

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,

Petitioner

v.

MAXELL, LTD.,

Patent Owner

Case No. IPR2020-00200

Patent No. 10,084,991

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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I. INTRODUCTION

Patent Owner's Response is largely a rehash of the arguments presented in its Preliminary Response. Because Patent Owner presents no new evidence or arguments that support the Board modifying its preliminary findings at institution, the Board should again reject Patent Owner's arguments and cancel the Challenged Claims.

II. ASMUSSEN ALONE OR COMBINED WITH LINDSTROM RENDERS OBVIOUS THE CLAIMED "NETWORK INTERFACE"

Regarding Claim 1(a)'s "network interface," the Petition submitted Asmussen's collective tuner 603 and receiver 750 are a network interface for performing the claimed functionality. (Paper 1, *Petition*, 21-24). The Petition also submitted Ground 4, relying on Lindstrom for teaching the "network interface." *Id.* at 69-73. Most of Patent Owner's arguments are directed to Asmussen's teachings, and Patent Owner does not dispute that Lindstrom teaches the claimed "network interface."

A. Asmussen's Collective Tuner 603 and Receiver 750 Render Obvious the Claimed "Network Interface"

i. Petition's Mapping and Evidence

The Petition submitted "[i]t would have been obvious to modify the STT [set top terminal] shown in Figs. 11 or 12a to include the receiver 750 of Fig. 30 STT." (Paper 1, 24, *citing* Ex. 1003, *Declaration of Dr. Andrew Lippman*, ¶¶ 115-119). The Petition did not contend a single embodiment of Asmussen taught both the tuner 603

and receiver 750. Rather, the Petition submitted it would have been obvious to modify the STT of Figs. 11 or 12a, which already teach a tuner 603 and other receiver components (receiver 33 in Fig. 11a; receiver components 601 in Fig. 12a), to include the receiver 750. (Paper 1, 22-24; Ex. 1003, ¶ 112). The Petition provided an extensive mapping, and Dr. Lippman (Petitioner's expert) provided further factual bases. (Paper 1, 21-24; Ex. 1003, ¶¶ 109-119). For example, Petitioner's arguments and evidence established that Asmussen teaches the tuner 603 receiving all cable television (CATV) signals at STT 220 and that videocall information is received by receiver 750 across a cable television network. (Paper 1, 22-23; Ex. 1003, ¶ 116). The Petition and evidence also showed that Asmussen is directed to *upgrading* and *augmenting* an STT (Ex. 1003, ¶ 109), and specifically, the STT is augmented to include video calling functionality using receiver 750. (Paper 1, 24; Ex. 1003, ¶ 114). Dr. Lippman opined that he understood "the receiver 750 and the transmitter 730 are components added to the existing set top terminal...." (Ex. 1003, ¶¶ 115-116). The Petition and evidence conclude it would have been obvious to modify the STT shown in either Figs. 11 or 12a to include a network interface for receiving information, as claimed. (Paper 1, 24; Ex. 1003, ¶¶ 117-119).

ii. Obviousness of Augmenting Asmussen's STT to Include Receiver 750

Patent Owner's first argument mischaracterizes Petitioner's mapping. Patent Owner argues the Fig. 11 STT illustrating tuner 603 does not explicitly disclose the

tuner 603 in use with receiver 750 and that Asmussen's teaching of receiver 750 "is not in the context of use with tuner 603 or included as part of the receiver components 601." (Paper 16, 11-12). The Petition did not contend that Fig. 11 showed the tuner 603 in combination with receiver 750. The Petition instead submitted it would have been obvious to augment the Fig. 11 STT to include a receiver 750. (Paper 1, 24; Ex. 1003, ¶ 119). Patent Owner does not respond to the actual mapping.

iii. The Challenged Claims Do Not Require Transmission of Information

Patent Owner's next argument improperly imports limitations into the claim, requiring the network interface to perform transmission functionality. (Paper 16, 12-13). Claim 1(a) does not require the network interface to transmit information, and Patent Owner does not contend otherwise. *See* Ex. 1053, 46:5–48:11 (Dr. Bystrom unable or unwilling to admit that Claim 1 only requires the network interface to *receive* first and second digital information). Patent Owner instead argues the network interface described in the '991 Patent transmits request signals and title information. (Paper 16, 12). Patent Owner uses this disclosure in the '991 Patent (not recitation in the claims) to imply the *claimed* network interface must also transmit information. The Challenged Claims do not require the network interface to transmit information. Any patentability argument requiring the network interface to include a transmitter improperly imports limitations into the claim. *Superguide Corp. v.*

DirecTV Enterprises, Inc., 358 F.3d 870, 875 (Fed. Cir. 2004) (“Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment.”).

Even though Patent Owner’s argument regarding transmission functionality is meritless, Petitioner notes both the Petition and Dr. Lippman identified Asmussen’s transmitter 730, and Dr. Lippman repeatedly stated it would have been obvious to include transmitter 730 in the STT of Figs. 11 or 12a. (Paper 1, 24; Ex. 1003, ¶ 115 (“From these teachings, I understand the receiver 750 and the transmitter 730 are components added to the existing set top terminal...”), ¶ 116 (“Thus, Fig. 12a illustrates an exemplary way a receiver 750 and transmitter 730 would be integrated into the STT.”). Additionally, the Petition noted Claim 1(a) only required the claimed network interface to *receive* information: “Claim 1(a) similarly does not recite any particular structure of the claimed ‘network interface’ but instead describes the network interface by its functionality, i.e., configured to receive the first and second digital information.” (Paper 1, 21). Thus, to the extent Patent Owner is now presenting a new claim construction that the network interface includes

transmission functionality, the Petition and Dr. Lippman identified transmitter 730 for performing the unclaimed transmission functionality.

iv. Patent Owner's "Turbo Card" Argument Fails to Appreciate the Upgrades to the Asmussen STT

Patent Owner presents a convoluted argument regarding Asmussen's teaching of a "Turbo Card," which is used with the STT 220 to provide additional functionality. (Ex. 1004, *Asmussen*, 17:10-47). Patent Owner's "Turbo Card" argument focuses solely on Asmussen's Fig. 12a, while ignoring Petitioner's mapping also relying on Fig. 11 and that obvious to add a receiver 750 to the STT of Fig. 1. (Paper 16, 13). Patent Owner asserts that Fig. 12a shows hardware upgrades A-C to the STT, that video call functionality is (presumably only) provided by the Turbo Card, and that "the Turbo Card is [not] one of the aforementioned hardware upgrades A-C," and therefore, Dr. Lippman "incorrectly states that receiver 750 is part of Figure 12a." (Paper 16, 13).

As an initial matter, Patent Owner is again misstating the mapping. Neither Petitioner nor Dr. Lippman asserted "receiver 750 is part of Figure 12a," as Patent Owner asserts. Instead, the Petition states "it would have been obvious to modify the STT shown in Figs. 11 or 12a to include the receiver 750 of the Fig. 30 STT." (Paper 1, 24; Ex. 1003, ¶ 119). **Notably, Patent Owner does not argue that it would be non-obvious to modify the STT of Figs. 11 or 12 to include receiver 750.**

With respect to the Turbo Card argument, Patent Owner seems to be arguing that videocall functionality is only available with the Turbo Card, and because Fig. 12 does not include the Turbo Card, Fig. 12 does not include videocall functionality. Assuming this is true (which it is not, as explained below), the argument still does not respond to Petitioner's mapping because (1) Patent Owner does not assert it is non-obvious to modify Fig. 12a's STT to include videocall functionality (even if only provided via use of the Turbo Card); and (2) the Petition also relied on modifying the Fig. 11 STT, which is irrelevant to Patent Owner's "Turbo Card" argument.

Additionally, Asmussen does not teach that videocall functionality is only provided by the Turbo Card. Asmussen instead teaches the STT may be augmented to include built-in features for video calling. *Asmussen*, 49:41-48 (emphasis added). Integrating video calling features in the STT is further confirmed in the discussion of Asmussen's Table A (22:13-31), which illustrates "several exemplary hardware configurations that may be used to achieve the goals of the present invention." *Asmussen*, 21:61-65. Asmussen teaches "[t]he fourth column of Table A shows an advanced set top terminal having decompression, menu generation, and **advanced functional capabilities**." *Asmussen*, 22:64-23:3 (emphasis added). Table A is illustrated below and shows the advanced set top terminal (i.e., the "advanced functional capabilities") built in to the STT:

TABLE A

	Existing Analog Set Top Converter	Set Top Converter With Digital Decompression Capability	Set Top Converter With Digital Decompression And Menu Generation Capability	Advanced Set Top Terminal
Decompression Capability	N/A	Built-In	Built-In	Built-In
Menu Generation Capability	Turbo Card	Upgrade Module or Menu Generation Card	Built-In	Built-In
Advanced Features	Level A-C Hardware Upgrades or Expansion Card	Level A-E Hardware Upgrades or Expansion Card	Level A-E Hardware Upgrades or Expansion Card	Built-In

Asmussen, 22:13-31 (annotated). *Asmussen* then includes a lengthy section entitled “Advanced Features and Functional Capabilities” with numerous sub-sections (identified as a, b, c, etc.) describing each feature. *Asmussen*, 31:49-50. One sub-section of the Advanced Features and Functional Capabilities is Section “m”: Video Call Feature, including additional sub-sections for “Basic Video Call Functionality,” “Network for Video Calling,” and “Video Calling Processes and Methods,” amongst others. *Asmussen*, 49:41, 49:42, 51:9, 55:4, 59:22, 59:37, 59:43. Thus, *Asmussen* teaches that one of the advanced features and advanced functional capabilities that is built in and integrated into the STT 220 is video calling functionality. *See also* Ex. 1003, ¶¶ 114-115. Any implication by Patent Owner that video call functionality is only provided by Turbo Card is false.

Regardless, Petitioner's mapping relies on the obviousness of modifying the Fig. 12a STT to be augmented to include the receiver 750 for performing a video call, and as established in, at the least, the above-discussed teachings, Asmussen readily contemplates augmenting its STT to include video call functionality. Patent Owner's argument that Dr. Lippman has not shown the Turbo Card is one of the upgrades to Fig. 12a improperly misstates Petitioner's mapping and misrepresents Asmussen's teachings.

v. *Asmussen's Mapped "Network Interface" Receives the First Digital Information*

Patent Owner contends "[t]here is no evidence that *Asmussen's* tuner 603 and receiver 750 are coupled to a contents server, particularly one that receives video-on-demand." (Paper 16, 14). The Petition mapped Asmussen's operations center 202 as the claimed "contents server" and showed how the operations center sends selected programming to the user's STT. (Paper 1, 25-26; Ex. 1003, ¶¶ 93-98). Patent Owner does not dispute that the mapped operations center 202 generates the claimed "first digital information" and that the user of the STT can download text or data. (Ex. 1053, 29:18-21 (Dr. Bystrom agreeing that "the user can download text or video supplied by the operations center")). Instead, Patent Owner asserts "the terrestrial link between cable headend 200 and operations center 202 shows a one-directional communication going in the uplink direction, not that the operations center 202 is

providing first digital information from a contents server to set top terminal 220.” (Paper 16, 14).

This argument ignores the express teachings of Asmussen, which were quoted in the Petition: “The set top terminal 220 receives compressed program and control signals from the cable headend 208 (or, in some cases, directly from the operations center 202).” *Asmussen*, 11:30-39; Paper 1, 26. Dr. Lippman discussed at length Asmussen’s teachings of the set top terminal receiving the digital programming. (Ex. 1003, ¶¶ 93-98). Patent Owner’s expert, Dr. Bystrom even admitted “[t]he operations center may send different groups of programs to different cable headends **and/or set top terminals.**” (Ex. 1053, 14:24–15:1, 15:13-16, 15:25–16:3 (“Q: So video programs can go to set-top terminals? A: Yeah, according to the spec. They may be sent to cable headends and/or set-top terminals.”)). Simply because Fig. 1 of Asmussen shows an uplink from cable headend to operations center 202 does not negate Asmussen’s express teaching that the STT receives programs “directly from the operations center 202.” *Asmussen*, 11:30-39.

vi. Asmussen Provides an Express Motivation to Augment the STT to Include Receiver 750

Patent Owner’s final argument regarding Asmussen’s network interface is that a POSITA would not add a collective tuner 603 and receiver 750 into the system of Asmussen because Asmussen “already contemplates extensive upgrades to its system.” (Paper 16, 15; Ex. 2021, ¶ 101). This argument completely misses the point

that Asmussen is all about describing possible upgrades to the conventional STT 220 and that “[t]o support video calling, the set top terminal 220 is **augmented** with additional features, as shown in Fig. 30.” *Asmussen*, 49:43-46, 3:54–4:9 (Summary discussing hardware upgrades and additional capabilities, including video calling); Ex. 1003, ¶¶ 78-80. Asmussen is expressly directed to augmenting an existing STT, thus providing an express motivation for modifying the STT of Figs. 11 or 12a to include a receiver 750 for video call functionality. (Ex. 1003, ¶¶ 114-119).

B. Asmussen's STT Modified to Include Lindstrom's Out-of-Band Tuner Renders Obvious the Claimed “Network Interface”

The Petition also presented an alternative ground relying on Lindstrom for teaching the claimed “network interface.” (Paper 1, 69-73; Ex. 1003, ¶¶ 188-197). Patent Owner tacitly admits Lindstrom teaches the network interface, instead only arguing there is no motivation to combine Lindstrom's single out-of-band tuner with Asmussen's STT. (Paper 16, 40-42).

The Petition discusses Lindstrom teaching an out-of-band tuner integrated with an in-band tuner on a single IC. (Paper 1, 70). The Lindstrom out-of-band tuner receives both video-on-demand and IP telephony/videophone signals. *Id.*; Ex. 1008, *Lindstrom*, ¶ 0017. The out-of-band tuner is for use in a cable television set top box receiver. *Lindstrom*, ¶ 0018.

Patent Owner's assertion that Petitioner fails to show why a POSITA would combine the references is plainly wrong. (Paper 16, 40). Dr. Lippman provided

numerous pages of discussion for the obviousness of the combination. (Ex. 1003, ¶¶ 190-198). For example, Dr. Lippman explained that Asmussen repeatedly discusses upgrades to the conventional STT (Ex. 1003, ¶¶ 190, 197), Lindstrom expressly teaches the desire to combine multiple tuner functionality into a single integrated chip (¶¶ 191, 194), the modification would achieve power saving functionality (¶¶ 192, 198), and there would be a reasonable expectation of success given the combination is a mere substitution of two tuners in Asmussen for Lindstrom's single IC (¶¶ 193, 196).

More importantly, Patent Owner and Dr. Bystrom offer no rebuttal to the extensive analysis and evidence. Instead, Patent Owner's central argument for non-obviousness is that incorporating Lindstrom's single IC "runs counter to Asmussen's teaching of using hardware upgrades to achieve advanced features and functionality." (Paper 16, 42). This argument is perplexing, as Asmussen states the desire to *augment, integrate*, and build in to the STT the videocall functionality. *Asmussen*, 49:41-48, col. 22, Table A and "built-in" functionality; Ex. 1003, ¶ 197. Asmussen is directed to upgrading and augmenting a STT, including adding receivers (e.g., receiver 750) for performing desired functionality. *Asmussen*, 50:18-49.

Patent Owner and Dr. Bystrom also make vague assertions that the "design requirements" of Asmussen and Lindstrom are different and that a POSITA would

not have been motivated to make the combination because the references “are directed to solving different problems and use different structures to solve these problems.” (Paper 16, 40; *see also id.* at 1, 28, 36 (making similar assertions for other limitations/combinations)). Dr. Bystrom’s opinions that the references solve different problems or use different structures are generic conclusions without any underlying factual basis. There is no explanation, for example, why the proposed combination would render the art unsatisfactory for its intended purpose or change the principle of operation. There is not even a cognizable discussion of why solving different problems or using different structures somehow alone renders the Challenged Claims patentable. Petitioner encourages the Board to review Dr. Bystrom’s opinions; she never provides a *why* for her conclusory opinions about “design requirements” and “different structures” and instead just repeats Patent Owner’s statements in the Response. (Ex. 2021, ¶¶ 165-173). Without more, Dr. Bystrom’s repeated generic conclusions should be given no weight. *In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997) (“[a]ttorney arguments and conclusory statements that are unsupported by factual evidence are entitled to little probative value”); *see also* 37 C.F.R. § 42.65 (“[e]xpert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

Patent Owner also asserts the Petition focuses on the modification of Asmussen alone and not how a POSITA would have modified the combination of Asmussen and Bear. Patent Owner is resorting to “gotcha” arguments with a feigned ignorance or confusion that is pointless. The Petition expressly states Ground 4 is the obviousness of Asmussen in view of Bear and further in view of Lindstrom. (Paper 1, 8, 69). Asmussen is the primary reference and teaches the vast majority of recited limitations in the Challenged Claims. The modification is to Asmussen’s STT (as otherwise modified by Bear for the limitation of rendering the camera operative in claim 1(e)). There is no question the proposed ground relies on Asmussen as modified by Bear for claim 1(e) (a limitation unrelated to the modification of the Asmussen STT to include a network interface) as further modified by Lindstrom.

Given the extensive discussion in the Petition and by Dr. Lippman, and the lack of any serious rebuttal by Patent Owner, Petitioner has shown the obviousness of modifying Asmussen’s STT to include Lindstrom’s single out-of-band tuner.

III. ASMUSSEN ALONE OR IN COMBINATION WITH BEAR TEACHES CLAIM 1(E)’S “RENDERING THE CAMERA OPERATIVE”

A. Asmussen Teaches Claim 1(e)

Patent Owner’s arguments regarding Asmussen’s teachings for Claim 1(e) are scattershot and do not rebut the Petition’s central argument. The Petition establishes that Asmussen teaches allowing a user to set the default state of the camera as on/off, such that when the default state is on, then upon receipt of an inbound call, the

camera is rendered operative. (Paper 1, 36-37; Ex. 1003, ¶¶ 128-129). The Petition explains why a default state of “on” is not the camera always being operative but rather being rendered operative in response to receipt of a videophone call. *Id.* Patent Owner disagrees, stating “[a] POSITA would certainly have understood that a camera *could* remain on and minimal operations, such as simply storing a few frames, *could* be performed.” (Paper 16, 18; Ex. 2021, ¶ 109) (emphases added).

As an initial matter, it is procedurally odd for Patent Owner's declarant to opine that Asmussen's system (and specifically its camera) *could* be modified in a way that would not teach the claimed limitation. How Asmussen *could* be modified to *not* teach a limitation is not germane to the obviousness analysis.

Patent Owner opens its argument by discussing the “pause” feature taught in Asmussen, conflating the Petition's mapping of the claimed “pause” feature with the claimed “rendering the camera operative.” (Paper 16, 15-16). The Petition separately mapped both limitations, and Patent Owner's discussion of the “pause” mapping is confusingly non-responsive to the Petition's mapping.

Moreover, Petitioner's expert, Dr. Lippman, opines that Dr. Bystrom's proposed modification to Asmussen's camera is undesirable. Designing a videocall system so that the camera always remains on and captures frames is an undesirable design and requires unnecessary processing. (Ex. 1054, *Supplemental Declaration of Dr. Lippman*, ¶¶ 3-10). Dr. Lippman opines there would be no reason to have the

camera always operative and capturing and storing a “few frames” (Paper 16, 18) when no video data is going to be displayed or transmitted. *Id.* at ¶ 8. Simply because the camera *could* be designed this way does not mean that a POSITA would desire to design it per Dr. Bystrom’s hypothetical. *Id.* Dr. Lippman also opines that rendering the camera operative when the videocall is received is sufficient to reduce lag time while still maintaining user privacy. *Id.* at ¶ 9 (further opining his opinions at Ex. 1003, ¶ 141 are consistent). Dr. Lippman also notes that video cameras are not always hard-wired into the STT or television and are sometimes stand-alone, battery-operated cameras. *Id.* at ¶¶ 4-6; *see also* Ex. 2020, *Lippman Trans.*, 62:18–63:18 (Dr. Lippman discussing why power resource is a frequent consideration of electronics designers), 63:25–64:18 (Dr. Lippman confirming that a POSITA would have also understood that a camera that is on would be utilizing computational resources). Therefore, rendering the camera operative upon receipt of the videophone call preserves power and processing resources, which is desirable for both hard-wired and battery-operated cameras.

Patent Owner provides no meaningful rebuttal to the Petition’s mapping. Instead, Dr. Bystrom opines, without factual basis or explanation, that at the processing speeds available in hardware at the time of the ’991 Patent, “reduction in lag time would not be a concern.” (Ex. 2021, ¶ 144). Without any evidentiary support or explanation, Dr. Bystrom’s opinion should be given no weight.

Patent Owner is also under the incorrect interpretation that Claim 1(e) requires the video to be *displayed* on the display upon receipt of the videocall (and before the called party has answered the call). Patent Owner's Response includes a long discussion about Asmussen's teaching of caller ID appearing on the display when an incoming video call is received (pages 19-23), concluding that "[n]owhere in the discussion of the display" of an incoming video call is there a teaching of rendering the camera operative. (Paper 16, 23). The import of Patent Owner's conclusion is unclear; displaying caller ID does not exclude rendering the camera operative upon receipt of the videocall. Patent Owner also argues that there is no disclosure of the user's face visible in a small box (Paper 16, 19), but claim 1(e) merely requires the camera to be rendered operative—not that the user's face is visible in a small box immediately upon receipt of the videocall.

Because Patent Owner's only rebuttal to the default state of the camera being "on" is that the camera *could* be always on and capturing and storing frames, and because such an operation is wholly undesirable, Patent Owner provides no persuasive arguments rebutting Asmussen's teachings.

B. Bear's Teachings Regarding Claim 1(e)

i. Bear Teaches Claim 1(e)

Patent Owner's response to Bear's teaching for claim 1(e) requires bodily incorporation of functionality taught in Bear and not relied on in the proposed

ground of unpatentability. Patent Owner points to Bear's teaching that once the user stops capturing video, the A/V application asks the user if they want to *save* the captured video. (Paper 16, 27). Patent Owner states "Dr. Bystrom explains that this addition of the question of whether to save the captured video indicates that this A/V application is for the purposes of recording a video call." (Paper 16, 27). Per Patent Owner, if the Bear A/V application is combined with Asmussen, then Bear's teaching of automatically recording each videophone call and then giving the user the option of saving the recording "would add a layer of unneeded processing and complexity to each video call...." *Id.*

Patent Owner's argument is premised on incorporating functionality in Asmussen taught in Bear but not otherwise pertinent to the Claim 1(e) limitation or Petitioner's mapping. Patent Owner's argument is not persuasive and is improper, as the "[t]he test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.... Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art." *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

The Petition relied on Bear's teaching of an A/V capture application that automatically launches upon receipt of an incoming video call, such that the camera begins capturing the video stream. (Paper 1, 37-39; Ex. 1003, ¶¶ 132-141). Patent Owner does not dispute Bear's teachings and does not argue that Bear fails to teach

the limitations of Claim 1(e). Instead, Patent Owner reverts to “bodily incorporation” arguments, asserting that the videocall information is recorded during the video call, and the user is then asked at termination of the call whether the user wants the system to store the videocall. (Paper 16, 27). Claim 1(e) does not address anything regarding storage of the videocall, and the Petition does not rely on or otherwise suggest modifying Asmussen to include Bear’s additional functionality of offering the user the option to store the recording. The Petition merely relies on Bear for claim 1(e) to teach the functionality of rendering the camera operative upon receipt of the videophone call. Because Bear’s teachings are not in dispute, Petitioner has established Bear teaches the limitations of claim 1(e).

Patent Owner also inserts a lack of teaching discussion in the middle of its lack of motivation to combine argument. (Paper 16, 33). Patent Owner asserts Bear teaches the user must answer the call *before* rendering the camera operative, citing Bear, 12:12-20. Bear discloses multiple embodiments, including an embodiment requiring the user to answer the call before the camera is rendered operative but also including an embodiment that automatically renders the camera operative upon receipt of the videophone call and launch of the A/V application. The Petition relies on the embodiment disclosed in Bear, 11:43-45, 11:61-66, Fig. 10. Indeed, at Bear, 11:33-45, Bear discloses multiple “capture events” for launching the A/V capture application (which renders the camera operative, per 11:61-66), such as pressing the

capture button or selecting the application from a menu or GUI. *See, e.g.*, Ex. 1003, ¶ 139 (Dr. Lippman discussing the various embodiments in Bear). Rather than respond to the actual mapping provided in the Petition, Patent Owner chooses to respond to other embodiments disclosed in Bear but not otherwise relied upon in the Petition. Patent Owner has no answer for the teachings in Bear actually relied on in the Petition. (Paper 1, 38).

ii. Patent Owner's Lack of Motivation Arguments Ignore Bear's Express Teachings

Patent Owner opens its alleged lack of motivation arguments with the unconvincing implication that it would be non-obvious to use Bear's A/V capture application in a set top box. But, as even recognized by Patent Owner, Bear discloses “[t]he invention is operational with numerous other general purpose or special purpose computing system environments or configurations. Examples of well-known computing systems, environments, and/or configurations **that may be suitable for use with the invention** include, but are not limited to...**set top boxes**.” (Ex. 1005, Bear, 3:66–4:9; Ex. 1003, ¶ 132). Bear is express that its invention can be used in multiple computing systems and environments and specifically including for set top boxes. Patent Owner provides no serious rebuttal to this teaching, instead emphasizing the “may be” language in bold/italics above and splicing the full text from Bear to exclude the context of the entirety of Bear's teaching at 3:66–4:9.

Patent Owner next accuses the Petition of not explaining how Bear's A/V capture application would be implemented in Asmussen's system, including the assertion "[i]ncorporating an entirely different function into a processor is hardly the result of 'simple programming techniques.'" (Paper 16, 29-30). First, it is noteworthy Patent Owner does not rebut that the proposed modification to Asmussen to render the camera operative when the videophone call is received would only entail simple programming techniques. *See* Paper 16, 29-30; Ex. 1003, ¶¶ 140-141 (Dr. Lippman opining the combination would have been obvious, including discussing the needed programming of Asmussen to include the Bear functionality). Second, Dr. Bystrom's repeat of the Patent Owner Response has no factual basis. For example, Dr. Bystrom does not identify any difficulties, extensive time or cost, or other obstacles in programming Asmussen's set top terminal, as proposed in the Petition. *See* Ex. 2021, ¶ 133. Without at least a modicum of explanation of why programming a camera to turn on when a call is received allegedly entails more than simple programming techniques, especially given Asmussen's extensive teachings and advanced functionality, Patent Owner's argument falls flat. (Ex. 1053, 12:1-6 (Dr. Bystrom stating Asmussen is a "vast patent covering a lot of ideas and a lot of components"))).

Patent Owner next contends "Petitioner improperly focuses on *Bear's* teachings in isolation," referring to Bear's teachings regarding a lens cover and

manual operation. (Paper 16, 30-32). Again, Patent Owner does not respond to the Petition's and Dr. Lippman's extensive explanations. Bear teaches "a simplified system and method for a user to interact with various communications and media applications in a consistent way" and that "answering a phone call that supports video" is a "possible usage scenario that would benefit from improved video communications handling." *Bear*, 2:1-10; Ex. 1003, ¶ 140 (quoting same). Contrary to Patent Owner's assertion, Bear is directed to the problem of providing user control (e.g., answering a phone call and interacting with communications and media applications). Dr. Bystrom opines "*Bear* is focused on safeguarding measures that require manual operation of a lens cover." (Ex. 2021, ¶ 134). Bear's discussion of a lens cover at 7:61-62 is hardly the "focus" of Bear. Dr. Bystrom is cherry-picking one teaching from Bear and ignoring the teachings actually relied on in the Petition. It is legally improper to ignore Bear's teachings simply because Bear has other teachings not applicable to the proposed ground. *In re Moutett*, 686 F.3d 1322, 1331 (Fed. Cir. 2012) ("[a] reference may be read for all it teaches, including uses beyond its primary purpose").

Finally, Patent Owner contends Dr. Lippman "neglects the fact" that the A/V capture application requires a step of displaying a dialog box to confirm saving the recording. (Paper 16, 32). Again, this discussion in Bear is **after** the videocall is terminated and requesting the user's confirmation of storing the recorded videocall.

This has nothing to do with Bear's teaching of the camera beginning to capture the video stream upon launching of the A/V application (which occurs, in one embodiment, in response to receipt of a videophone call). *Bear*, 11:33-45, 11:61–12:7.

IV. MARLEY'S TEACHINGS

A. Marley Renders Claim 1(c) Obvious

Ground 2, Claim 1 relies on Marley as alternatively teaching Claim 1(c) should Patent Owner contend the claimed communication apparatus must include both the display and other components packaged together within a single housing. Patent Owner does not appear to assert such. Nonetheless, Patent Owner inexplicably argues Marley allegedly teaches away from claim elements 1(d)-(g) and Marley does not teach Claim 1(e).¹ (Paper 16, 35-36, 37-38). Marley was never relied on for teaching any of Claims 1(d)-(g) or 1(e), rendering Patent Owner's arguments regarding Marley and Claims 1(d)-(g) and 1(e) irrelevant.

¹ The Response, p. 37 includes a single-sentence assertion that Marley teaches away from the '991 Patent, with Dr. Bystrom repeating the conclusion at Ex. 2021, ¶ 154. This teaching-away assertion is unexplained, let alone supported by evidence, and should be disregarded.

Patent Owner next repeats its “design requirements” and “solving different problems and us[ing] different structures” argument. (Paper 16, 36). There is no support or explanation for these arguments—not even reliance on Dr. Bystrom repeating the conclusory assertions from the Response. Patent Owner’s argument should be disregarded.

Patent Owner continues its unfounded arguments, asserting Petitioner “never explains how a POSITA would implement another set-top box system as discussed in *Marley* to the now hybrid set-top box/personal computer combination of *Asmussen* and *Bear*.” (Paper 16, 36). This is an unfair characterization of the combination, which proposes modifying Asmussen’s set-top box, which was modified per Ground 1 to include the functionality of Bear to render the camera operative, to have the display and other claimed components packaged in a single housing. (Paper 1, 49-50). Patent Owner repeats its “gotcha” argument, but the Petition is express that Ground 2 is the combination of Asmussen, Bear, and Marley. (Paper 1, 8, 48, 60).

Finally, Patent Owner asserts that “incorporating *Marley*’s integrated components in a single housing runs counter to Asmussen’s teaching of using hardware upgrades to achieve advanced features such as video calling.” (Paper 16, 38). This argument ignores Asmussen’s express teaching that the videocall functionality is “**integrated** into an enhanced set top terminal 220.” *Asmussen*,

49:44-48. This argument also ignores Marley's express teaching that the "set top box features and functionality can be **integrated** into a TV or monitor, so that no separate physical box is needed." *Marley*, ¶ 0029; Paper 1, 49-50. Patent Owner is again failing to respond to the Petition's mapping and evidence.

B. Marley Renders Claim 5 Obvious

Patent Owner argues that "Dr. Lippman has not shown that *Marley* contains a single processor as required by Claim 1...." Patent Owner makes this statement without any conclusion, which makes the import of the statement unclear. Regardless, the Petition explained how Marley teaches the "PAVP renders the camera and microphone operative or such would be obvious" because the PAVP and VTP work in conjunction, and the PAVP communicates with the VTP, or alternatively, it would have been obvious for the PAVP to directly render operative the camera and microphone...." (Paper 1, 57-59). Patent Owner's response to this evidence is "it is not made clear that either of the processors satisfy the requirements of Claim 5 and the claims on which it depends, since the two processors are responsible for entirely different functionalities." (Paper 16, 39).

Patent Owner again fails to respond to the actual mapping. As opined by Dr. Lippman, "it would have been obvious to modify *Asmussen's processor* using *Marley's* teachings of the processor receiving a single user input...." (Ex. 1003, ¶ 175; *id.* at ¶¶ 176-177 (similar opinion regarding obviousness of modifying

Asmussen's processor for different claimed processor functionality). Petitioner did not propose to modify Asmussen to include Marley's processor. Rather, the Petition shows Marley's processors perform the claimed functionality and that it would have been obvious to modify Asmussen's processor to perform the same functionality performed by Marley's processors.

V. CONCLUSION

Patent Owner fails to present any persuasive argument establishing the cited art does not teach each of the Challenged Claims or that the skilled person would not have found the alleged invention obvious. For the reasons and evidence provided in the Petition and this Reply, Petitioner requests cancellation of the Challenged Claims.

Respectfully submitted,

ERISE IP, P.A.

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ATTORNEYS FOR PETITIONER, APPLE INC.

APPENDIX OF EXHIBITS

Exhibit 1001	U.S. Patent No. 10,084,991 (“’991 Patent”)
Exhibit 1002	File History of U.S. Patent No. 10,084,991 (“ <i>File History for ’991 Patent</i> ”)
Exhibit 1003	Declaration of Dr. Andrew Lippman, PhD (including Appendices A and B) (“ <i>Dec.</i> ”)
Exhibit 1004	U.S. Patent No. 7,565,680 to Asmussen (“ <i>Asmussen</i> ”)
Exhibit 1005	U.S. Patent No. 7,584,255 to Bear (“ <i>Bear</i> ”)
Exhibit 1006	U.S. Patent Pub. No. 2007/0139514 to Marley (“ <i>Marley</i> ”)
Exhibit 1007	U.S. Patent No. 5,940,484 to DeFazio (“ <i>DeFazio</i> ”)
Exhibit 1008	U.S. Patent Application No. Pub. No. 2004/0031064 to Lindstrom et al (“ <i>Lindstrom</i> ”)
Exhibit 1009	Docket Control Order, <i>Maxell Ltd. v. Apple Inc.</i> , No. 5:19-cv-0036-RWS (E.D. Tex. July, 9, 2019), ECF No. 46
Exhibit 1010	U.S. Patent No. 8,363,087 to Iwabuchi (“’087 Patent”)
Exhibit 1011	File History of U.S. Patent No. 8,363,087 (“ <i>File History for ’087 Patent</i> ”)
Exhibit 1012	U.S. Patent No. 6,493,020 to Stevenson (“ <i>Stevenson</i> ”)
Exhibit 1013	U.S. Patent No. 6,134,223 to Burke (“ <i>Burke</i> ”)
Exhibit 1014	U.S. Patent No. 8,458,756 to Rodriguez (“ <i>Rodriguez</i> ”)
Exhibit 1015	U.S. Patent No. 7,373,650 to Rodriguez (“ <i>Rodriguez ’650</i> ”)
Exhibit 1016	Explorer® Digital Video Recorder - Users Guide (“ <i>Explorer User Guide</i> ”)

Exhibit 1017	“So far, interactive TV is no match for the mall” - Tampa Bay Times (St. Petersburg, Florida) June 5, 1995 (“ <i>Time Warner Full Service Network</i> ”)
Exhibit 1018	“Comcast rolls out video on demand” - Sunday News (Lancaster, Pennsylvania) Nov. 3, 2002 (“ <i>Comcast Video on Demand</i> ”)
Exhibit 1019	Intentionally Left Blank
Exhibit 1020	Intentionally Left Blank
Exhibit 1021	Intentionally Left Blank
Exhibit 1022	Intentionally Left Blank
Exhibit 1023	Intentionally Left Blank
Exhibit 1024	Intentionally Left Blank
Exhibit 1025	Intentionally Left Blank
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Exhibit 1038	Intentionally Left Blank
Exhibit 1039	Intentionally Left Blank
Exhibit 1040	Intentionally Left Blank
Exhibit 1041	Intentionally Left Blank
Exhibit 1042	Excerpts of AIA Legislative Comments
Exhibit 1043	Trial Date Statistics
Exhibit 1044	Transfer Motion Success
Exhibit 1045	District Court Docket Entries Showing Stay Motion (Dkt. 239)
Exhibit 1046	Fed Cir Docket (Writ of Mandamus on Transfer Motion) (Dkt. 2)
Exhibit 1047	Apple's Final Election of Prior Art
Exhibit 1048	Intentionally Left Blank
Exhibit 1049	J. Albright Docket Entry Deny Stay and Moving Up Trial to May
Exhibit 1050	J. Albright Scheduling Order Showing July Trial
Exhibit 1051	Intentionally Left Blank
Exhibit 1052	Order Denying Motion to Stay Without Prejudice
Exhibit 1053	Deposition Transcript of Maja Bystrom, Ph.D. of November 20, 2020
Exhibit 1054	Supplemental Declaration of Dr. Andrew Lippman

CERTIFICATION OF WORD COUNT

The undersigned certifies pursuant to 37 C.F.R. § 42.24 that the foregoing Petitioner's Reply to Patent Owner's Response, excluding any table of contents, mandatory notices under 37 C.F.R. § 42.8, certificates of service or word count, or appendix of exhibits, contains 5,589 words according to the word-processing program used to prepare this document (Microsoft Word).

Dated: December 30, 2020

BY: /s/ Jenifer C. Bailey
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ATTORNEYS FOR PETITIONER,
APPLE INC.

CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105, the undersigned certifies that on December 30, 2020, Petitioner's Reply to Patent Owner's Response was served via electronic service on the following counsel of record for Patent Owner:

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