ach of the **vertically-stacked multiple continuous displays**, user interfaces, and packages may then **simultaneously** output a different part of the message” and “[t]he message may include graphics, text, animations, **streaming video**, or any combination thereof.” (Ex. 1004, [0287]). Further, Swafford discloses that “**a continuous display shelf edge label device** may determine or **receive data from another continuous display shelf edge label device** about a competitive product and/or related product (such as toothpastes to toothbrushes).” (Ex. 1004, [0315]). “The electronic label devices may be configured to receive a streaming video and apportion the streaming video between the one or more electronic label devices and the plurality of packages.” (Ex. 1004, [0421]).

Id. at 24–25 (bracketed material in original). Thus, Petitioner shows that Swafford discloses video playback devices that communicate data with each other. However, Petitioner fails to show that Swafford teaches or suggests the remaining elements of limitation 1.3 and acknowledges that Swafford does not describe limitation 1.3b. *See id.* at 24–27. In this regard, the Petition states:

Swafford does not explicitly describe that the video playback progress-data is transmitted from one continuous display shelf edge label device to another continuous display shelf edge label device, i.e., Swafford does not explicitly disclose that “the devices (6A, 6B) are designed to transmit video playback progress-data via the communication stage to the other device (6B, 6A).” This modification would be obvious in view of Masumoto. (Ex. 1003, ¶74).

Id. at 25.

Figure 9 of Masumoto is reproduced below.

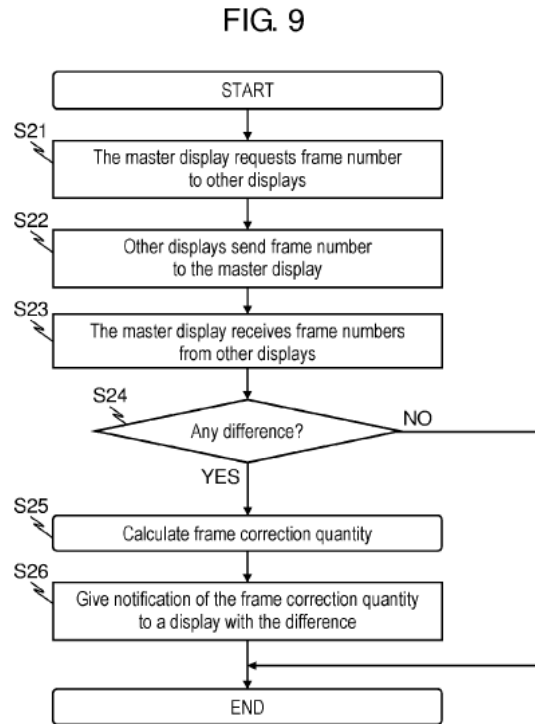


Figure 9 of Masumoto depicts “a flow chart illustrating the operation of a multi-display apparatus.” Ex. 1005 ¶ 28. With regard to Masumoto, the Petition provides:

Specifically, Masumoto discloses that the displays can communicate data with each other and are designed to transmit specific information of a video signal displayed on the display (*corresponding to the video playback progress-data*), such as the frame number or the time stamp, to the other display and to determine synchronization or asynchronization based on the video playback progress-data by disclosing that “[t]he multi-display apparatus includes the plurality of displays connected to a network. Each of the plurality of displays includes a communication unit that communicates via the network and a controller. ***The controller [in one display] sends a request signal requesting other display to transmit specific information of a video signal displayed on the other display, and receives the specific information from the other display.***”

The controller gives *notification of correction* to the other display sending the specific information with a difference when the specific information received differs from specific information of a video signal that is supposed to be displayed.” (Ex.1005, [0017]). Thus, Masumoto discloses that the displays can communicate data with each other and the displays are designed to transmit specific information of a video signal displayed on one display to the other display and to determine synchronization or asynchronization based on the specific information. Masumoto discloses the specific information of a video signal displayed on one display as the video playback progress-data in [1.3]. (Ex.1003, ¶¶75-76).

Furthermore, as shown in FIG. 9, Masumoto discloses that “the frame number is an example of specific information of the video signal, and the time [stamp] is also another example of the specific information of the video signal.” (Ex.1005, [0107]). Therefore, Masumoto discloses that the displays transmit video playback progress-data, such as the frame number or the time stamp, between each other to determine synchronization/asynchronization. (Ex.1003, ¶¶77-80).

Pet. 25–26 (bracketed material in original). Thus, Petitioner shows that Masumoto discloses video playback devices comprising a communication unit and controller (ref. nos. 211 and 214 in Fig. 2) and that communicate data with each other. And, Petitioner shows that Masumoto discloses that the video playback devices are designed to transmit frame number or time stamp information to the other playback devices. And, still further, Petitioner shows that the video playback devices are designed to determine whether the frame number or time stamp of the other devices are different.⁷

⁷ We also note that claims 7 and 8 of Masumoto recite:

7. A multi-display apparatus for displaying a single image by combining a plurality of displays, the multi-display apparatus comprising:
the plurality of displays that are connected to a network,

Patent Owner disputes Petitioner’s showing as to limitation 1.3. *See generally* Prelim. Resp. First, Patent Owner argues that “Petitioner fails to address the requirement of a ‘communication stage’ in limitation [1.3].” *Id.* at 1. The Preliminary Response states that “neither the Petition nor the supporting expert declaration even use the term ‘communication stage,’ much less explain where the required ‘communication stage’ can be found.” *Id.* at 2. However, Patent Owner fails to offer any construction of “communication stage,” argue or suggest that it is limited to any particular physical form or structure, or otherwise offer a clear and definite meaning for this claim term. *See generally* Prelim. Resp. The term “communication stage” is used only 5 times in the ’669 patent outside of the claims and is described in only functional terms with no physical form or structure identified. *See* Ex. 1001, 1:49, 1:51–52, 2:19, 3:27, 3:63. We determine that

wherein
each of the plurality of displays includes,
a communication unit that communicates via the network,
and
a controller that sends a request signal requesting other
display to transmit specific information of a video signal
displayed on the other display, receives the specific
information from the other display, and gives notification
of correction to the other display sending the specific
information with a difference when the specific
information received differs from specific information of a
video signal that is supposed to be displayed.

8. The multi-display apparatus of claim 7, wherein the
controller of each of the plurality of displays conducts mutual
time synchronization periodically.

Ex. 1005, 23. As noted in the Petition (Pet. 26), the “specific
information” is a frame number or time stamp. *Id.* at ¶ 107.

Patent Owner’s argument fails to address the issues articulated in the Petition, especially as it relates to limitation 1.3, and has little merit. *See* Pet. 24–27.

The Petition is structured so that a limitation is identified by number and the showing as to each limitation is provided thereafter by an explanation and quotations and citations to evidence. *See, e.g.*, Pet. 24–27 (relating to limitation 1.3). As noted above, for limitation 1.3, the Petition states that “Swafford in view of Masumoto discloses this element” (*id.* at 24), and “Swafford in view of Masumoto discloses each and every limitation of [1.3]” (*id.* at 27). With regard to claim 1’s requirement that “each playback device comprises . . . a communication stage to communicate data with each other” (Ex. 1001, 8:9–12), the Petition includes an explanation and quotes and cites evidence from both Swafford and Masumoto. *See* Pet. 24–26.

With regard to Swafford, the Petition quotes paragraph 315 that states “***a continuous display shelf edge label device*** may determine or ***receive data from another continuous display shelf edge label device*** about a competitive product and/or related product (such as toothpastes to toothbrushes)” (Pet. 24–25 (quoting Ex. 1004 ¶ 0315)) and paragraph 421 that states “The electronic label devices may be configured to receive a streaming video and apportion the streaming video between the one or more electronic label devices and the plurality of packages” (*id.* at 25 (quoting Ex. 1004 ¶ 421)). These quotations show that the system described in Swafford comprises devices that have communication structure to communicate data with each other and are reasonably understood to assert that Swafford

teaches a “a communication stage to communicate data” as recited in claim 1 of the ’669 patent.

With regard to Masumoto, the Petition twice states that “Masumoto discloses that the displays can communicate data with each other” (Pet. 25, 26) and quotes paragraph 17 that states, “[t]he multi-display apparatus includes the plurality of displays connected to a network. Each of the plurality of displays includes a communication unit that communicates via the network and a controller. ***The controller [in one display] sends a request signal requesting other display to transmit specific information of a video signal displayed on the other display, and receives the specific information from the other display.*** The controller gives ***notification of correction*** to the other display sending the specific information with a difference when the specific information received differs from specific information of a video signal that is supposed to be displayed” (*id.* at 25–26 (quoting Ex. 1005 ¶ 17)). This quotation shows that the system described in Masumoto comprises devices that have communication structure to communicate data with each other and are reasonably understood to assert that Masumoto teaches a “a communication stage to communicate data” as recited in claim 1 of the ’669 patent. Patent Owner’s argument that “Petitioner fails to address the requirement of a ‘communication stage’ in limitation [1.3]” (Prelim. Resp. 1) overlooks the relevant section of the Petition (Pet. 24–27) and lacks merit.

Additionally, Patent Owner argues that Petitioner has failed to show that the cited art teaches the remaining elements of limitation 1.3. The Preliminary Response states:

The Petition relies on Masumoto to teach limitation [1.3] for both grounds. Petition 25–27, 65–66. As shown below,

Masumoto is a fundamentally different type of system, and as a result, does not teach the limitation for three reasons: (1) Masumoto's master display does not transmit video play-back progress data; (2) Masumoto's master display does not determine whether it is in synchronous or asynchronous playback progress with the other devices; and (3) Masumoto's non-master displays do not receive progress data or determine whether they are in synchronous or asynchronous playback with the other devices.

Prelim. Resp. 24.

As noted above, Patent Owner's arguments raise a potential claim construction issue regarding the import and meaning of "designed to" in the context of claim 1. *See supra* § II.C. Patent Owner's arguments are based on the contentions that claim 1 requires that each of the playback devices must transmit video playback progress data and determine whether it is synchronous or asynchronous playback progress with the other playback devices. But, claim 1 recites that "the devices (6A, 6B) are ***designed: to transmit*** video playback progress-data . . . ***and, to determine*** based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A)." Ex. 1001, 8:12–17 (emphasis added). Patent Owner's contentions fail to give any import or meaning to "designed to."

With regard to Patent Owner's arguments that the cited art does not teach limitation 1.3b because Masumoto's master display does not transmit video play-back progress data (Prelim. Resp. 24–27) and Masumoto's non-master displays do not receive progress data (*id.* at 29–31), Patent Owner acknowledges that Masumoto teaches that "[c]oordinating the timing requires the displays (*e.g.*, 210) to communicate 'specific information' including time stamp and frame at that time to a 'controller' 214 of a

separate display” (Prelim. Resp. 12 (citing Ex. 1005 ¶¶ 17, 107, 108)) and that Masumoto teaches that the playback device that serves as the “master display” is selected from among the playback devices in the multi-display system of Masumoto. *Id.* at 13 (“Masumoto’s multi-display system determines which display serves in the master-display role before operating using a ‘rule in advance.’”). And, as pointed out in the Petition (Pet. 15–16), Masumoto teaches that “[a]ll displays have the same structure” and include a “communication unit” and a “controller 214 for controlling these communication unit 211 [sic].” Ex. 1005 ¶ 40.

With specific regard to limitation 1.3b, the Petition states that “Masumoto discloses that the displays . . . are designed to transmit specific information of a video signal displayed on the display (*corresponding to the video playback progress-data*), such as the frame number or the time stamp, to the other display” and “Masumoto discloses that the displays . . . are designed to transmit specific information of a video signal displayed on one display to the other display.” Pet. 25, 26. In support, Petitioner quotes the following passage in Masumoto (*id.*):

The multi-display apparatus includes the plurality of displays connected to a network. Each of the plurality of displays includes a communication unit that communicates via the network and a controller. The controller sends a request signal requesting other display to transmit specific information of a video signal displayed on the other display, and receives the specific information from the other display.

Ex. 1005 ¶17. We determine that Masumoto teaches that each of the playback display devices in its multi-display system is “designed: to transmit video playback progress-data via the communication stage to the other device” as recited in claim 1 of the ’669 patent.

With regard to Patent Owner’s arguments that the cited art does not teach limitation 1.3c because Masumoto’s master display does not determine whether it is in synchronous or asynchronous playback progress with the other devices (Prelim. Resp. 27–29) and Masumoto’s non-master displays do not determine whether they are in synchronous or asynchronous playback with the other devices (*id.* at 29–31), Patent Owner acknowledges that: “Masumoto concerns synchronization of large displays—‘multi-display apparatus for displaying a single image.’” (*id.* at 11 (citing Ex. 1005, code (57) (Abstract)); “Because Masumoto’s apparatus displays one image using multiple displays, it must ‘match . . . image display timings and image display positions of the entire image by connecting an image transmission server and multiple displays to a network.’” (*id.*, at 12 (citing Ex. 1005 ¶ 15); “The master display system ‘match[es] display timings of all [non-master] displays at a desired original timing of the video signal [from the master display], without adjusting the displays to a display with the slowest display timing.” (*id.* at 13 (citing Ex. 1005 ¶ 126)); “the master display controls the timing of the other displays,” (*id.*); and “The master display uses the information received from the other displays to calculate whether to send a correction to the sending display.” (*id.* (citing Ex. 1005 ¶¶ 108–119, Fig. 9 (steps S24-S26)).

With specific regard to limitation 1.3c, the Petition states that “Masumoto discloses that the displays . . . are designed to . . . to determine synchronization or asynchronization based on the video playback progress-data” and “Masumoto discloses that the displays . . . are designed . . . to determine synchronization or asynchronization based on the specific

information.” Pet. 25, 26. In support, Petitioner quotes the following passage in Masumoto (*id*):

The multi-display apparatus includes the plurality of displays connected to a network. Each of the plurality of displays includes a communication unit that communicates via the network and a controller. The controller sends a request signal requesting other display to transmit specific information of a video signal displayed on the other display, and receives the specific information from the other display. The controller gives notification of correction to the other display sending the specific information with a difference when the specific information received differs from specific information of a video signal that is supposed to be displayed.

Ex. 1005 ¶17. We determine that Masumoto teaches that each of the playback display devices in its multi-display system is “designed: . . . to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices” as recited in claim 1 of the ’669 patent.

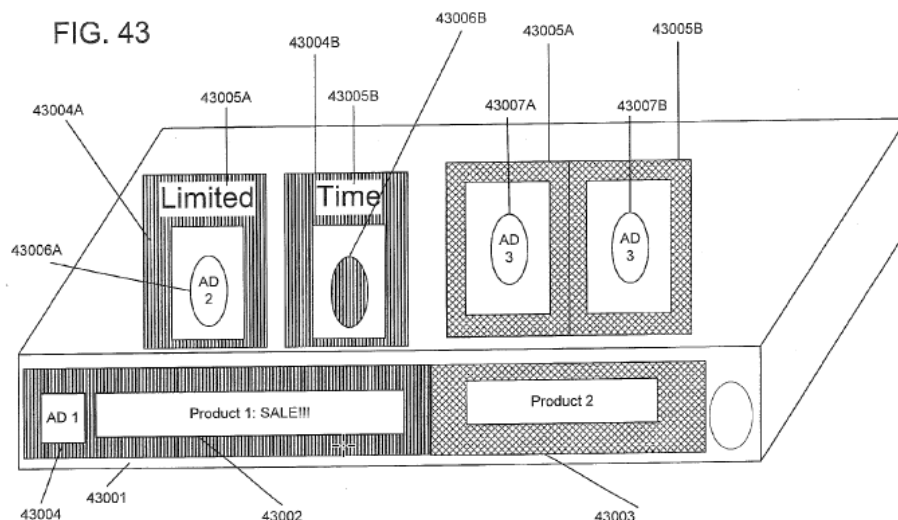
We also note that the Petition and Petitioner’s contentions as to limitation 1.3 (and all the other claim limitations) are supported by the Declaration of Dr. Manos M. Tentzeris. (Ex. 1003) while Patent Owner’s arguments and contentions are not supported by any contrary testimony. *See generally* Prelim. Resp. As noted above, Petitioner cites Dr. Tentzeris’s testimony in support of its contention that the combination of Swafford and Masumoto teach all the elements of limitation 1.3. Pet. 24, 27 (citing Ex. 1003 ¶¶ 71–85). Although Patent Owner’s fails to provide any testimonial support for its arguments, Patent Owner attacks Dr. Tentzeris’s testimony because it “largely parrots the discussion in the Petition.” Prelim. Resp. 22; *see also id.* at 36 (“The expert simply parrots the analysis in the petition.”).

But, at least at this stage, we determine that the testimony of Dr. Tentzeris is entitled to at least some weight and provides some support for Petitioner's contentions when contrasted with Patent Owner's complete lack of any expert testimonial support for its arguments and contentions.⁸

We determine that Petitioner has sufficiently shown for institution that the cited art teaches all the elements of limitation 1.3.

[1.4] wherein the display devices (6A, 6B) are designed to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen's (5) display area overlapping with a video content or substituting a video content of said section.

Petitioner relies on Swafford for teaching all the elements of this limitation. *See* Pet. 28–30 (citing Ex. 1003 ¶¶ 86–90; Ex. 1004 ¶¶ 388, 404, Fig. 43). Figure 43 of Swafford is reproduced below.



⁸ In its Sur-reply, somewhat ironically in view of Patent Owner's complete lack of testimonial support for its arguments and contentions, Patent Owner attacks Petitioner's arguments relating to limitation 1.3 as "little more than bare attorney argument." Sur-reply 3.

Figure 43 depicts a shelf carrying products 43006A and 43006B with “[c]ontinuous display shelf edge label device 43001. . . provided with any number of displays.” Ex. 1004 ¶ 388. The Petition states:

Specifically, Swafford discloses that the display shelf edge label device 43001 includes different displays area 43002 and 43003 as shown in FIG. 43. “Display 43002 provides information on products 43006A and 43006B and may also display a static or dynamic advertisement 43004. For example, the background of display 43002 may display the logo representing the manufacturer of products 43006A and 43006B. Display 43003 can provide information on products 43007A and 43007B. Also the background of display 43003 may display the logo representing the manufacturer of products 43007A and 43007B, where the logo displayed on the background of display 43003 may differ from the logo displayed on the background of display 43002. However, it is contemplated that *the backgrounds of displays 43002 and 43003 may display additional information, such as static images or streaming video of products 43006A-B and 43007A-B, promotional content, good-will messages, advertisements or any related information.*” (Ex.1004, [0388]).

Therefore, Swafford discloses that the display shelf edge label device 43001 is designed to display both static images and streaming video of products. (Ex.1003, ¶87). As shown in FIG. 43, static information about Product 1 or Product . . . may overlap with a streaming video as a background Furthermore, the dynamic advertisement 43004 . . . , information about Product 1 or Product 2 are [sic] respectively occupies one section in the displays area 43002 or 43003. The dynamic advertisement 43004 may inherently include same content as the streaming video displayed in the backgrounds of displays 43002 and 43003 by virtue of “advertisement.” (Ex.1003, ¶88).

. . . .

Moreover, a POSITA would understand that designing substitutive video contents in overlapping display areas is commonly used to “provide additional information to a customer or to attract a customer’s attention.” (Ex. 1004, [0404]; Ex. 1003, ¶89).

Pet. 28–30. The paragraphs of Swafford cited in the Petition (Pet. 28–30) support Petitioner’s contentions that the cited art teaches all the elements of this limitation. *See* Ex. 1004 ¶¶ 388, 404.

Patent Owner does not dispute the showing in the Petition for this limitation. *See generally* Prelim. Resp.

We determine that Petitioner has sufficiently shown for institution that the cited art teaches this limitation.

In summary, after considering the arguments and evidence presented by the parties, we determine Petitioner has shown that there is a reasonable likelihood that the combination of Swafford and Masumoto teaches all the limitations of claim 1 of the ’669 patent.

Reasons to Combine Swafford and Masumoto

Petitioner contends that “a POSITA would have found it obvious to apply multiple displays communicating video playback progress-data (e.g., the frame number, the time stamp) with each other, as taught in Masumoto, in Swafford’s system.” Pet. 51–52 (citing Ex. 1003 ¶¶ 152–158). The Petition provides:

First, a POSITA would have been motivated to combine Swafford with Masumoto because Swafford and Masumoto are designed to achieve the same goal to synchronize a video across multiple displays. . . . a POSITA would have been motivated and able to use the teaching of Masumoto modify Swafford in order to fulfill Swafford’s express objective of “simultaneously

output[ting] a different portion of the streaming video.” (*Id.* at 52–53 (citing Ex. 1004, code (57), ¶ 423; Ex. 1005 ¶¶ 4, 17)).

Second, it would have been obvious to a POSITA to have looked to Masumoto’s disclosure of transmitting video playback progress-data from one display to another display because it provides a solution to a well-recognized need in synchronizing video displays – a need for low bandwidth and simple, inexpensive hardware, as identified in Yamada, Kipp, Masumoto, and the ’669 Patent. (*Id.* at 53 (citing Ex. 1001, 1:28–40; Ex. 1005 ¶ 79; Ex. 1006 ¶ 26; Ex. 1010 ¶ 11)).

....

Third, a POSITA would have expected that Swafford’s system would likely be subjected to the way of transmitting video playback progress-data among different displays addressed in Masumoto because of the structural similarity between Swafford’s and Masumoto’s devices. (*Id.* at 54 (citing Ex. 1004 ¶ 330; Ex. 1005 ¶ 17, 40, 107–118)).

....

Fourth, . . . a POSITA would have been readily able to incorporate Masumoto’s displays that transmit video playback progress-data (e.g., frame numbers) and Masumoto’s memory that stores video data representing the video into Swafford’s electronic label devices with an expectation of success. (*Id.* at 55).

The Petition states that, “[f]or at least the above reasons, a POSITA would have found it obvious to incorporate Masumoto’s teaching to Swafford’s system so as to transmit the video playback progress-data from one electronic label device to another electronic label device.” *Id.* at 56.

Patent Owner argues that “Petitioner and its expert assert a POSITA would have had several reasons to combine Swafford with Masumoto. Petition 51–56. But none are sufficient for institution because they are conclusory and unsupported. Petitioner has not provided any articulated

reasoning with rational underpinning to support the combination of Swafford and Masumoto.” Prelim. Resp. 31. The premises of Patent Owner’s argument are incorrect. The Petitioner’s reasons to combine Swafford and Masumoto are not conclusory or unsupported. Patent Owner may disagree with Petitioner, but Petitioner provides reasoning and cites evidence including an expert declaration. As noted above, Patent Owner’s arguments are not supported by any contradictory expert declaration evidence. At least at this stage of this proceeding, Petitioner’s reasons to combine are better supported than Patent Owner’s contrary arguments. Thus, contrary to Patent Owner’s contention, Petitioner has provided articulated reasoning with rational underpinning to support the combination of Swafford and Masumoto.

The Preliminary Response states, “Petitioner says that ‘Swafford and Masumoto are designed to achieve the same goal to synchronize a video across multiple displays’” and that “[t]his is incorrect.” Prelim. Resp. 31–32. We do not agree with Patent Owner. We agree with Petitioner that “Swafford and Masumoto are designed to achieve the same goal to synchronize a video across multiple displays.” See Pet. 52. Petitioner supports this statement with quotations from Swafford and Masumoto. *Id.* at 52–53. The Petition quotes paragraph 423 of Swafford (Ex. 1004) which states that “[e]ach of the first electronic label device, the second electronic label device, the first group of electronic displays, and the second group of electronic displays may be configured to *simultaneously* output a different portion of the streaming video”) and quotes paragraph 4 of Masumoto (Ex. 1005) which states, “mutually synchronizing displays to match the frame number contained in the image marker. This enables to display one entire

image by multiple displays without a sense of incongruity.” *Id.* The relied-upon art supports Petitioner’s reasoning.

Patent Owner asserts that “[t]he displays contemplated by Swafford and Masumoto are fundamentally different and involve different considerations.” Prelim. Resp. 32. With regard to Swafford, Patent Owner argues that Swafford is directed to electronic merchandising displays along product shelves that are wide but very short, and on the product packages that have a different aspect ratio and number of pixels. *Id.* (citing Ex. 1004, code (57) (Abstract), Fig. 43). And, Patent Owner argues that “Masumoto, on the other hand, contemplates ‘video wall systems and signage systems,’ such as what one might see in a sports bar or displaying a fast-food menu” (*id.* at 33 (citing Ex. 1005 ¶ 148, Fig. 1)) and “Masumoto discloses nothing related to adjusting to the differing aspect ratios or differing numbers of pixels per screen because Masumoto assumes the displays are all the same (*id.* at 34 (citing Ex. 1005 ¶ 0107)). Patent Owner contends that “[t]he two references, thus, are not directed to the same goal,” because “Masumoto involves simple video processing using uniform displays and a network server to expand the size of a streaming video from covering one screen to covering four, whereas Swafford pieces together streaming video segments having different widths and heights.” *Id.* Although it is true that the video playback displays in Swafford and Masumoto are quite different and require different considerations, at least at this stage, we determine that does not undermine Petitioner’s contention that “Swafford and Masumoto are designed to achieve the same goal to synchronize a video across multiple displays.” *See* Pet. 52. In this regard, we particularly note that the claims of the ’669 patent are not limited to systems with playback devices that have

any specified size, aspect ratio, number of pixels, or number of displays. And, the differences and considerations argued by Patent Owner do not relate to any claimed feature.

Patent Owner also argues that Swafford itself belies Petitioner’s supposed well-recognized need in synchronizing video displays and that “[t]he only evidence Petitioner offers to explain why a POSITA would have modified Swafford with Masumoto relies on hindsight and two references *besides* Swafford and Masumoto—Yamada (Ex. 1010) and Kipp (Ex. 1006).” Prelim. Resp. 34–35. At least at this stage, as Petitioner’s contentions are supported by evidence including an expert declaration and Patent Owner’s contrary arguments are unsupported attorney argument, we give more weight to Petitioner’s contentions and find them sufficient to support the asserted combination of teachings.

However, we do agree with Patent Owner that Petitioner’s contention that the cited combination of teachings is supported “because of the structural similarity between Swafford’s and Masumoto’s devices” (Pet. 54–55) does not provide a motivation to combine. Prelim. Resp, 35–36. The only structural similarity relied on by Petitioner in support of this argument is that Swafford and Masumoto both disclose use of LCDs. *See* Pet. 54–55. Petitioner provides an inadequate explanation as to how or why the use of LCDs which are a common form of video displays would motivate the combination of the relied-upon teachings. But, this deficiency does not undermine the persuasiveness of Petitioner’s overall showing of motivation to combine.

We determine that Petitioner shows sufficiently, for the purpose of institution, that a person of ordinary skill in the art would have been

motivated to combine the relied-upon teachings of Swafford and Masumoto with a reasonable expectation of success.

Summary as to Claim 1

Petitioner has sufficiently shown for purposes of institution that the combination of Swafford and Masumoto teaches all the limitations of claim 1 and has sufficiently articulated well-supported reasoning as to why a skilled artisan would have been motivated to combine the relied-upon teachings of Swafford and Masumoto as set forth in claim 1. We determine that there is a reasonable likelihood that Petitioner will prevail in establishing the unpatentability of challenged claim 1 of the '669 patent. Accordingly, we institute *inter partes* review of all the challenged claims and on both grounds presented in the Petition. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348 (2018) (holding that the Board may not institute review on fewer than all claims challenged in the petition); 37 C.F.R. § 42.108(a) (2023) (“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.”).

4. *Claims 2–15*

Petitioner also challenges dependent claims 2–15 of the '669 patent as unpatentable in view of a combination of the teachings of Swafford and Masumoto. Pet. 2, 30–51. Petitioner presents an element-by-element mapping of the limitations of these claims to the relevant teachings of Swafford and Masumoto. *Id.* Patent Owner does not present any separate or specific arguments directed to these dependent claims. *See generally* Prelim. Resp. After considering the Petitioner’s showing, and for the reasons discussed above with regard to claim 1, we determine that Petitioner

has sufficiently shown for purposes of institution a reasonable likelihood of prevailing in establishing the unpatentability of claims 2–15 of the ’669 patent in view of a combination of the teachings of Swafford and Masumoto.

E. Obviousness Ground Based on Masumoto, Kipp, and Takashi

Petitioner contends that claims 1–15 would have been obvious in view of Masumoto, Kipp, and Takashi. Pet. 3, 56–87. Patent Owner argues to the contrary. Prelim. Resp. 19–31, 37–41.

We provide summaries of Kipp and Takashi and then analyze the arguments and evidence of the parties relating to this ground.

1. Kipp

Kipp is a U.S. patent application publication directed to “[s]ystems, methods, and devices for synchronizing playback of segmented video content across multiple video playback devices.” Ex. 1006, code (57). According to Kipp, “playback devices may synchronize playback of a segmented video stream regardless of the clock time at the video server or the respective clock times of the playback devices.” *Id.* ¶ 26.

Figure 1 of Kipp is reproduced below.

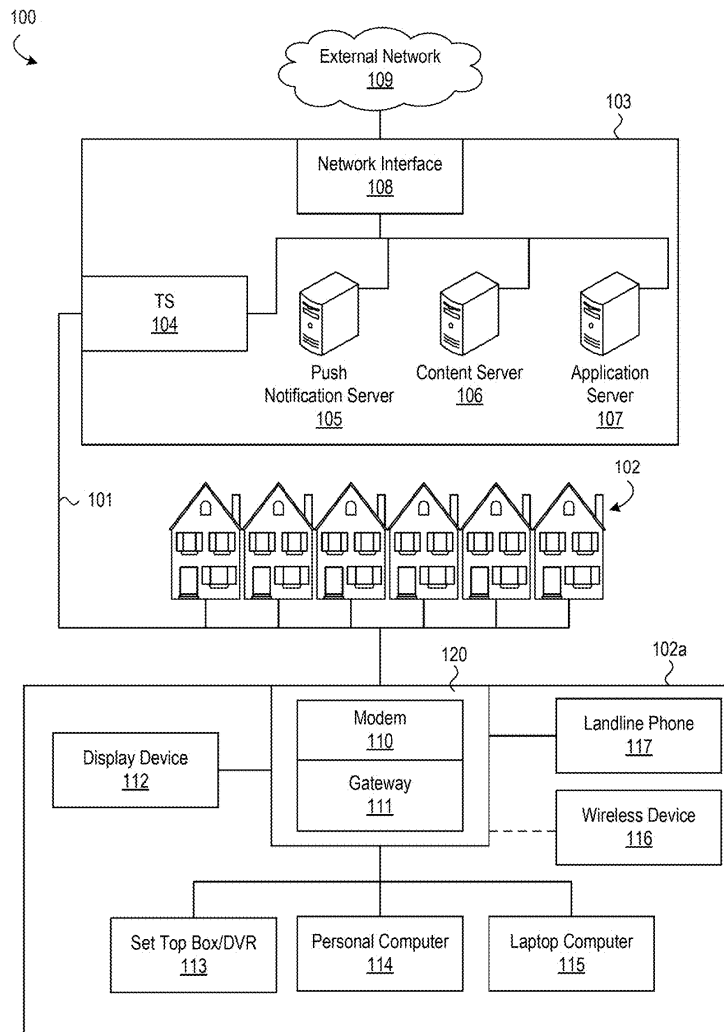


FIG. 1

Figure 1 depicts a communication network 100 using “a series of interconnected communication links 101 (e.g., coaxial cables, optical fibers, wireless, etc.) to connect multiple premises 102 (e.g., businesses, homes, consumer dwellings, etc.) to a local office or head end 103.” *Id.* ¶ 28. The local office 103 may include a variety of servers 105–107, such as a content server 106, which “may be one or more computing devices that are configured to provide content to users at their premises,” and application server 107, which “may be a computing device configured to offer any

desired service.” *Id.* ¶¶ 32–33. According to Kipp, “premise 102a, such as a home, may include an interface 120,” which “can include any communication circuitry needed to allow a device to communicate on one or more links 101 with other devices in the network.” *Id.* ¶ 34.

Figure 2 of Kipp is reproduced below.

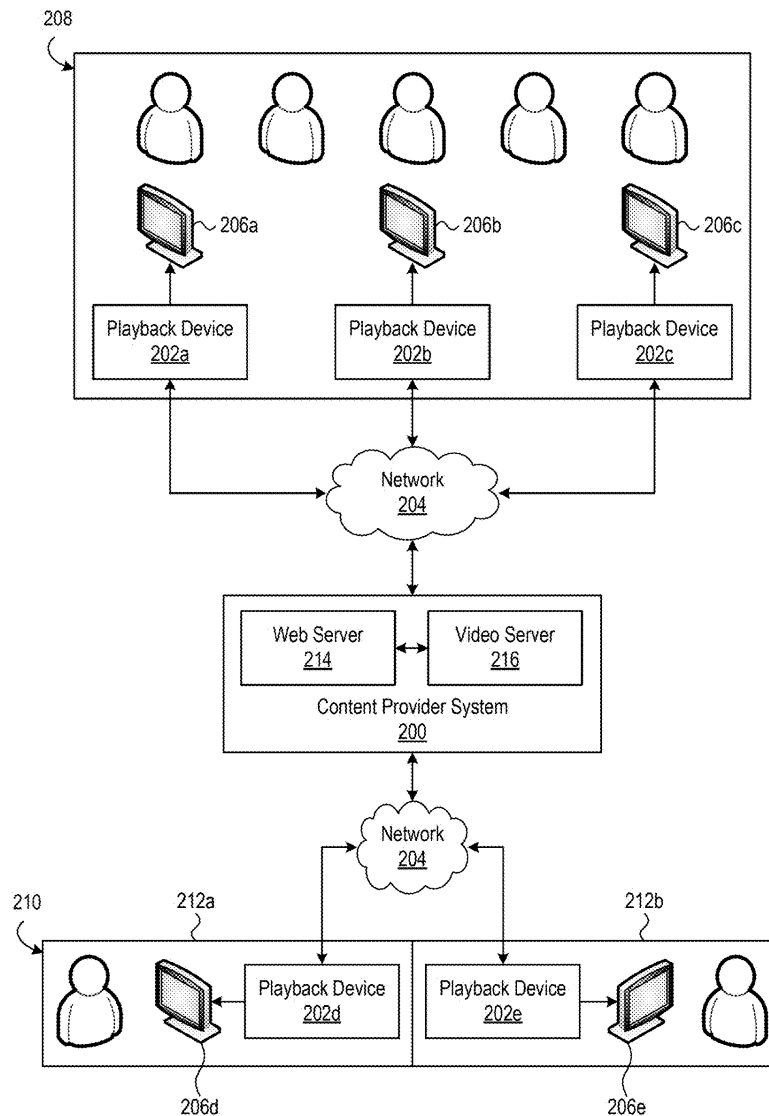


FIG. 2

Figure 2 depicts “an example configuration of a system for synchronizing segmented video streams across multiple playback devices,” where “a

content provider system 200 is in signal communication with multiple playback devices 202*a-e* (collectively 202) via a network 204.” *Id.* ¶ 35.

Kipp describes synchronizing playback of segmented video streams at the co-located playback devices shown in Figure 2:

Co-located playback devices may be arranged such that their respective display devices are or are not within view of each viewer. At site 208, for example, each of the display devices 206*a-c* are within view of the viewers. Such arrangements may be found, for example, at sports bars, classrooms, meeting rooms, and other locations where it may be desirable to have multiple display devices presenting the same content. In contrast, at site 210, the co-located playback devices 202*d-e* are arranged such that their respective display devices are not within view of each viewer, e.g., within different areas 212*a-b* of the site 210. At site 210, for example, playback device 202*d* and display device 206*d* are located in area 212 *a* while playback device 202*e* and display device 206*e* are located in area 212*b*. These arrangements may be found, for example, at hotels, apartment buildings, residences having display devices in different rooms (e.g., upstairs and downstairs), and other locations in which the playback devices may be within vicinity of each other but present the video content to different viewers.

Id. ¶ 36. Kipp further states that “the techniques described herein may synchronize playback of segmented video streams at playback devices that are not co-located with each other, i.e., not within vicinity of each other,” such as those “across stadium video boards and other types of devices such as mobile devices (e.g., smartphones of attendees) and fixed devices (e.g., television screens installed throughout the stadium).” *Id.*

In one scenario, for example, two viewers may call each other on the telephone with the same program airing in the background. If the playback devices at each location employ the synchronization techniques described, then playback at one location may not get ahead of playback at the other location. In this way, hearing noticeable events over the phone prior to

receiving them at the local playback device can be advantageously avoided.

Id.

Kipp was published June 15, 2017, (Ex. 1006, code (43)) and Petitioner contends that Kipp qualifies as prior art under 35 U.S.C. § 102(a). Pet. 58. Patent Owner does not contest the prior art status of Kipp. *See generally* Prelim. Resp. We determine that Kipp qualifies as prior art under 35 U.S.C. § 102(a), because Kipp’s publication date of June 15, 2017, is before the effective filing date for the ’669 patent, which is November 10, 2017. Ex. 1001, code (22); Ex. 1006, code (43).

2. *Takashi*

Takashi is a Japanese patent application publication directed to a “merchandise information display system,” which is provided with “a shelf tag terminal 70 as merchandise information display terminal that displays text information about merchandise, and an image display terminal 80 that displays images relating to the merchandise.” Ex. 1008, code (57).

Figure 1 of Takashi is reproduced below.

[FIG. 1]

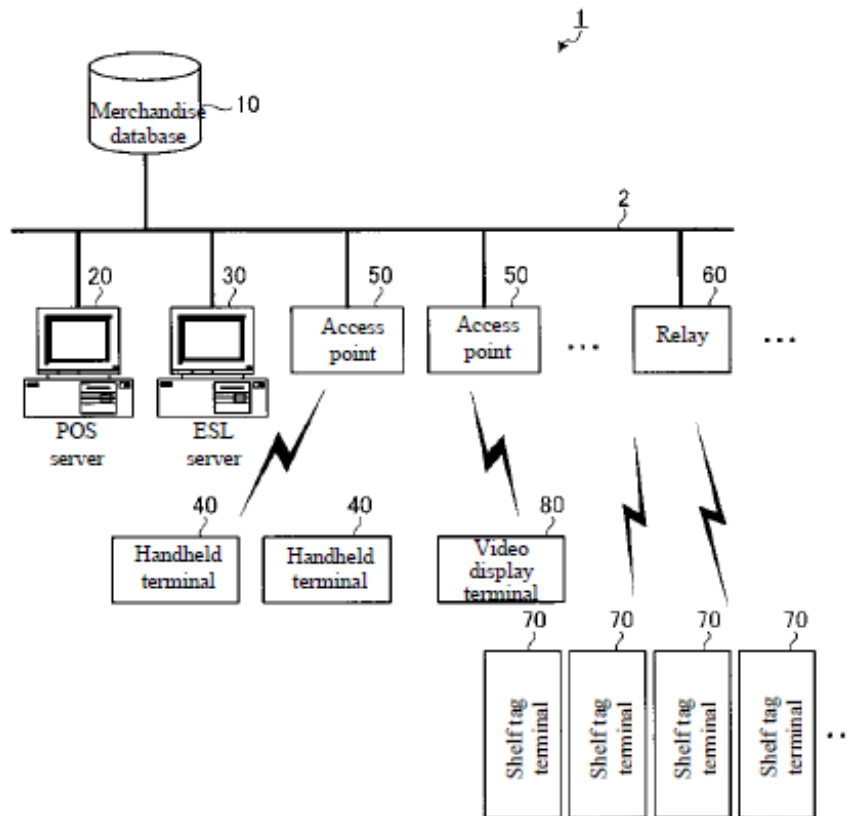


Figure 1 depicts “a schematic configuration of a merchandise information display system.” *Id.* ¶ 8. The merchandise information display system 1 comprises, *inter alia*, a shelf tag terminal 70 and an image display terminal 80, which display information about the merchandise, and an electronic shelf label (ESL) server 30, which corresponds to the server device. *Id.* ¶ 10.

Figure 9 of Takashi is reproduced below.

[FIG. 9]

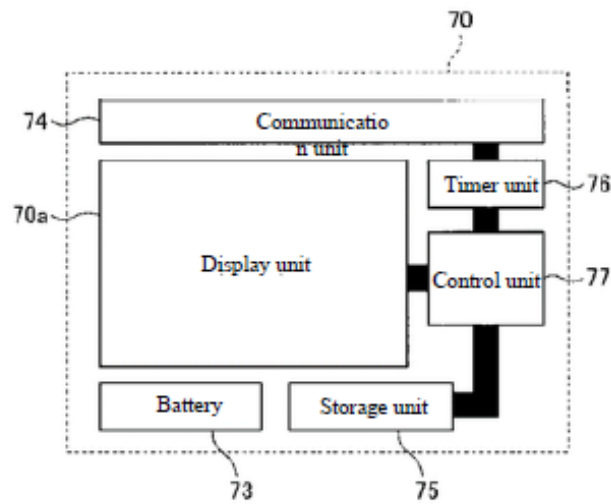


Figure 9 depicts “a schematic configuration of a shelf tag terminal.” *Id.* ¶ 8. According to Takashi, “the shelf tag terminal 70 is provided with the display portion 70a, a battery 73 as a drive source, a communication unit 74 that communicates data with the ESL server 30 via the relay 60, a non-volatile storage unit 75, a timer unit 76 used for synchronization and time measurement during communication control, and a control unit 77 that controls each unit.” *Id.* ¶ 30.

Figure 5 of Takashi is reproduced below.

[FIG. 5]

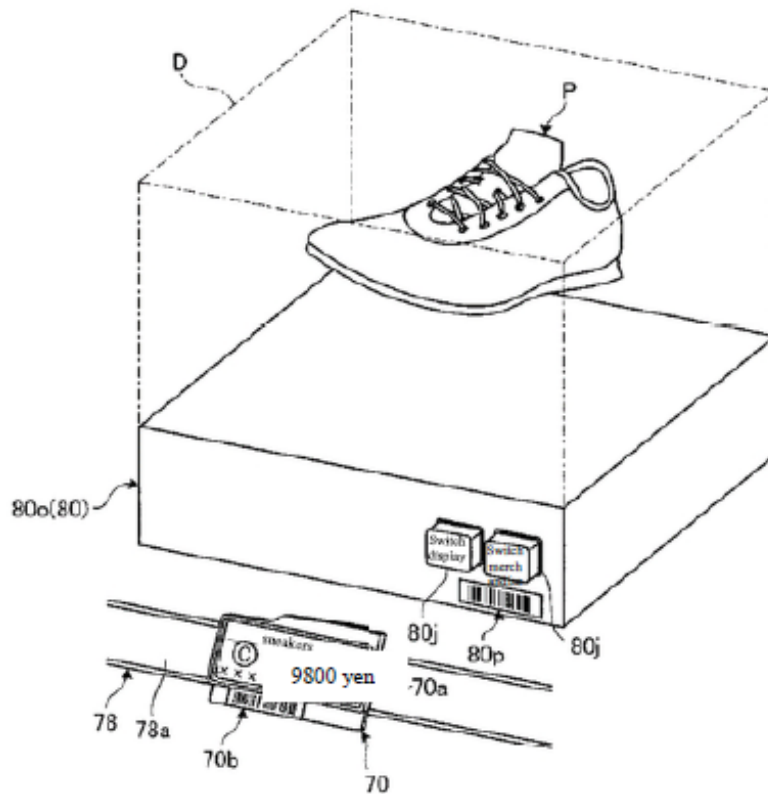


Figure 5 depicts “a perspective view showing an example of a shelf tag terminal and an image display terminal.” *Id.* ¶ 8. According to Takashi, “the shelf tag terminal 70 is provided with a display portion 70a that displays information including text information relating to merchandise such as merchandise name and price on the front side of the thin plate (label-shaped) housing, and a terminal code display portion 70b that shows a barcode as the terminal code.” *Id.* ¶ 19. In addition, “the image display terminal 80 is provided with a display area D that is larger than the display portion 70a of the shelf tag terminal 70 . . . , and this display area D displays images P relating to the merchandise.” *Id.* ¶ 20.

Figure 14 of Takashi is reproduced below.

[FIG. 14]

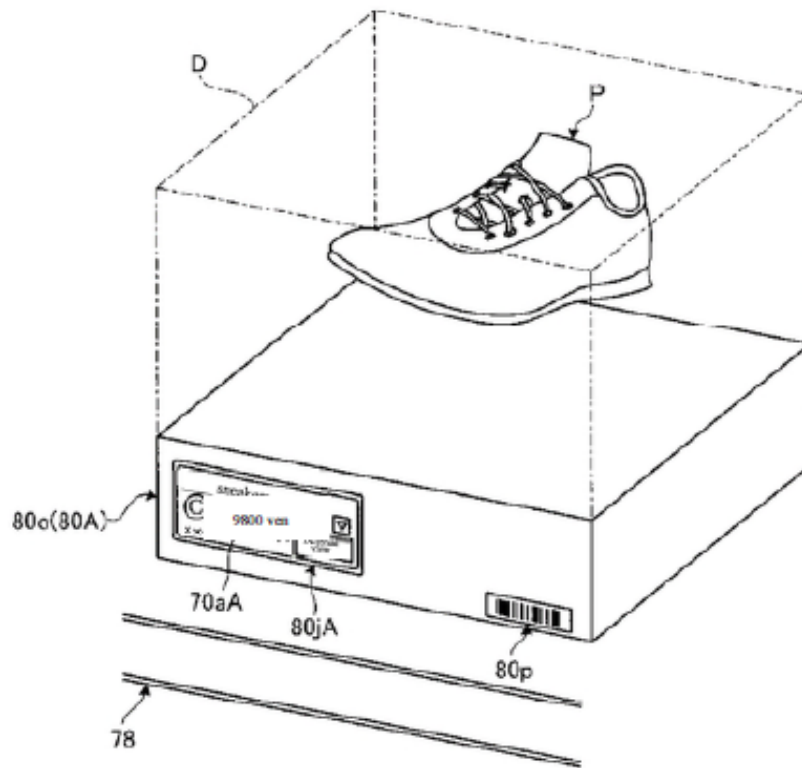


Figure 14 depicts “a perspective view showing a variation of a shelf tag terminal and an image display terminal.” *Id.* ¶ 8. According to Takashi, the shelf tag terminal 70 and the image display terminal 80 may be combined such that, as shown in Figure 14, “the merchandise information display system 1 may include . . . an information display terminal 80A having a first display portion 70aA that mainly displays text information about the merchandise, and a display portion D serving as a second display portion that has a display portion larger than the first display portion 70aA and mainly displays images about the merchandise.” *Id.* ¶ 51.

Takashi was published April 24, 2011, (Ex. 1008, code (43)) and Petitioner contends that Takashi qualifies as prior art under 35 U.S.C. §§ 102(a) and (b). Pet. 60. Patent Owner does not contest the prior art

status of Takashi. *See generally* Prelim. Resp. We determine that Takashi qualifies as prior art under 35 U.S.C. § 102(a), because Takashi's publication date of April 24, 2011, is before the effective filing date for the '669 patent, which is November 10, 2017. Ex. 1001, code (22); Ex. 1008, code (43).

3. *Claim 1*

For the reasons that follow, we are persuaded that Petitioner establishes sufficiently for the purpose of this decision that the subject matter of independent claim 1 would have been obvious over the combination of Masumoto, Kipp, and Takashi.

[1.0] A video playback system (1), comprising

The Petitioner contends that the preamble of claim 1 is not limiting. Pet. 61 ("The preamble of claim 1 is not limiting because it merely states the purpose or intended use of the alleged invention. It does not define any of the claim limitations, which are set forth fully in the body of the claim (i.e., a video playback system)."). Nonetheless, Petitioner cites Masumoto, Kipp, and Takashi and shows that each of the three cited references disclose video playback systems. *Id.* at 62.

Patent Owner does not discuss the preamble of claim 1 and, thus, does not dispute Petitioner's contention that the preamble is not limiting or dispute that the cited art discloses the preamble. *See generally* Prelim. Resp.

We determine that the preamble is not limiting but, if it were, the cited art has been shown to teach it sufficiently for institution.

[1.1] a number of playback devices (6A, 6B) to playback a video on their screens (5),

Petitioner contends that both Masumoto and Kipp disclose this limitation. Pet. 62 (citing Ex. 1003 ¶¶ 168–171). With regard to Masumoto, Petitioner relies on its showing as discussed above. *Id.* With regard to Kipp, the Petition provides:

Kipp discloses this element because Kipp discloses that “[a]s seen in FIG. 2, a content provider system 200 is in signal communication with *multiple playback devices 202a-e (collectively 202)* via a network 204. Each playback device 202a-e is connected to *a respective display device 206a-e (collectively 206)*.” (Ex.1006, [0035], FIG. 2). Thus, the multiple playback devices 202a-e (collectively 202) corresponding to “a number of playback devices (6A, 6B)” that playback a video on their respective display device 206a-e (collectively 206) in [1.1]. (Ex.1003, ¶171).

Id. (bracketed material in original).

Patent Owner does not dispute the showing in the Petition for this limitation. *See generally* Prelim. Resp.

We determine that Petitioner has sufficiently shown for institution that the cited art teaches this limitation.

[1.2] each playback device (6A, 6B) comprises a memory to store video data (9) representing said video, and

Petitioner contends that both Masumoto and Kipp disclose this limitation. Pet. 64 (citing Ex. 1003 ¶¶ 173–175). With regard to Masumoto, Petitioner relies on its showing as discussed above. *Id.* With regard to Kipp, the Petition provides:

Kipp discloses that “[t]he playback device 400, in this example, includes *a video content buffer 406 configured to store a set*

408 video fragments 410, a video content playlist 411 that includes the age 413 of the video content playlist, video content playback instructions 412, a clock 414 that provides a clock time 416 for the playback device, and configuration information 418.” (Ex.1006, [0056], FIG. 4). Thus, the video content buffer 406 corresponds to the “memory” in [1.2]. (Ex.1003, ¶174).

Pet. 64 (bracketed material in original).

Patent Owner does not dispute the showing in the Petition for this limitation. *See generally* Prelim. Resp.

We determine that Petitioner has sufficiently shown for institution that the cited art teaches this limitation.

[1.3a] a communication stage to communicate data with each other, wherein the devices (6A, 6B) are designed:

[1.3b] to transmit video playback progress-data via the communication stage to the other device (6B, 6A); and,

[1.3c] to determine based on the received progress data whether it is in a synchronous or asynchronous playback progress with the other devices (6B, 6A);

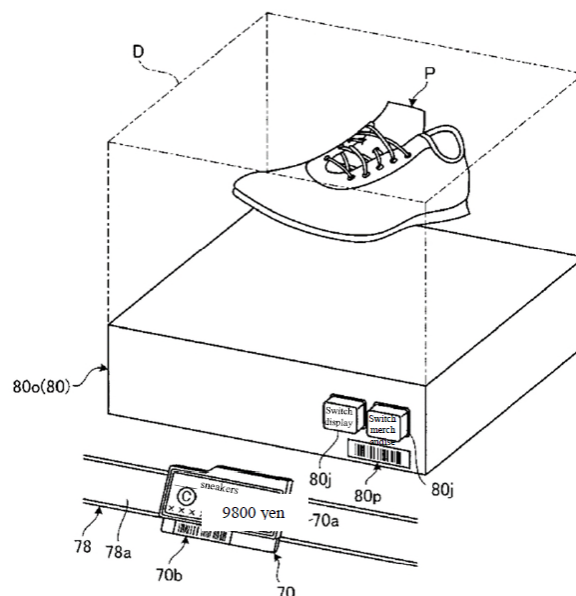
Petitioner relies on Masumoto for teaching all the elements of this limitation and on its showing for this limitation as discussed above. Pet. 65–66. Patent Owner recognizes and acknowledges that Petitioner relies on its previous showing for this limitation. *See, e.g.*, Prelim. Resp. 20 (“For both Grounds, the Petition claims that Masumoto discloses [1.3].”). Accordingly, the arguments of both parties regarding limitation 1.3 are the same as those discussed above for this limitation. And, for the reasons discussed above, we determine that Petitioner has sufficiently shown for institution that the cited art teaches this limitation.

[1.4] wherein the display devices (6A, 6B) are designed to display product information or product price related information by means of virtual electronic shelf labels displayed within a section of a screen's (5) display area overlapping with a video content or substituting a video content of said section.

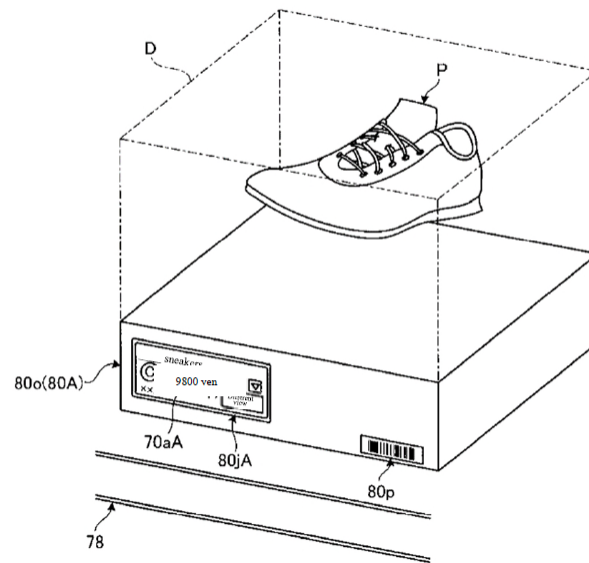
Petitioner relies on Kipp and Takashi for teaching all the elements of this limitation. *See* Pet. 66–71 (citing Ex. 1003 ¶¶ 178–182; Ex. 1006 ¶¶ 32, 33, 127; Ex. 1008, code (57) (Abstract), ¶¶ 19–21, 51, 52, Figs. 5, 14). With regard to Kipp, the Petition states, “Kipp teaches that the multiple playback devices may display advertisement video contents associated with the premise. Therefore, a POSITA would understand that in a business premise, such as a retail store, the content associated with the premise will include product information.” *Id.* at 67 (citing Ex. 1003 ¶ 178).

Figures 5 and 14 of Takashi are reproduced below.

[FIG. 5]



[FIG. 14]



Figures 5 and 14 depict “a shelf tag terminal and an image display terminal.”

Ex. 1008 ¶ 8. The Petition states:

Takashi discloses an electronic shelf tag system in which multiple display units are used to display information including a video relating to a product. (Takashi, Abstract). “As shown in FIG. 5, the image display terminal 80 is provided with a display area D that is larger than the display portion 70a of the shelf tag terminal 70, and this display area D displays images P relating to the merchandise. 5 illustrates a case in which the display device is configured as a display device which displays a three-dimensional image (the image P) showing the appearance of the merchandise.” (Ex.1008, [0020]). “It is also possible to configure the image display terminal 80 as a known display device (e.g., a cathode ray tube (CRT) or liquid crystal display (LCD)) that displays two-dimensional images of the merchandise. In such cases, the display area D is flat.” *Id.* “Note that the image display terminal 80 may display not only the appearance of the merchandise, but also cross-sections and other images, display still images, and display videos such as usage and commercial video.” (Ex.1008, [0021], FIG. 5). “[T]he shelf tag terminal 70 is provided with a display portion

70a that displays information including ***text information relating to merchandise such as merchandise name and price*** on the front side of the thin plate (label-shaped) housing.” (Ex.1008, [0019], FIG. 5). Thus, FIG. 5 of Takashi discloses the shelf tag 70 (*corresponding to the virtual virtual electronic shelf labels*) including display portion 70a displaying product information or product price related information and the image display terminal 80 including display area displaying display ***videos*** such as usage and commercial video. (Ex.1003, ¶179).

....

In another embodiment, as shown in FIG. 14, “the merchandise information display system 1 may include a merchandise information display terminal 80A having a first display portion 70aA that mainly displays text information about the merchandise, and a display portion D serving as a second display portion that has a display portion larger than the first display portion 70aA and mainly displays images about the merchandise” and “[t]his can be said to be an integral combination of the shelf tag terminal 70 and the image display terminal 80.” (Ex.1008, [0051], FIG. 14). ***The display portion D of the image display terminal 80 may display video as well.*** (Ex.1008, [0021]).

....

Takashi further discloses that “the shelf tag terminal is not limited to what is illustrated in the above embodiments” and ***“the image display terminal [80; 80A] or the second display unit [D] may display text information about the merchandise along with images relating to the merchandise.”*** (Ex.1008, [0052]). Thus, the area in the image display terminal [80; 80A] or the second display unit [D] that displays text information about the merchandise correspond to the virtual electronic shelf labels in [1.4]. (Ex.1003, ¶181).

Therefore, Takashi discloses that the image display terminal is configured to display text information about the merchandise via virtual electronic shelf labels displayed within a section of the display area of the merchandise information display terminal 80; 80A that is overlapping with the video displayed, as featured in [1.4]. (Ex.1003, ¶181).

Moreover, a POSITA would understand that designing substitutive video content in overlapping display areas is commonly used to attract customers' attention. *See* Ex.1004, [0404] ("provide additional information to a customer or to attract a customer's attention.") (Ex.1003, ¶182).

Pet. 67–71 (bracketed material in original). The passages of Takashi cited in the Petition (Pet. 67–71) support Petitioner's contentions that the cited art teaches all the elements of this limitation. *See* Ex. 1008, code (57) (Abstract), ¶¶ 19–21, 51, 52.

Patent Owner does not dispute the showing in the Petition for this limitation. *See generally* Prelim. Resp.

We determine that Petitioner has sufficiently shown for institution that the cited art teaches this limitation.

In summary, after considering the arguments and evidence presented by the parties, we determine Petitioner has shown that there is a reasonable likelihood that the combination of Masumoto, Kipp, and Takashi teaches all the limitations of claim 1 of the '669 patent.

Reason to Combine Masumoto, Kipp, and Takashi

Petitioner contends that "a POSITA reading Masumoto in view of Kipp and Takashi would have found it obvious to implement the video content displayed on Kipp's multiple playback devices and the product content displayed on Takashi's image display terminal, in Masumoto's multiple displays when applying Masumoto's multiple-display apparatus in a specific business premise, e.g., a retail store" for various reasons. Pet. 82–83 (citing Ex. 1003 ¶224). The Petition provides:

First, a POSITA would have been motivated to combine Masumoto with Kipp because Masumoto and Kipp are

designed to achieve the same goal to synchronize a video across multiple displays.

....

Second, it would have been obvious to a POSITA to have looked to Kipp's disclosure of synchronously displaying advertisement content associated with a premise where the multiple playback devices are co-located when applying Masumoto's multiple-display apparatus in a specific business premise, e.g., a retail store, to solve a well-recognized need in a business premise – a need for synchronously providing clients with promotional information or advertisement.

....

Third, a POSITA would have expected using Masumoto's multiple displays to display advertisement video as in Kipp and Kipp's approach of presenting the same content can be extended to different content that needs to be synchronized as in Masumoto.

....

Fourth, a POSITA would have had have been readily able to combine Masumoto's displays with Kipp's display devices that display information related to a premise and Takashi's manner of displaying production information and advertisement with an expectation of success.

....

Fifth, a POSITA would also have looked to Takushi for displaying promotion content related to products in a business premise, e.g., a retail store. It is a universal, obvious goal of all such systems to display promotion content related to the premise where the systems are located. Both Kipp and Takushi disclose that, the video content displayed on the multiple playback devices or the image display terminal may include various content to the users at their premises. Ex.1006, [0032], [0036]; Ex.1008, [0020], [0042]. A POSITA reading Masumoto and Kipp naturally would have looked to Takushi for additional details regarding how to display advertisement

contents in a business premise such as a retail store. (Ex.1003, ¶229).

Moreover, a POSITA would have understood that to attract customers (e.g., Ex.1004, [0404] - “provide additional information to a customer or to attract a customer’s attention”), designing other promotion contents to substitute a part of advertisement video is a commonly used promotional strategy in a business premise, e.g., a retail store. (Ex.1003, ¶230).

Furthermore, it is a universal, obvious goal of all such systems to attract customers’ attention but less intrusive in a business premise. *See* Ex.1009, [0008] (“Electronic components, such as a video display device, audio speakers, a printer or a wireless transmitting device used to deliver content to shoppers in the vicinity of the shelf can be housed securely within the enclosure of the shelf”). Takashi describes placing the shelf tag terminal 70 and the image display terminal 80 on or close to shelves. (Ex.1008, FIG. 5.) A POSITA reading Masumoto and Kipp would have been motivate [sic] to apply the shelf tag terminal 70 and the image display terminal 80/80A to the combination of Masumoto and Kipp. (Ex.1003, ¶218).

Thus, it would be obvious to a POSITA, in view of Takashi, to use the multiple displays in the combination of Masumoto and Kipp to display the product information in the similar manner as Takashi in the premise of a retail store. (Ex.1003, ¶231).

Pet. 83–86.

Patent Owner argues that all of the articulated rationales in the Petition for combining Masumoto, Kipp, and Takashi “are flawed.” Prelim. Resp. 37. We have considered Patent Owner’s arguments that are unsupported by any expert testimony (*see id.* at 37–41), but give more weight to the showing in the Petition that is supported by expert declaration testimony (*see* Pet. 82–87 (citing Ex. 1003 ¶¶ 218, 224–232)).

Accordingly, for the purpose of institution, Petitioner shows sufficiently that a person of ordinary skill in the art would have been

motivated to combine the relevant teachings of Masumoto, Kipp, and Takashi with a reasonable expectation of success.

Summary as to Claim 1

Petitioner has sufficiently shown for purposes of institution that the combination of Masumoto, Kipp, and Takashi teaches all the limitations of claim 1 and has sufficiently articulated supported reasoning as to why a skilled artisan would have been motivated to combine the relied-upon teachings of Masumoto, Kipp, and Takashi as set forth in claim 1. We determine that there is a reasonable likelihood that Petitioner will prevail in establishing the unpatentability of challenged claim 1 of the '669 patent in view of the combination of Masumoto, Kipp, and Takashi.

4. Claims 2–15

Petitioner also challenges claims 2–15 of the '669 patent as unpatentable in view of a combination of the teachings of Masumoto, Kipp, and Takashi. Pet. 3, 71–87. Petitioner presents an element-by-element mapping of the limitations of these claims to the relevant teachings of Masumoto, Kipp, and Takashi. *Id.* Patent Owner does not present any separate or specific arguments directed to these dependent claims. *See generally* Prelim. Resp. After considering the Petitioner's showing, and for the reasons discussed above with regard to claim 1, we determine that Petitioner has sufficiently shown for purposes of institution a reasonable likelihood of prevailing in establishing the unpatentability of claims 2–15 of the '669 patent in view of a combination of the teachings of Masumoto, Kipp, and Takashi.

III. CONCLUSION

After considering the evidence and arguments presented in the current record, we determine that Petitioner has demonstrated a reasonable likelihood that it would prevail with respect to at least one of the claims challenged in the Petition. Accordingly, we institute an *inter partes* review on all of the challenged claims and all grounds presented in the Petition. At this stage of the proceeding, we have not made a final determination as to the patentability of any challenged claim.

IV. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314, *inter partes* review is instituted as to claims 1–15 of the '669 patent with respect to all grounds of unpatentability presented in the Petition; and

FURTHER ORDERED that *inter partes* review is commenced on the entry date of this Order, and pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial.

IPR2024-00188
Patent 11,405,669 B2

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