

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,

Petitioner,

v.

ADVANCED CODING TECHNOLOGIES, LLC,

Patent Owner.

Patent No. 9,445,041

Filing Date: December 26, 2013

Issue Date: September 13, 2016

Inventor: Akiyoshi Jin

Title: MOVING IMAGE DATA PROCESSING APPARATUS AND MOVING
IMAGE DATA PROCESSING METHOD

PATENT OWNER'S SUR-REPLY

Case No. IPR2023-00910

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37 C.F.R. § 42.23(b)	4
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EXHIBIT LIST

Exhibit No.	Description of Document
2001	U.S. Patent Application Publication No. 2010/0310229 (“Iwata”)
2002	Defendants’ Joint Patent L.R. 3-3 Invalidity Contentions and Subject Matter Ineligibility Contentions in <i>Advanced Coding Techs. LLC v. Samsung Elecs. Co., Ltd. and Samsung Elecs. America, Inc.</i> , No. 2:22-cv-00499-JRG, served August 8, 2023
2003	Declaration of Dr. Hari Kalva (“Kalva Decl.”), dated July 5, 2023 and Exhibit A, Curriculum Vitae of Hari Kalva, Ph.D. in <i>TikTok Inc. v. Advanced Coding Techs. LLC</i> , Case No. IPR2022-01548
2004	Transcript of the Deposition of David Lett, taken in <i>TikTok Inc. v. Advanced Coding Techs., LLC</i> , Case No. IPR2022-01548 on June 16, 2023. (“Lett Depo.”)
2005	Joint Claim Construction and Prehearing Statement, Dkt. 87, <i>Advanced Coding Techs. LLC v. LG Elecs. Inc.</i> , Case No. 2:22-cv-00501-JRG (E.D. Tex. Mar. 5, 2024)
2006	Declaration of Dr. Hari Kalva (“Kalva Decl.”), dated March 26, 2024 and Exhibit A, Curriculum Vitae of Hari Kalva, Ph.D. in <i>Samsung Elecs. Co., Ltd. v. Advanced Coding Techs. LLC</i> , Case No. IPR2023-00910
2007	Preliminary Constructions, <i>Advanced Coding Techs. LLC v. LG Elecs. Inc.</i> , Case No. 2:22-cv-00501-JRG (E.D. Tex. May 16, 2024)
2008	Claim Construction Order, Dkt. 155, <i>Advanced Coding Techs. LLC v. LG Elecs. Inc.</i> , Case No. 2:22-cv-00501-JRG (E.D. Tex. July 21, 2024)

I. INTRODUCTION

Petitioner's Reply (Paper No. 17, "Reply") confirms patentability for several reasons.

First, while acknowledging the prosecution history of the '041 Patent and agreeing that "fixed" output frame rates are precluded from the claimed "specify[ing] [the] output frame rate," Petitioner nonetheless argues that Morikawa and Suzuki, which teach fixed output frame rates, render obvious the challenged claims. The Board should reject Petitioner's arguments and adopt Patent Owner's claim construction of this disputed term in view of Petitioner's agreement as to the exclusion of "fixed" output frame rates based on the prosecution history.

Second, Petitioner fails to acknowledge that the explicit claim language of Claims 1 and 6 of the '041 Patent require changing the frame rate of both the first and second moving image data. For that reason alone, Morikawa and Suzuki fail to render obvious Claims 1 and 6.

Third, Petitioner ignores the '041 Patent's description of "accepts the inputs continuously" in view of its new unsupported expert testimony. Specifically, Petitioner argues that accepting continuous inputs can include discrete values or inputs in a stepwise manner, even though the '041 Patent distinguishes between continuous and stepwise inputs.

Petitioner's new arguments vis-à-vis a new expert declaration by Mr. Lett related to applying Patent Owner's proposed constructions and bolstering its existing motivations to combine, including by using new cited prior art references, should be rejected as untimely.

Petitioner's proposed motivations to combine are entirely based on impermissible hindsight, and a reasonable expectation of success in combining Petitioner's references is unsupported by sufficient evidence.

I. PETITIONER'S NEW EXPERT DECLARATION SHOULD BE REJECTED IN ITS ENTIRETY

Instead of merely rebutting the arguments in Patent Owner's Response, Petitioner improperly submits a new expert declaration replete with new arguments. *See generally* Ex. 1041; Trial Practice Guide, at 74 ("While replies and sur-replies can help crystalize issues for decision, a reply or sur-reply that raises a new issue or belatedly presents evidence may not be considered."). Specifically, Mr. Lett's declaration introduces new testimony and evidence (including new prior art exhibits) that could have been raised in the Petition regarding whether: (i) the combination of Morikawa/Suzuki with Sekiguchi (Ex. 1008), CTA-861-E (newly introduced Ex. 1032), and Jack (newly introduced Ex. 1033) teaches "assess[ing] display frame rate to ensure that its output frame rate is set to a rate that is compatible with the display device to which it is connected" (Ex. 1041, ¶¶ 4-9, 32 (citing Sekiguchi in ¶ 4, CTA-

861-E in ¶ 5, and Jack in ¶ 6)); (ii) Morikawa's frame rate conversion occurs after the user has specified the desired playback speed, such that Morikawa's system executes the frame rate conversion based on the selected playback speed (Ex. 1041, ¶¶ 12-16); (iii) distinct output frame rates set for first and second moving image data does not accord with the language of the claims or the specification of the '041 Patent (Ex. 1041, ¶¶ 18-19); (iv) the term "continuous" requires Takabe's circular ring-shaped interface to merely enable selection of any of the possible values as the user rotates the circular ring (Ex. 1041, ¶¶ 20-23); (v) a POSITA would be motivated to combine Takabe with Morikawa/Suzuki because Takabe's camera settings as an "example" would not deter a POSITA, and does not negate the broader applicability of Takabe's user interface teachings to other selectable parameters (Ex. 1041, ¶¶ 24-27, 33); (vi) a POSITA would be motivated to combine Walpole with Morikawa/Suzuki because widespread adoption of network-enabled video processing systems prior to the '041 Patent, as in Markley (newly introduced Ex. 1039) and Helms (newly introduced Ex. 1040), would have made it obvious to implement network output capabilities in Morikawa's/Suzuki's system (Ex. 1041 ¶¶ 28-31, 40-43); (vii) a display panel, as in Sekiguchi is an external device for the purposes of the claimed "based on information of an external device receiving the moving image data" since it is external to the device's video playback apparatus (Ex. 1041 ¶¶ 34-36); and (viii) there is a motivation to combine Suzuki with Sekiguchi

because it would be a routine capability of a POSITA to use Sekiguchi's techniques of using the refresh rate of the display panel to specify the output frame rate (Ex. 1041, ¶¶ 37-39). Collectively, the aforementioned portions of Mr. Lett's declaration correspond to *the entirety* of Mr. Lett's new declaration.

By submitting this untimely declaration, Petitioner blatantly circumvents the Board's Trial Practice Guide that states that a reply "may only respond to arguments raised in the preceding brief," which means that it does not "proceed in a new direction with a new approach as compared to the positions taken in a prior filing" "in the context of 37 C.F.R. § 42.23(b)." Patent Trial and Appeal Board Consolidated Trial Practice Guide ("Trial Practice Guide") (Nov. 2019), at 74, available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf>. Petitioner's modification of arguments rises to the level of a "newly raised rationale to combine the prior art references that was not expressed in the petition" and is barred by the Board. See Trial Practice Guide, at 74 (citing *Intelligent Bio-Sys., Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369–70 (Fed. Cir. 2016)).

Because all of Mr. Lett's new declaration comprises new arguments, the Board should reject the entire declaration, as well as the corresponding portions of Petitioner's Reply. *Intelligent Bio-Systems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) ("Once the Board identifies new issues raised for the first time in reply, neither this court nor the Board must parse the reply brief to

determine which, if any, parts of that brief are responsive and which are improper. As the Board noted, ‘it will not attempt to sort proper from improper portions of the reply.’”).

II. THE BOARD SHOULD ADOPT PATENT OWNER’S CONSTRUCTION OF “SPECIFY[ING] [THE] OUTPUT FRAME RATE”

Petitioner’s Reply confirms that the Board should adopt Patent Owner’s construction of “specify[ing] [the] output frame rate” as “specify[ing] [the] variable output frame rate.” Even though Petitioner quibbles with whether “variable” (*i.e.*, non-fixed) ought to be included in the construction for the term, Petitioner admits that frame rates cannot be specified when there is a fixed frame rate. In its Reply, Petitioner explicitly acknowledged the prosecution history and noted that the prior art cited during prosecution, Iwata, “had a ‘fixed’ frame rate, and thus the frame rate could not be specified.” Paper No. 17 (“Reply”), 1-2 (citing Ex. 1002, 71). Given the parties’ apparent agreement that fixed frame rates are precluded from being “specified,” the Board should adopt Patent Owner’s construction, which simply memorializes the parties’ agreed upon understanding.

III. PETITIONER IGNORES PATENT OWNER’S APPLICATION OF ITS PROPOSED MEANS-PLUS-FUNCTION CLAIM CONSTRUCTIONS

Petitioner’s allegation that Patent Owner “does not assert that the identified structure for any limitation of claim 1 is specifically missing from the prior art in a

manner that is different from the language set forth in the claim” is plainly false. Reply, 28-30. The Patent Owner Response contains several arguments that the cited references do not disclose the properly construed limitations of Claim 1. *See* Paper No. 12 (“POR”), 34 (“Morikawa cannot teach the software algorithm required by this claim limitation, particularly the step of “transmitting the specified playback speed to the frame rate conversion unit,” because it is directed toward offering the user the choice to specify the playback speed of a singular multi-frame rate content *after* any alleged frame rate conversion occurs.”); POR, 38 (“Neither the software algorithm structure of the ‘frame rate conversion unit,’ which requires ‘receiving specified playback speed for both the first and second moving image data’ and ‘converting input frame rate to a frame rate that is output, for each of the first moving image data and second moving image data, based on the . . . specified playback speed,’ nor the corresponding function of ‘changing a frame rate . . . based on the . . . playback speed’ is disclosed by Morikawa.”); POR, 50 (“Suzuki does not disclose ‘transmitting specified output frame rates to frame rate conversion unit’ or the ‘frame rate conversion unit,’ which is required by the software algorithm structure of the ‘output frame rate specification unit.’”); POR, 51 (“Suzuki does not disclose ‘transmitting the specified playback speed to the frame rate conversion unit’ or the ‘frame rate conversion unit,’ which is required by the software algorithm structure of the ‘playback speed specification unit.’”).

Petitioner's spurious assertion that Patent Owner's proposed constructions are "irrelevant to this proceeding" is designed to obfuscate its failure to comply with 37 C.F.R. § 42.51(b). "Submission of a prior claim construction determination is mandatory under 37 C.F.R. § 42.51(b), if it is 'relevant information that is inconsistent with a position advanced by the party during the proceeding.'" Patent Trial and Appeal Board Consolidated Trial Practice Guide, at 47 (citations omitted). Petitioner confirms that it "did not advance means-plus-function constructions." Reply, 28-29. Petitioner cannot dispute that its failure to propose any construction in this proceeding is inconsistent with its proposed means-plus-function constructions during the Markman hearing in the related district court litigation. Ex. 2005, 9-13. In fact, on May 16, 2024, nearly two months prior to Petitioner's Reply, during that Markman hearing, the court provided preliminary claim constructions on the terms disputed in this proceeding, holding them all to be means-plus-function constructions. Ex. 2007, 5-8. These preliminary claim constructions were later adopted in the Court's final claim construction order. Ex, 2008, 27-37. Despite Petitioner's awareness of the preliminary claim constructions and obligation to submit that prior claim construction determination in compliance with 37 C.F.R. § 42.51(b), especially since it is inconsistent with its position during this proceeding, Petitioner chose not to disclose this determination in its Reply.

In view of Petitioner's failure to properly construe the means-plus-function limitations of Claim 1, according to either Patent Owner's proposed constructions or the district court's preliminary constructions, the Petition cannot demonstrate invalidity by a preponderance of the evidence.

IV. PETITIONER'S GROUNDS FAIL TO RENDER OBVIOUS THE CHALLENGED CLAIMS

A. Ground 1A

1. Morikawa Does Not Disclose "Specifying Output Frame Rate"

Petitioner admits that the only proof it has of allegedly non-fixed (*i.e.*, variable) output frame rates is Morikawa's "playback frame rate [] set based on a display frame rate of a display device." Reply, 3 (citing Ex. 1004, [0025]).

While the '041 Patent does describe that "the output frame rate is specified based on the acquired information on the model number" "of the connected external device," this is not a fixed output frame rate since it specifically contemplates specifying the output frame rate depending on the external display model, regardless of what that external display model might support. Ex. 1001, 8:49-57.

On the other hand, regardless of what the external display supports, Morikawa only sets a fixed output frame of 60fps:

[W]hen the display frame rate is 60 Hz, 120 Hz, 240 Hz,
the payback [sic] frame rate is set to 60 Hz.

Ex. 1004, [0026]. A POSITA, such as Dr. Kalva, would have understood that statement to mean that regardless of whether the display frame rate is 60 Hz, 120 Hz, *or* 240 Hz, the playback frame rate is still set as 60 Hz:

11	Q. Okay. So you read this as kind of having
12	an "or" after the 120 that then it's saying that if
13	the display rate is 60, 120, or 240?
14	A. Yeah, I think that -- right. Yeah, that
15	different -- even when you're -- yeah. Display frame
16	rate is different output. The Morikawa's playback
17	frame rate is 60.

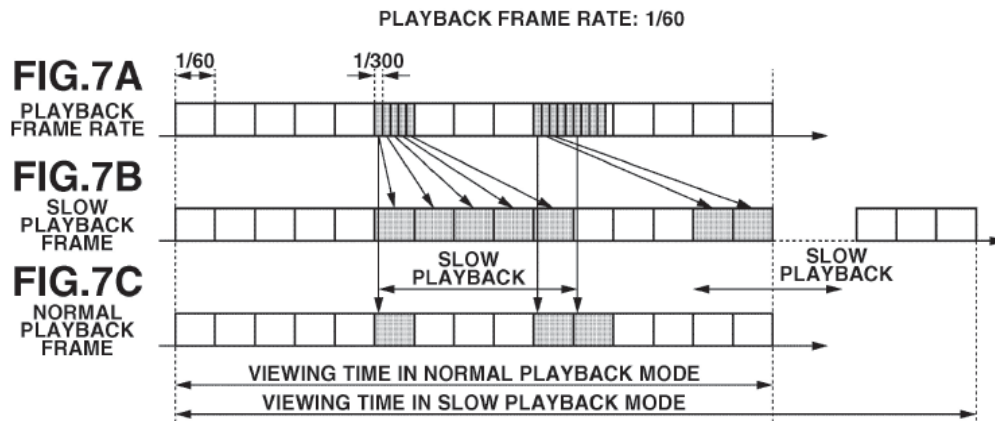
Ex. 1030, 43:11-17.

Just like Iwata, which Petitioner agrees is precluded from specify[ing] [the] output frame rate (*see supra* Section II), Morikawa explicitly states that it sets a “fixed” output frame rate:

The playback frame rate is *fixed* to 60 Hz.

Ex. 1004, [0030] (emphasis added).

Similarly, Fig. 7 of Morikawa emphasizes how, even when playback speed is adjusted, the output frame rate is normalized to 60 Hz (*i.e.*, “Playback Frame Rate: 1/60”):



Id., Fig. 7.

Dr. Kalva, Patent Owner's expert, testified that "regardless of slow playback mode or normal playback mode, the playback frame rate in [Morikawa's] Figure 7 is 60 frames per second":

8 Q. And do you recall discussing with Counsel
9 Figure 7 of Morikawa earlier?

10 A. Yes.

11 Q. Figure 7 shows only the high frame rate
12 portion of 300 frames per second being slowed down in
13 the slow playback mode shown in Figure 7B, right?

14 A. Yes, that's right. Yeah.

15 Q. In the slow playback frame of Figure 7B,
16 all of the frames of the 300-frame-per-second portion
17 are retained but slowed down to 60 frames per second,
18 correct?

19 A. Yes.

20 Q. And you can tell that the
21 300-frame-per-second portion is slowed down to 60
22 frames per second because the same size block is used
23 for 60 frames per second at the start of Figure 7A,
24 right?

25 A. Yes, yeah, right. 60 frame portion remains

1	the same and nothing changes.
2	Q. And in normal playback -- in the normal
3	playback mode in Figure 7C, the playback frame rate
4	also appears to be 60 frames per second based on the
5	block size, correct?
6	A. Yes. Frame rate is the same, correct.
7	Q. So regardless of slow playback mode or
8	normal playback mode, the playback frame rate in
9	Figure 7 is 60 frames per second, correct?
10	A. Yes, that's right.

Ex. 1030, 73:8-74:10.

Petitioner does not deny that no output frame rate other than 60 Hz is disclosed or suggested by Morikawa. Rather, Petitioner unavailingly argues that “Morikawa’s example does not preclude other examples.” Non-preclusion is not sufficient for obviousness. Reply, 4. The fact remains undisputed that Morikawa does not disclose any other example and neither Petitioner nor Petitioner’s expert present a rationale as to how a POSITA would understand specifying a non-fixed (*i.e.*, variable) output frame rate from Morikawa’s disclosure of a fixed rate of 60 Hz.

Petitioner’s argument that “[a] POSITA would have understood (and found it obvious) to use a frame rate that is compatible with the display being used” is irrelevant (Reply, 4-5) because display frame rate support does not necessarily dictate the possibilities of specified output frame rates. As Dr. Kalva testifies, displays supporting 120 Hz or 240 Hz may still be capable of playing Morikawa’s fixed output frame rate of 60 Hz:

23 BY MR. KATZ:
24 Q. Yeah. My -- let me ask it in a better way.
25 Are you saying as a general matter, one
1 cannot assume that a display specified at a frequency
2 that's a multiple of 60 Hz would be able to
3 successfully play a 60 frame per second video?
4 A. It would depend on the hardware. It could
5 depend on the hardware capabilities, whether they're
6 designed to handle such variations of that.

Ex. 1030, 44:25-45:6.

Therefore, Morikawa cannot render obvious this claim limitation that is required both of Claims 1 and 6.

2. Morikawa Does Not Disclose “a playback speed specification unit . . .,” as Required by Claims 1 and 2 or “specifying a same playback speed . . .,” as Required by Claim 6

Petitioner now agrees that Claims 1 and 6 require that the playback speed must be specified prior to frame rate conversion, such that the frame rate conversion can be based on the specified playback speed. Reply, 6-10. Yet, none of Petitioner’s cited portions of Morikawa disclose specifying a playback speed prior to frame rate conversion.

First, Petitioner’s description of Morikawa’s Fig. 1 unreasonably assumes that Morikawa’s “frame decimating operation is in response to “instruction information” that corresponds to a specified playback speed. Reply, 6-7. Morikawa’s “control unit 109 instructs the image processing unit 107 to execute a frame decimating operation

in response to instruction information from the operation unit 105.” Ex. 1004, [0034]. There is no disclosure that the “instruction information from [Morikawa’s] operation unit” is a specified playback speed. In fact, Morikawa explains that “[a]n operation unit 105... causes display of a content list or transmits *instruction information such as content playback*” (*i.e.*, displays the content to be played back or transmits instructions to play back the content). *Id.*, [0033] (emphasis added).

Second, Petitioner incorrectly conflates the “playback time” of Morikawa’s Claim 3 with the ’041 Patent’s “playback speed.” Reply, 7-8. For example, by increasing the output frame rate, it is possible to decrease playback time without specifying a playback speed. Claim 3 does not mention specifying the playback speed. *See* Ex. 1004, Claim 3. Petitioner actually admits that playback time is a separate concept than playback speed and that playback time occurs prior to the playback speed being specified or selected: “Morikawa’s calculation of playback *time* is a prospective calculation of how long playback will take under different playback speeds when it occurs.” Reply, 9 (citing Ex. 1041, ¶ 16).

Third, Petitioner’s reliance on Figure 5 is misplaced since it does not disclose any relationship between when the selection of Morikawa’s normal or slow playback mode takes place and when the frame rates are converted through interpolation or decimation. Reply, 8; Ex. 1004, Fig. 5.

Fourth, Petitioner's mischaracterization of Dr. Kalva's testimony in the context of Morikawa's Fig. 7 should be rejected. Reply, 8-9. As a preliminary matter, Petitioner's cited portion of the deposition transcript only shows Dr. Kalva responding to his opinion of what the claim limitation of the '041 Patent, Claims 1 and 6 require:

6	Q.	Okay. So if I heard you correctly, you're
7		saying, yes, the decimation process will follow the
8		selection of the playback speed, but the frame rate,
9		in your view, is fixed; is that correct?
10	A.	Frame rate is -- frame rate is independent
11		of your playback, you know -- of the selection of the
12		frame rate.
13	Q.	Okay. I'm going to have to ask it just one
14		more time just so the record is clear. I'm not
15		asking you to change your answer at all; I'm just not
16		sure if the court reporter got it.
17		Am I correct that your answer to the
18		question of whether the frame conversion process, and
19		specifically whether decimation occurs, follows the
20		selection of playback speed? And I believe your
21		answer was "yes"; is that correct?
22	MR. PYMENTO:	Objection. Form.
23	THE WITNESS:	Yes.

Ex. 1030, 60:6-23. Dr. Kalva further testifies that the system of Morikawa describes multi-frame rate content. *Id.*, 72:10-14. Moreover, when the playback speed in Morikawa is specified to a slow mode (as shown in Fig. 7B), Morikawa adjusts only the high frame rate portion of the multi frame rate contents to be slowed down. *Id.*,

72:15-73:7; *see* Ex. 1004, [0027]. Therefore, the disclosure of Morikawa directly contradicts the claim language that requires a shared playback speed for both the first and second moving image data. Ex. 1001, Claim 1 (“specify a same playback speed for the first moving image data and the second moving image data”), Claim 6 (“specifying a same playback speed for the first moving image data and the second moving image data”). Similarly, Fig. 7C also shows that, for a normal playback mode, the high frame rate portion of the multi frame rate content is slowed down with decimated frames, which means that the playback speed is not shared between higher and lower frame rate portions of the multi frame rate content. *See* Ex. 1004, Fig. 7C.

Further, as described above, Fig. 7 shows and Dr. Kalva testifies that regardless of slow playback mode or normal playback mode, the playback frame rate in Fig. 7 is 60 frames per second, indicating that the frame rate is converted to 60 frames per second (the frame rate corresponding to the lower frame rate portion of the multi frame rate) regardless of the playback mode selection. *See supra* Section IV.A.1.

3. Morikawa Does Not Disclose “a frame rate conversion unit . . .,” as Required by Claim 1 or “changing a frame rate of the first moving image data based on the first frame rate, the output frame rate, and the playback speed, and changing a frame rate of the second moving image data based on the second frame rate, the output frame rate, and the playback speed,” as Required by Claim 6

Petitioner admits that Morikawa only discloses changing the multiple input frame rates of a single piece of content into one changed output frame rate through one process, which does not meet the requirements of Claims 1 and 6. Reply, 10-12; *see also supra* Section IV.A.1.

Petitioner ignores the explicit claim language of Claims 1 and 6 that requires two separate processes for changing the output frame rates per moving image data. For example, Claim 1 requires “change a frame rate of the first moving image data” and “change a frame rate of the second moving image data” and Claim 6 requires “changing the frame rate of the first moving image data” and “changing the frame rate of the second moving image data.” Ex. 1001, Claims 1, 6. Similarly, Claim 6 recites “specifying output frame rate of the first moving image data and output frame rate of the second moving image data,” indicating two processes for specifying output frame rates. *Id.*, Claim 6; *see also* Ex. 1030, 70:7-71:4.

The Board should reject Petitioner’s attempts to mischaracterize the claim limitations of Claim 1 and Claim 6 through Figure 6 of the ’041 Patent. Reply, 11-

12. The '041 Patent is clear that Fig. 6 describes only one of the two moving image data, such that the output frame rate in Fig. 6 refers to either the first or second moving image data. *See* Ex. 1001, 15:27-37 (“As described above, according to the imaging apparatus 1, even if playing back a plurality of moving image data generated at different frame rates sequentially from a medium or the like where the plurality of moving images is mixed and recorded, the user can perform playback by easily and appropriately *adjusting the output frame rate of each piece of the moving image data. . .*”) (emphasis added).

Because Morikawa does not disclose changing the frame rate of each moving image data, it cannot render obvious Claims 1 or 6 of the '041 Patent.

B. Ground 1B

1. Takabe Does Not Disclose “... the operating unit accepts the inputs continuously...,” as Required by Claim 3

Petitioner does not dispute Patent Owner’s argument that “Takabe is silent regarding displaying input frame rates, output frame rates, or playback speeds on its circular display.” POR, 39. Rather Petitioner attempts to belatedly introduce a claim construction of the term “continuously” as simply selecting possible values in a circular fashion. Petitioner should have raised this construction during its Petition, but did not, and therefore the Board should reject Petitioner’s new argument. Petitioner is also blatantly wrong. As Patent Owner’s Response pointed out, the '041

Patent sets up a dichotomy between accepting inputs continuously versus in a stepwise manner. POR, 39-41 (citing Ex. 1001, 17:49-61). Petitioner does not address this argument or disclosure in the '041 Patent.

Petitioner admits that Takabe only describes selecting in a stepwise or selectable manner, contrary to Claim 3's requirement of "accept[ing] the inputs continuously." Reply, 13-15. Therefore, Takabe cannot render Claim 3 obvious.

2. A POSITA Would Not Be Motivated to Combine Morikawa with Takabe

Petitioner's Reply demonstrates the latitude it is taking with its proposed (and new) motivation to combine arguments. Specifically, Petitioner is now unreasonably arguing that Takabe's circular digital camera display can essentially be applied to *any* type of values. Reply, 16-17 ("a POSITA would have been motivated to consider use of Takabe's circular ring shaped interface in other contexts"). However, Petitioner's own cited portions of Takabe only refer to values related to "display formats," such as the "example [] given in the drawings described above." Ex. 1005, 23:25-30. Similarly, Takabe describes that "[t]his invention relates to a display method and display device for displaying, set values, and the like, in case multiple levels of set values exist on a display device, such as the set values for the shutter speed and aperture on a digital camera, for example." *Id.*, 4:4-7. Notably, Petitioner's cited portions of Takabe underscore that Takabe only describes "set values" (which

are not even the claimed input frame rates, output frame rates, or playback speed) rather than accepting inputs continuously, such that a POSITA would not be motivated to combine Takabe with Morikawa to disclose Claim 3. *See supra* Section IV.B.1.

The Board should reject Petitioner's and Mr. Lett's reasoning that a POSITA with routine programming skills could have applied Takabe's circular ring shape interface to pick input frame rates, output frame rates, and playback speed in Morikawa's system because (i) Mr. Lett provides no substantial explanation of what those amorphous "programming skills" would entail, particularly since Takabe's circular display did not contemplate these inputs; and (ii) Mr. Lett does not even broach the subject of how Takabe's circular display would operate with the multi-frame rate content of Morikawa. Reply, 16-18; Ex. 1041, ¶¶ 24-27. Therefore, Petitioner still fails to articulate a reasonable expectation of success in meeting the limitations of Claim 3 from the combination of Morikawa and Takabe.

3. The Printed Subject Matter Does Not Apply

Petitioner's sole argument as to whether the printed subject matter doctrine applies is that Takabe's interface is simply a matter of labeling rather than functionality. This is incorrect. Whether Takabe's interface supports continuous or stepwise values is a distinction of functionality. Additionally, whether Takabe's interface is capable of accepting inputs for each of input frame rates, output frame

rates, or playback speed is also a distinction of functionality. Both aspects in dispute here are not merely a question of placing a label of numbers (*i.e.*, printed matter) on a screen but providing a functional advantage to a user. *See* Ex. 2006, ¶¶ 83-84 (noting the functional advantage of selecting arbitrary image capture frame rates rather than discrete stepwise selections) (citing Ex. 1001, 17:49-61). Therefore, the printed subject matter doctrine does not apply.

C. Ground 1C

As with the combination of Morikawa and Takabe, Petitioner introduces new, but non-persuasive rationales for its motivation to combine Morikawa and Walpole. Yet, Petitioner still fails to provide substantial evidence regarding how Morikawa's system, which does not disclose support for outputting information over a network, would support Walpole's "adaptive Internet-based video and audio player," such that there would be a reasonable success of the combination. Petitioner and Mr. Lett merely argue that there are "several benefits" and that there was "widespread adoption of network-enabled video processing systems." Reply, 19-20 (citing Ex. 1041, ¶¶ 28-31). However, widespread adopting and possible benefits do not demonstrate that the system of Morikawa specifically would support the addition of Walpole's adaptive Internet-based video and audio player." Ex. 2006, ¶¶ 89-92. For example, Petitioner and Mr. Lett completely sidestep the issue of adjusting frame rates dynamically based on bandwidth availability where you already have multi

frame rate content, as in Morikawa, that is designed to only standardize to one playback frame rate for both the high and low frame rate portions of the multi frame rate content. *See* Ex. 1004, Fig. 7.

In view of the failure to address whether Morikawa is compatible or would support the system of Walpole, there is no properly articulated motivation to combine Morikawa with Walpole.

D. Ground 2A

As noted above in Section IV.A.1, Petitioner agrees that fixed output frame rates are precluded from the claimed “specify[ing] [the] output frame rates.” Nonetheless, Petitioner fails to address Patent Owner’s Response, which shows that Suzuki’s output frame rate, represented by FRa, is static or fixed for a given system or configuration. POR, 47-50.

Petitioner does not address Patent Owner’s argument related to the proper claim construction for Claim 1’s “playback speed specification unit,” and therefore Suzuki cannot render it obvious. POR, 51.

Petitioner admits that Suzuki only discloses changing the multiple input frame rates of a single piece of content into one changed output frame rate through one process, and instead incorrectly disputes whether two processes of changing the frame rates are required by the Challenged Claims. Reply, 22. For the same reasons as noted above in Section IV.A.3, Suzuki cannot render obvious Claims 1 and 6.

E. Ground 2B

See supra Section IV.B.1 and Section IV.B.2.

F. Ground 2C

Petitioner admits that “[t]he modification [to Suzuki] proposed by the Petition” requires “the application of Sekiguchi’s method of adjusting frame rates based on the display device’s capabilities.” Reply, 25. Therein lies the problem with Petitioner’s proposed motivation to combine. Sekiguchi’s method cannot be applied to Suzuki because the video camera recording system of Suzuki is not compatible with “the display device’s capabilities” of Sekiguchi. In other words, Petitioner or Petitioner’s expert do not provide a link or communication mechanism between Suzuki’s video camera and the display of the external device of Sekiguchi, which is why Sekiguchi only discloses a TV or set top box that plays a video from a source, such as a broadcast TV input. POR, 56-58 (citing Ex. 2006, ¶¶ 109-112).

Petitioner also implicitly admits that “the Petition lacks a detailed explanation of how the combination would be implemented, including how the modified system would detect the frame rate required by the display device and impact playback speed.” Reply, 25. It then justifies this deficiency by resorting to its new expert declaration, where Mr. Lett simply says that a POSITA could implement Sekiguchi’s guidance on frame rate control using “routine programming skills.” Ex. 1041, ¶ 39. The Board should reject this argument because Mr. Lett provides no substantial

explanation of what those amorphous “programming skills” would entail.

Therefore, Petitioner’s articulated motivation to combine fails because it makes no showing of how an artisan would have had a reasonable expectation of success from combining the incompatible systems of Suzuki and Sekiguchi.

G. Ground 2D

For similar reasons as the combination of Morikawa with Walpole, namely, the lack of network connectivity in Suzuki, and the failure of Petitioner to substantiate the reasonable success of the combination, a POSITA would also not have been motivated to combine Suzuki with Walpole. *See supra* Section IV.C.1.

V. CONCLUSION

For the foregoing reasons, Patent Owner respectfully requests that the Board issue a Final Written Decision confirming patentability of the Challenged Claims.

Respectfully submitted,

Dated: July 23, 2024

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CERTIFICATE OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned PATENT OWNER'S SUR-REPLY specified in 37 C.F.R. § 42.24 has 4,537 words in compliance with the 5,600 word limit set forth in 37 C.F.R. § 42.24. This word count was prepared using Microsoft Word for Office 365.

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CERTIFICATE OF SERVICE

A copy of the foregoing Patent Owner's Sur-Reply and Exhibits 2007 and 2008 have been served on Petitioner's counsel of record as follows:

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