

**IN UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD**

SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.

Petitioners,

v.

MAXELL, LTD.,
Patent Owner

Case: IPR2024-00867

U.S. Patent No. 10,176,848

**PATENT OWNER'S RESPONSE
TO PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 10,176,848**

Mail Stop **Patent Board**
Patent Trial and Appeal Board
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PATENT OWNER’S EXHIBIT LIST

Description	Exhibit #
1st Amended Docket Control Order from District Court Litigation	2001
Original Docket Control Order from District Court Litigation	2002
Maxell’s Supplemental Preliminary Election of Asserted Claims	2003
Defendants’ Preliminary Election of Prior Art	2004
U.S. Patent Application No. 2009/0135269	2005
U.S. Patent No. 8,488,847	2006
Samsung invalidity contentions (Gallagher)	2007
Samsung invalidity contentions (Nakashima)	2008
U.S. Patent Application No. 2007/0098303	2009
U.S. Patent Application No. 2007/0019083	2010
CNET iPhone Article	2011
MacRumors Article	2012
CNET iPhone Face ID Article	2013
iPhone User Guide IOS 12—Find people in Photos	2014
iPhone User Guide IOS 18—Find people in Photos	2015
iPhone User Guide IOS 13—Find people in Photos	2016
iPhone User Guide IOS 14—Find people in Photos	2017
iPhone User Guide IOS 15—Find people in Photos	2018
iPhone User Guide IOS 16—Find people in Photos	2019
iPhone User Guide IOS 17—Find people in Photos	2020
Apple Support—Use the People & Pets Album	2021
Google Photos Help—Set up & manage your face groups	2022
Microsoft Support—Group photos by faces	2023
Amazon Help & Customer Service—Learn More about image tagging in Amazon Photos	2024
Nikon Press Release	2025
JP No. 2008-130678	2026
U.S. Patent No. 9,159.368	2027
PC Mag Dictionary	2028
McGraw-Hill Dictionary	2029

Declaration of Ravin Balakrishnan, Ph.D.	2030
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I. INTRODUCTION

Patent Owner Maxell, Ltd. ("Patent Owner") respectfully requests that the Board confirm patentability of Claims 11, 12, 16, 17, 19, 20, and 84 ("challenged claims") of U.S. Patent No. 10,176,848 ("the '848 Patent") because Petitioners Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (hereinafter "Petitioner" or "Samsung") fail to demonstrate by a preponderance of the evidence that the challenged claims are unpatentable.

Ground 1 relies entirely on a misapplication of the plain meaning of "mode" as used in the challenged claims. As a result, Petitioner attempts to combine references such as Nozaki and Haitani. However, a POSITA would not be motivated to combine the teachings of Nozaki and Haitani because they are directed to solving different problems and use different technology and/or structures to solve these problems. Petitioner's expert concedes that Nozaki has no disclosure to sort images, nor does Nozaki contemplate the inclusion of such a method. Thus there would be no reason that a POSITA would look to Haitani's filters to purportedly solve a problem that Nozaki does not contemplate. In asserting the combination of Nozaki and Haitani, Petitioner misapplies Haitani when it claims the "filters" disclosed therein "resemble" the claimed first reproducing mode and the second reproducing mode of claims 11-12, 16-17, 19-20. Under a proper interpretation of "mode" as used in the claims, Haitani's filters are not modes.

Grounds 2-3 challenge claim 84, but fail for similar reasons as Ground 1. Namely, the Petition fails to explain how a POSITA would implement the video-segmenting from Graham (Ground 2) or Kim (Ground 3) in a portable device like Nozaki, let alone the combination of Nozaki-Haitani to which Graham/Kim is being added. Instead, Petitioner invents a purported need, describes some benefits in generalities (“improve the efficiency”), and claims Graham’s and Kim’s video-segmenting methods “could have easily been implemented in the Nozaki device.” But describing potential improvements that are accomplished by the claims of the ’848 Patent is the definition of hindsight.

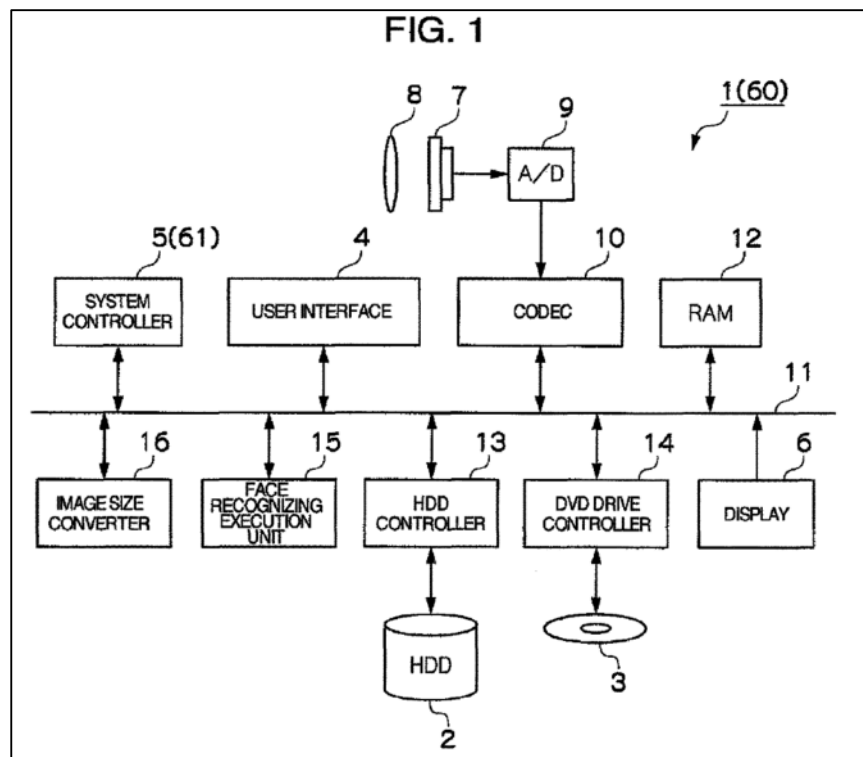
For these reasons, and those more fully explained below, Petition has failed to show by a preponderance of the evidence that the challenged claims are unpatentable.

II. BACKGROUND

A. Overview of U.S Patent No. 10,176,848

The ’848 Patent generally describes a recording and reproducing apparatus (such as a mobile phone or camera), EX1001 at 13:38-42, that allows users to “rapidly and easily” locate certain types of images from among a large number of images. *Id.* at 2:18-22. Specifically, the patent recognizes that, in the 2008 timeframe, the memory capacities of camera devices were increasing, thereby allowing for the storing of more and more images and videos. *Id.* at 1:55-59. Inventor

Ms. Yoshida recognized the need for a better way to find images among the ever-increasing number of images stored on recording devices. *See id.* at 1:59-61 (“It is therefore difficult for a user to quickly find a target scene from a number of scenes recorded in the recording medium.”). For example, Figure 1 of the '848 Patent is a block diagram illustrating the structure of a video according to several embodiments:



Reproduction of Fig. 1 of the '848 Patent

Ms. Yoshida solved this problem by applying a face-recognizing process to characterize recorded images by registering individual people in the recorded images. For example, the claims recite two ways in which a face-recognizing process registers a person in an image as a specific person: a “first setting mode,” in which a person in newly photographed images is registered as a specific person; and a

“second setting mode,” in which a person is selected from among a plurality of images and registered as a specific person. EX1001 at 15:64-16:7 (claim 8).

The specification illustrates one example of this concept in the embodiment shown in Figure 3:

FIG. 3

25	26	27
001	filepath/file.jpg	hh:mm:ss:ff ...
002	filepath/file.jpg	
003	filepath/file.jpg	hh:mm:ss:ff ...
⋮	⋮	

24

This embodiment associates a face ID 25 with the file path 26 of an image containing that particular person's face. *Id.* at 5:47-65. In another exemplary embodiment, the recording apparatus can recognize faces and associate them with specific persons by newly photographing a person. *Id.* at 6:32-59. The patent also describes using a similar face-recognizing process to register individuals “for an image already photographed.” *Id.* at 7:10-16.

Prior to the '848 Patent, recording and reproducing apparatuses like smartphones and laptops were being used to record a large number of videos and pictures. EX2030, ¶56. In order to make it easier for a user to find recorded content, conventional techniques generated a list of thumbnails corresponding to each recorded content, giving the user a type of “preview” of the recorded content. *Id.*

However, as the volume of recorded content increased it became difficult to identify a specific picture or video simply by looking through thumbnails. *Id.*

The '848 Patent discloses a solution to these problems, including, techniques that enable a user to identify and search through recorded content more efficiently and effectively. EX2030, ¶57. For example, the '848 Patent discloses executing a face recognizing process on the recorded pictures and allows a user to register pictures of a specific person in an organized manner. *Id.* Further, the '848 Patent also discloses techniques whereby once a picture of a specific person is registered, future pictures of the same person will continue to be categorized and associated with the previously identified pictures of that person. The '848 Patent also discloses displaying thumbnails corresponding to recorded images with an icon having predetermined shape when an importance level is set for a specific recorded image. The '848 Patent also discloses recording video information including a plurality of sections corresponding to a plurality of thumbnails and displaying the thumbnails. This manner of recording and reproducing images and video information allows users of the recording and reproducing apparatus to navigate and search through pictures and video in a more manageable and efficient manner. *Id.*

B. The State of the Art in 2008

The state of the art of cellular phones in 2008 lagged behind the inventions of the '848 Patent. For example, the first iPhone was released in June 2007. EX2030,

¶58. But the first iPhone did not have the ability to even record video (rather, just still photographs) or any facial recognition capacity let alone using facial recognition technology in conjunction with picture organization. *Id.* It was not until November 2017, in conjunction with the release of the iPhone X, that Apple added facial recognition technology (Face ID) to the iPhone and even that technology was used for device unlock/authentication purposes and not for picture organization. *Id.* Apple did not introduce its “People Album” functionality until the release of iOS 12 in September 2018 and is a feature that continues to be in its products (*i.e.*, present in the recently-released iOS 18). EX2030, ¶59. *See also* EXS. 2011-2021.

Apart from Apple products, functionality that combines a facial recognition process with registering/associating people with pictures for efficient categorization and later reproduction is now commonplace across a plethora of other devices or offered services such as Android phones, Windows laptops, and Amazon photos. EX2030, ¶60; *see also* EXS. 2022-2024.

In view of the above facts, the inventor of the '848 Patent was well ahead of her time. EX2030, ¶61. The inventions in the '848 Patent comprise image recording and storing means, execution of a facial recognition process on stored images, where the images can be used in a variety of modes. Thus, the '848 Patent discloses a novel video recording and reproducing apparatus (*e.g.*, cellular phone) that provides users

with numerous smartphone functionalities that are familiar to, and expected from, users today but that were not found in the leading smartphones of that time. *Id.*

The claims of the '848 Patent are directed towards, among other things, allowing a user to register and reproduce pictures of a specific person in an organized manner and the ability to register a picture of a specific person and, thereafter, future pictures of that person will be associated with their likeness. EX2030, ¶62.

C. Person Of Ordinary Skill In The Art

A “person of ordinary skill in the art” in the field of the '848 Patent would have had a working knowledge of image recording and reproduction, and face recognition technology. EX 2030, ¶41. The person would have gained this knowledge through an undergraduate Bachelor of Science degree in Computer Science or Electrical Engineering or equivalent degree and at least one year of experience working in the field of image recording and reproduction. More education (*e.g.*, a Master's degree) or work experience in a relevant field may compensate for a deficit in one or the other relevant qualifications stated above. *Id.*

In the ID, the Board found that POSITA would have “a Bachelors' degree in electrical or computer engineering or a comparable field of study, with at least two to three years of experience in the field of image processing.” ID at 20-21. The Board also stated that “[a]dditional education could substitute for professional experience, and significant experience in the field could substitute for formal education.” *Id.*

Patent Owner does not believe the two definitions are materially different, and the arguments herein do not change under either definition. EX2030, ¶43.

D. Summary Of Petitioner's Proposed Grounds Of Unpatentability And The References Cited

The Petition raises three grounds of alleged obviousness based on the following four references: WO 2007/060980 ("Nozaki") (EX1006), U.S. Patent No. 9,665,597 ("Haitani") (EX1007), U.S. Patent Application No. 2004/0095376 ("Graham") (EX1008), and Korean Unexamined Patent Publication No. 2007/0017068A ("Kim") (EX1009).

Ground	'848 Patent Claim(s)	Type of Challenge	Primary Reference	Secondary Reference(s)
1	11, 12, 16, 17, 19, 20	Obviousness	Nozaki	Haitani
2	84	Obviousness	Nozaki	Haitani & Graham
3	84	Obviousness	Nozaki	Haitani & Kim

1. Nozaki (EX1006)

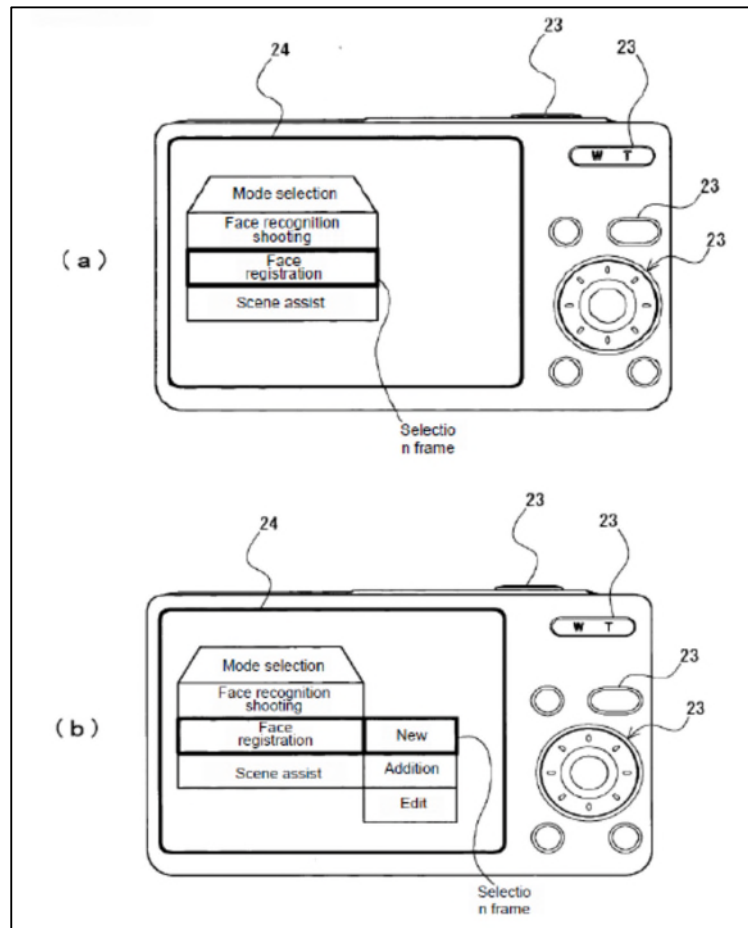
Nozaki, titled "Electronic Camera and Image Processing Device," was filed as an international patent application on November 22, 2006 and published on May 31, 2007.

Nozaki purportedly discloses fifty-seven different inventions in seven different embodiments. EX1006, ¶¶[0009]-[0038]. Nozaki discloses an electronic

camera with an imaging element, an image processing section, a face detecting section, a control section, a face image creating section, or a face recognition data creating section, and a recording section. EX2030, ¶92. The imaging element generates an imaging signal by photo-electrically converting the image of an object captured by an imaging optical system. The image processing section creates face registration image data from the image signal sent from the imaging element and creates through image data from the image signal. The face detecting section detects a face region on the imaging screen on the basis of the through image data. *Id.* The control section adjusts the imaging parameter of the imaging optical system according to the detected position of the face region. The face image creating section cuts out the image of the face region to create face image data. *Id.* The face recognition data creating section extracts a feature point of the face of the imaged person from the face region of the face registration image data and creates face recognition data according to the feature points. The recording section records the face recognition data or the face image data. EX1006, Abstract.

Nozaki describes a face registration mode, which is “a type of shooting mode with which a user can shoot the face of a registered person to generate face recognizing data.” *Id.* ¶ [0062]; EX2030, ¶93.

Nozaki's Figures 3(a) and 3(b), below, depict an example of a mode selection screen displayed on the liquid crystal monitor 24 of an electronic camera. EX1006 ¶¶ [0041], [0063], [0064].



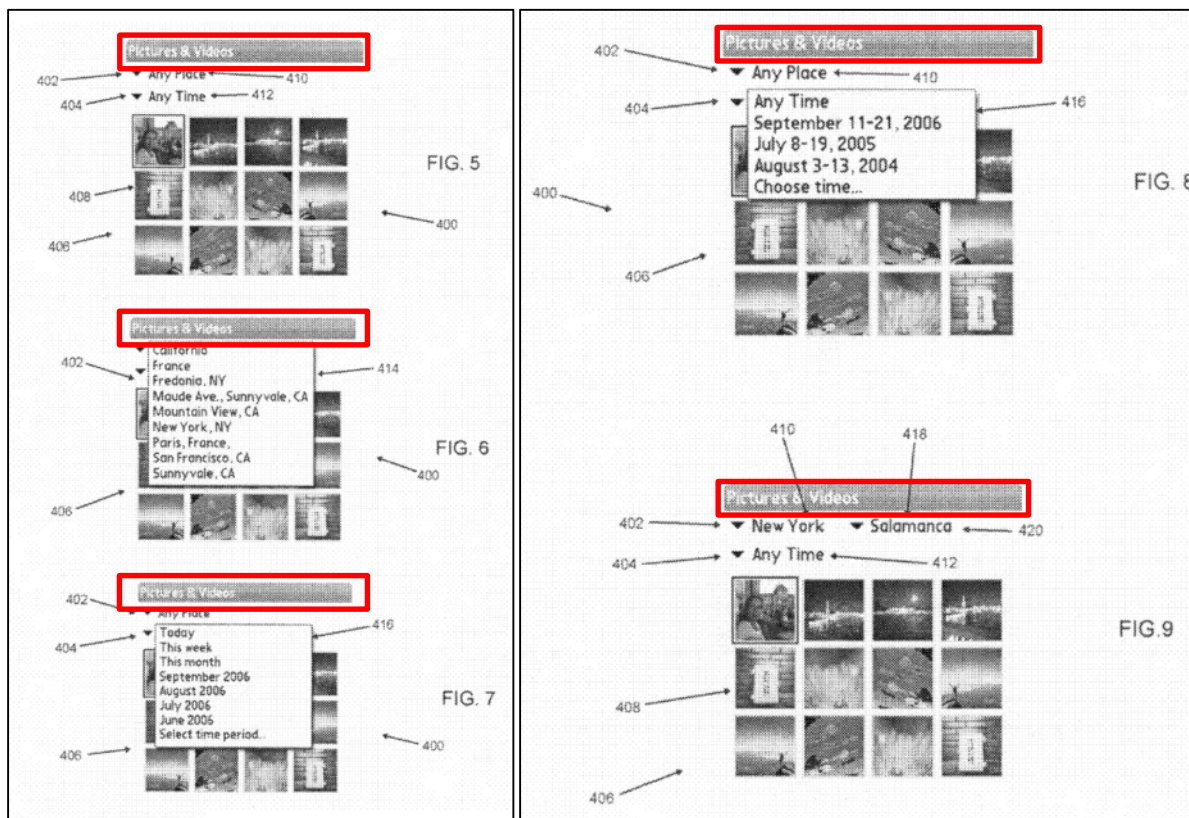
EX1006, Figs. 3(a)-(b); EX2030, ¶94.

2. Haitani (EX1007)

Haitani, titled "Method and System for Processing Images Using Time and Location Filters," was filed on March 22, 2007 and issued on May 30, 2017.

Haitani discloses a device that processes images (*e.g.*, sort, group, file, e-mail, etc.) using various filters. The filters relate to non-image data in the image files to

be processed, and may include time and location filters. EX1007, Abstract. As depicted below in Figures 5-9, Haitani's various filters are not separate modes or operational states of the portable hand-held device 10 similar, for example, to the different and distinct "face registration" and "scene assist" modes discussed in Figures 3(a)-(b) of Nozaki. EX2030, ¶97. Rather, a user choosing various filters in Haitani that display images or videos, operating in a single "review" mode—a user is, at all times, in the "Pictures & Video" interface review mode with the option of selecting one or more drop down menus that filter images or video:



See EX1007, Figs. 5-9; EX2030, ¶97.

3. Graham (EX1008)

Graham, titled "Techniques for Displaying Information Stored in Multiple Media Documents" was filed on June 18, 2003 and published on May 20, 2004. Graham discloses techniques for providing a graphical user interface (GUI) that displays a representation of stored information that may include information of one or more types. The displayed representation may include representations of information of the one or more types. The GUI enables a user to navigate and skim through the stored information and to analyze the contents of the stored information. The stored information may include information captured along the same timeline or along different timelines. EX1008, Abstract.

4. Kim (EX1009)

Kim, titled "Apparatus and Method for Partitioning Videos According to Topic," was filed on August 4, 2006 and published on February 8, 2007.

Kim discloses a way to partition a video according to topic. Kim discloses a start shot determining unit that detects a plurality of key frames using character information in a video sequence composed of a plurality of frames and determines the detected key frames as the start shot of each subject, and a topic list generating unit that generates a topic list using the starting shot of each topic. EX 1009, Abstract.

III. CLAIM CONSTRUCTION

It is Petitioner's burden to propose a construction and then explain how the construed claim is unpatentable under that proposed construction. See 37 C.F.R. § 42.104(b)(4). The Petition fails to meet this burden. Petitioner contends that "all claim terms in the Challenged Claims should be construed according to their plain and ordinary meaning to a POSITA." Pet. at 5. Petitioner offers no specific terms for construction. However, Petitioner is not applying the "plain and ordinary meaning" to certain claim terms, particularly "mode." Instead, to support its hindsight-driven analysis, Petitioner attempts to equate "filters" to the claimed "modes." As such, "mode" should be construed to resolve the proper meaning of "mode" which, as understood in the context of the '848 Patent and the prior art utilized by Petitioner, is "an operational state that a system has been switched to."

A. "Mode" (All Challenged Claims)

A person of ordinary skill in the art, consistent with the intrinsic record including the '848 Patent and its prosecution history, and the extrinsic evidence, would understand "mode" to mean "an operational state that a system has been switched to." EX2030, ¶72.

1. Intrinsic Evidence Supports Patent Owner's Construction Of Mode

Such a plain and ordinary meaning of the word "mode" is supported by the '848 Patent. *Id.*, ¶74. The '848 Patent describes a "standard reproducing mode,"

wherein “all chapters are sequentially reproduced in an order of smaller chapter ID, irrespective of the chapter importance level set to each chapter.” EX1001 at 9:20–28. The ’848 Patent also describes an “express reproducing mode,” wherein “only the chapters having the chapter importance level ‘3’ or smaller (only the chapters having the importance levels ‘1’ to ‘3’) are reproduced.” *Id.* at 9:29–45. The ’848 Patent further describes a “superexpress reproducing mode,” wherein “only the chapters having the chapter importance level ‘1’ are reproduced.” *Id.* at 9:46–54. The ’848 Patent explains that the user selects between the three different reproducing *modes*—standard, express, superexpress—from a menu. *Id.*, at 9:20-22 (“as reproduction is performed by selecting as a reproducing mode a ‘standard reproducing mode’ from the menu”), 9:29-30 (“as a user starts reproducing by selecting as the reproducing mode an ‘express reproducing mode’”), 9:46-47 (“as a user starts reproducing by selecting as the reproducing mode a ‘superexpress reproducing mode’”); *see also id.* at Figure 9. EX2030, ¶75.

A POSITA would understand that this disclosure in the ’848 Patent conveys that different modes that yield different operations may be selected and switched to, here, choosing specific chapters and playing back select information. EX2030, ¶76. A POSITA would not understand that this disclosure in the ’848 Patent “resembles” “filters” or the filtering search feature in, for example, Haitani, which merely separates data based on user input, as further described below in Section IV.

EX2030, ¶77.

2. Extrinsic Evidence Supports Patent Owner's Construction Of Mode

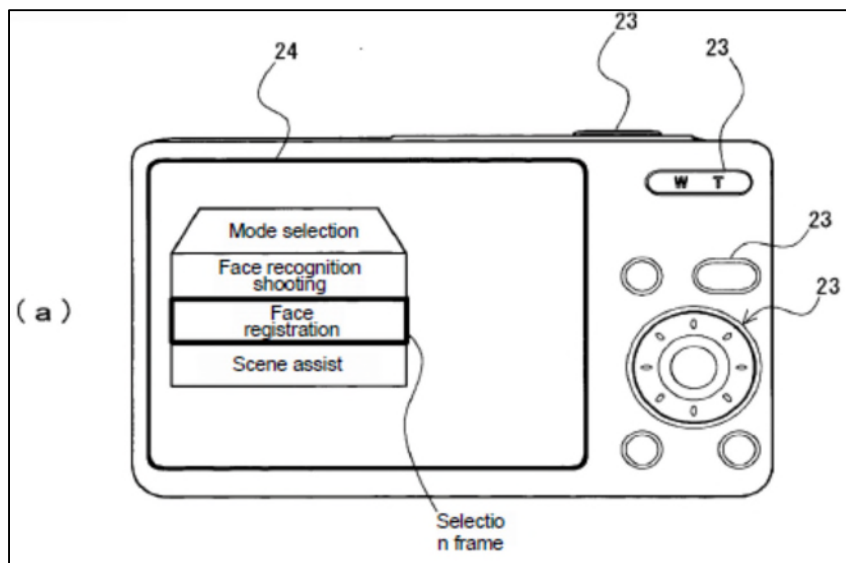
The extrinsic evidence also supports an understanding that mode means “an operational state that a system has been switched to.” *Id.* For example, multiple dictionary definitions distinguish “filter” and “mode” consistent with the '848 Patent and contrary to Petitioner's equating “filters” to the claimed “modes”:

Source	Filter Definition	Mode Definition
PC-Mag (EX2028]	“To select data. Filters use patterns (masks) against which data are compared and only matching data are "passed through," hence the concept of a filter.”	“an operational state that a system has been switched to.”
McGraw-Hill Dictionary of Scientific and Technical Terms, 6 th ed. (2003) (EX2029)	“[Comput Sci] A device or program that separates data or signals in accordance with specified criteria.” EX2029 at 799	“One of several alternative conditions or methods of operation of a device.” EX2029 at 1357

EX2030, ¶77.

Even the prior art at issue in this proceeding uses “mode” consistent with Patent Owner's construction. *Id.*, ¶78. For example, Nozaki differentiates between “face registration mode” and the “face recognizing shooting mode,” where the latter

is a different type of shooting mode selected by the user which performs a different function. EX1006 at [0084]. *Id.*, ¶80. When describing Figures 3(a)-(b), Nozaki discusses bringing up a “mode selection screen” on the liquid crystal display 24, and a user can select between a “face registration mode” and a “face recognizing shooting mode” (among other options) on the mode selection screen:



EX1006 at Figure 3(a), ¶¶[0063], [0085]; EX2030, ¶81. Depending on which mode the user selects, wholly different processing operations are performed by the CPU 26 in Nozaki. *Compare id.* at [0062]-[0083] (“Operations in Face Registration Mode”) and Figure 2 (flow chart relating to the Face Registration Mode) with [0084]-[0092] (“Operations in Face Recognizing Shooting Mode”) and Figure 7 (flow chart relating to the Face Recognizing Shooting Mode). EX2030, ¶82. In other words, Nozaki uses “mode” consistently with its plain and ordinary meaning as understood by a POSITA—*i.e.*, an operational state that a system has been switched

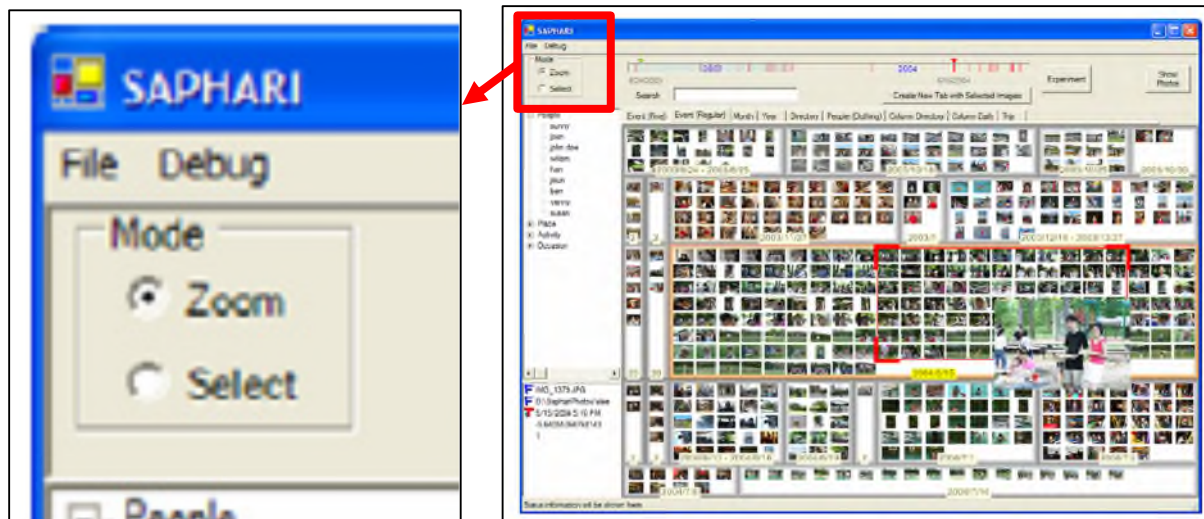
to. EX2030, ¶86.

Similar understandings of “mode” are present in Haitani and Graham, EX1007 at 18:59-60 (“In review mode, the portable device will organize the images into a virtual album created automatically....”); 20:66-21:1 (“The review mode also displays time and location filter menus that allow a user to filter through the images stored by the portable device.”); EX1008 at ¶¶[249]-[250] (“When GUI 300 is operating in ‘full update’ mode, the positions of thumbnail view area lens 314 and panel viewing area lens 322 are automatically updated....”); ¶[251] (“When GUI 300 is operating in ‘partial update’ mode, the positions of thumbnail view area lens 314 and panel viewing area lens 322 are not updated....”)

Haitani and Graham clearly use modes describe operational states of a device, and Haitani distinguishes between modes and filters and does not use them interchangeably. EX2030, ¶¶84, 86. Dr. Bederson agreed to a similar understanding on cross-examination. EX2031 at 27:19-23 (agreeing Graham discloses two modes); 32:13-21 (agreeing Haitani discloses various modes); 49:13-18 (agreeing Haitani distinguishes between filters and modes).

Even Petitioner's expert, Dr. Bederson, has used “mode” in accordance with its plain and ordinary meaning—*i.e.*, an operational state—and not interchangeably with “filter” as he attempts to do in these proceedings. EX2030, ¶144. For example, Dr. Bederson relies on his paper describing the “SAPHARI” system as motivation

for combining Nozaki and Haitani, both generally and with respect to limitation [8.i].
See EX1005, ¶¶68, 91 (citing to EX1012). Yet, that paper noted at least two different operational states—selection mode and zoom mode—that were distinct from the “clustering” or filtering teachings in the paper:



See EX1012, Fig. 3, page 20 (“Sometimes, users were confused between ‘**selection mode**’ which allows users to select images and ‘**zoom mode**’ which enable users to navigate a zoomable space.”) (emphasis added).¹ Dr. Bederson’s description of the “selection” and “zoom” modes of the “SAPHARI” system is in contrast to how he describes common filtering operations such as performed by Adobe Photoshop. See *id.* at page 4 (“[Adobe Photoshop] has a timeline showing the distribution of photos over time. The timeline has two sliding knobs and users can **filter** photos by the date

¹ All emphasis in quotations added throughout except where otherwise noted.

they were taken.”). EX2030, ¶144. Dr. Bederson testified similarly on cross examination:

I referred to the user interface operating in either selection mode or zoom mode....[I]f the user was in zoom mode, because the user had pressed the zoom button...using the mouse in the main area of the user interface could cause the interface to zoom, and if the user interface were in selection mode, because the user had pressed the select button within that mode box, then the user interface would react to the user using the mouse by selecting images.

EX2031 at 9:15-10:6.

The foregoing illustrates that a POSITA would not treat modes and filters the same and would understand “mode” to mean “an operational state that a system has been switched to.” EX2030, ¶¶72-86.

IV. GROUND 1: NOZAKI IN VIEW OF HAITANI DOES NOT RENDER CLAIMS 11-12, 16-17, AND 19-20 UNPATENTABLE

Petitioner fails to demonstrate that Nozaki alone anticipates or renders obvious challenged claims 11-12, 16-17, and 19-20. In an attempt to fill in the gaps of the deficiencies of Nozaki, Petitioner attempts to combine Nozaki with Haitani. However, Petitioner has failed to show by a preponderance of the evidence both that a POSITA would be motivated to combine Nozaki and Haitani and, even if the two references are combined, that the combination of Nozaki and Haitani discloses each element of challenged claims 11-12, 16-17, and 19-20. EX2030, ¶110.

A. A POSITA Would Not Have Found It Obvious To Combine Nozaki And Haitani For Claims 11-12, 16-17, And 19-20

Ground 1 fails because Petitioner has only stated vague, conclusory, and unsupported reasons to combine Nozaki and Haitani in its effort to show Claims 11-12, 16-17, and 19-20 are obvious. EX2030, ¶111. In so doing, Petitioner offers essentially two reasons why a POSITA would combine Nozaki and Haitani: (1) “Nozaki and Haitani are analogous art to the ’848 patent, and as a result a POSITA would have found it obvious to combine them for that reason alone. . . . Nozaki and Haitani also disclose devices with digital cameras that can capture and reproduce image/video files;” and (2) “The disclosures in Nozaki and Haitani are compatible and complementary to each other, and a POSITA would have been motivated to combine them for this additional reason. EX1005, ¶ 67.” This lack of articulated reasons for combining Nozaki and Haitani fails to meet Petitioner’s burden in showing a combination of Nozaki and Haitani would be obvious. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (requiring “articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”); *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004) (improper under the “as a whole” requirement of § 103 to “break an invention into its component parts (A+B+C), then find a prior art reference containing A, another containing B, and another containing C, and on that basis alone declare the invention obvious”).

First, merely because the '848 Patent discloses a “reproduction and reproducing apparatus” and Nozaki and Haitani each disclose digital cameras, a POSITA would not be motivated to combine Nozaki and Haitani. EX2030, ¶114. Under Petitioner's and Dr. Bederson's rationale, any two references that mention digital cameras could be potentially be combined even if those references solve different problems from each other (as is the case with Nozaki and Haitani) and/or the '848 Patent. A POSITA would not ignore the problems that prior art sought to solve in determining whether the two references could be analogous art. *Sanofi-Aventis Deutschland GmbH v. Mylan Pharms., Lts.*, 66 F4th. 1373, 1378 (Fed. Cir. 2023) (“Even if a reference is analogous to one problem considered in another reference, it does not necessarily follow that the reference would be analogous to the problems of the challenged patent.”)

Second, as to the second rationale, Petitioner offers nothing other than conclusory reasoning. EX2030, ¶115. Petitioner and Dr. Bederson state that “Nozaki uses face-recognition technology to organize registered individuals. [] Although Nozaki discloses reproducing image/video files based on stored information about those files (e.g., face-recognition data, time/date data, event data, etc.), Nozaki does not explore the ways that the recorded information can be used to tailor the reproduction search process to produce broader or narrower results. Haitani teaches how to achieve this objective by disclosing selectively reproducing image/video

information using combinations of filters based on data that the Nozaki device already generates, including face-recognition data, date/time information, and event data.” Pet. at 8. However, a POSITA would not be motivated to combine the teachings of Nozaki and Haitani because they are directed to solving different problems and use different technology and/or structures to solve these problems. EX2030, ¶116. The design requirements for Nozaki and Haitani are substantially different. *Id.* As Dr. Bederson concedes that Nozaki has no disclosure to sort images, nor contemplates the inclusion of such a method (*see id.* at ¶167), there is no reason that a POSITA would look to Haitani’s filters to purportedly solve a problem that Nozaki does not contemplate. Petitioner and Dr. Bederson have not considered the two references as a whole and have not accounted for these differences. EX2030, ¶116. Instead, Petitioner selected portions of each reference and used hindsight to assemble a new system without accounting for the different objectives and goals of the systems in Nozaki and Haitani. *Id.*

The Petition also does not explain how a POSITA would implement Haitani’s filtering feature in Nozaki’s device other than by the *ipse dixit* of Dr. Bederson. EX2030, ¶117. Dr. Bederson invents a purported need, describes some benefits in generalities (“improve the efficiency”), and claims Haitani’s filtering feature “could have easily been implemented in the Nozaki device.” EX1005, ¶68. But, describing potential improvements that are accomplished by the claims of the ’848 Patent is the

definition of hindsight. EX2030, ¶117. *See In re Oetiker*, 977 F.2d 1443, 1447 (Fed. Cir. 1992) (“The combination of elements from non-analogous sources, in a manner that reconstructs the applicant's invention only with the benefit of hindsight, is insufficient to present a prima facie case of obviousness.”). Neither Petitioner nor its expert attempts to explain such “easy” implementation techniques. Incorporating an entirely different function into a processor is hardly the result of “easy” implementation techniques, as further explained by Dr. Balakrishnan. EX2030, ¶117.

Petitioner's and Dr. Bederson's reliance on Haitani's filters does not provide motivation to a POSITA for combining Nozaki with Haitani for another reason. As more fully discussed below with respect to limitation [11.a], Haitani's filters are not modes and do not teach or disclose the first or second reproducing modes of challenged claims 11-12, 16-17, and 19-20. EX2030, ¶118. In addition, Dr. Bederson's cited publication (Ex. 1012) further cuts against any potential motivation to combine Nozaki with Haitani. *See* EX1005, ¶68; *see also id.* at ¶91 (citing EX 1012 for limitation [8.i]). EX2030, ¶118. Not only does Dr. Bederson's publication distinguish “mode” from “filter,” so does Haitani. EX2031 at 49:13-18 (agreeing Haitani distinguishes between filters and modes).

A POSITA would not look to combine Haitani with Nozaki. EX2030, ¶122.

B. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Haitani To Disclose Limitation [8.i] Of Claim 8.

Claims 11 and 12, which depend on Claim 8, are not unpatentable because Petitioner has failed to show that Nozaki in combination with Haitani discloses limitation [8.i] of Claim 8. EX2030, ¶123. A POSITA would not have found it obvious to combine Nozaki with Haitani to comprise a processor to “selectively reproduce the recorded image information which includes the registered specific person” as claimed in limitation [8.i]. *Id.* First, as set forth above in Section IV.A, Petitioner provides nothing but improper hindsight to combine Haitani with Nozaki. *Id.*, ¶124. The Petition states:

Although Nozaki does not expressly disclose that selecting one or more items from the list would enable a user to reproduce onscreen each image associated with the face registration data (i.e., the “face registration image data”), it would have been obvious to implement this feature in Nozaki in view of Haitani, which discloses the use of search filters—including filters based on face-recognizing data—to selectively display photographs of certain individuals on a device monitor.

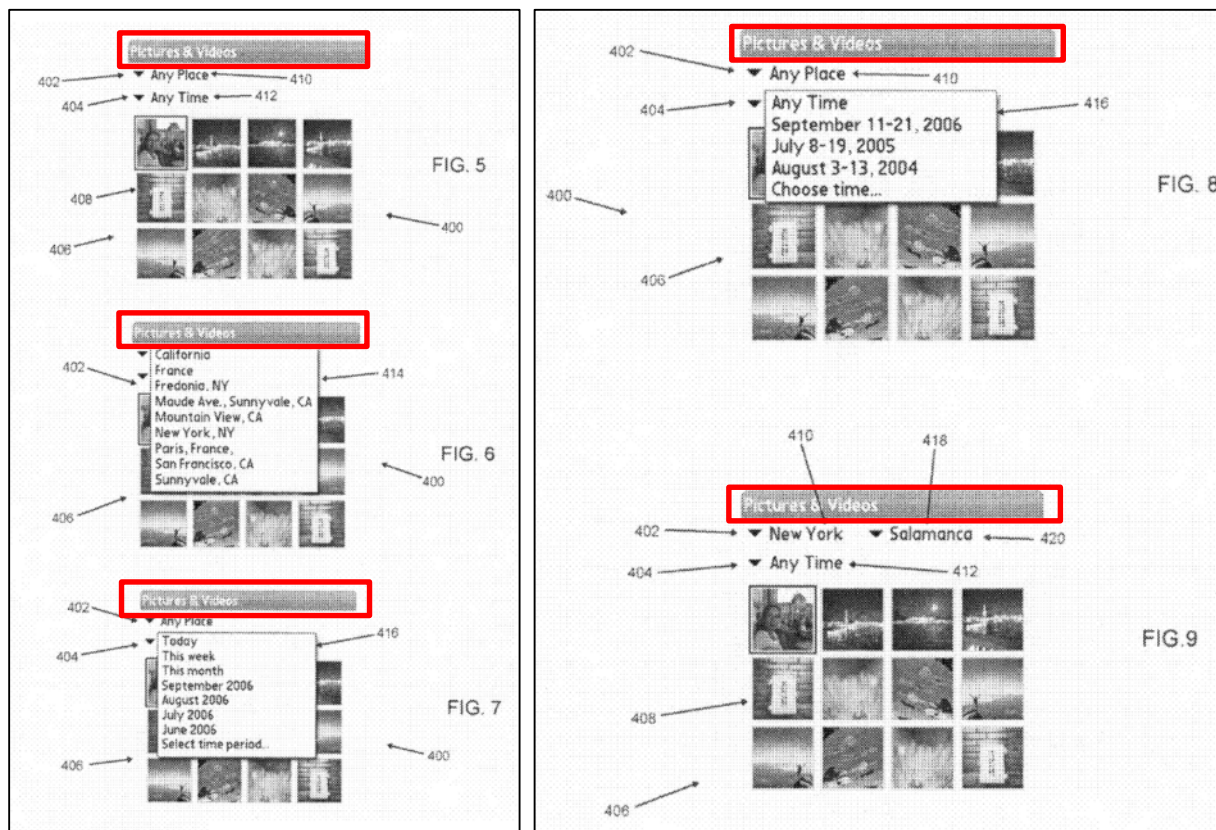
Pet. at 21. But a POSITA would not be motivated to look to or incorporate Haitani's filters to selectively reproduce an image. EX2030, ¶125. Petitioner's claim that “a POSITA would also recognize that Nozaki already implements a version of the ‘filter’ criteria that Haitani describes” is also unfounded. *Id.*, ¶126. Indeed, this contradicts Petitioner's statement in support of the proposed motivation to combine

rationale that “Nozaki does not explore the ways that the recorded information can be used to tailor the reproduction search process to produce broader or narrower results” and then cites to Haitani’s filters to disclose this deficiency. Pet. at 8; *see also* EX2005, ¶67. In other words, Petitioner and Dr. Bederson state that Nozaki **does not** have the filtering criteria in Haitani, so his hindsight-driven recasting of Nozaki for limitation [8.i] is unsupported and should be rejected. EX2030, ¶¶126-127.

C. Nozaki In View Of Haitani Does Not Disclose Limitation [11.a] Of Claim 11.

Neither Nozaki nor Haitani, alone or together, disclose a first **and** second reproducing mode for reproducing the image information as claimed in limitation [11.a]. EX2030, ¶128. Apart from noting that “Nozaki discloses a memory that stores program instructions for execution by a processor,” Petitioner does not cite to any other disclosure of Nozaki for limitation [11.a] and concedes that Nozaki alone does not meet this limitation. Pet. at 26 (*citing* EX1005, ¶95); EX2030, ¶129. Nozaki does not disclose limitation [11.a] as it does not disclose a first and second reproducing modes as claimed. Ex. 2030, ¶129. Rather, Petitioner focuses its argument on the various filters disclosed in Haitani and claims that those filters disclose the first and second reproducing modes in limitation [11.a]. EX2030, ¶130.

However, the different filters in Haitani are not two separate modes, *i.e.*, a first reproducing mode and a second reproducing mode as claimed. *Id.*, ¶131. Specifically, Haitani's filters are not operational states of the portable hand-held device 10 that may include a camera 12 to capture still images and movies. *Id.* Rather, as shown in Figures 5-9 in Haitani reproduced below, a user choosing various filters in Haitani to display images or videos is operating in, at most, a single “review mode” state—a user is, at all times, in the “Pictures & Video” user interface with the option of selecting one or more drop down menus that filter images or video:

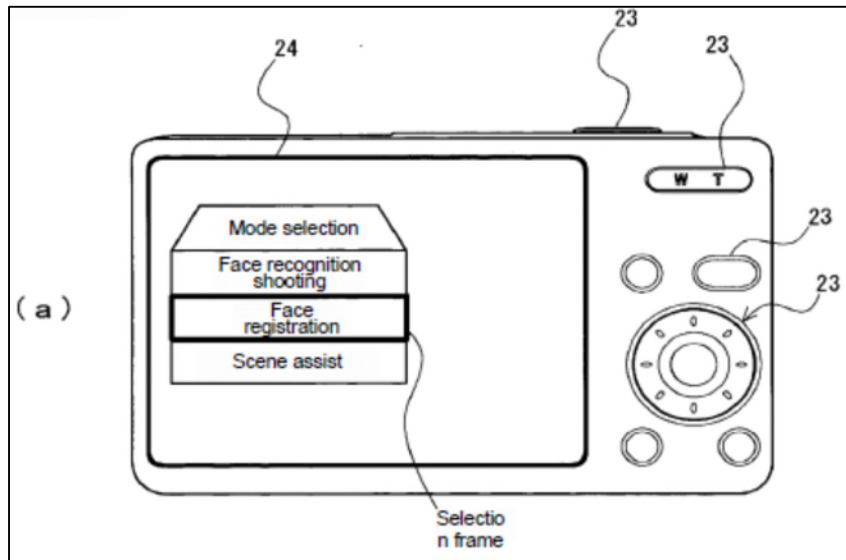


See Ex. 1007, Figs. 5-9; EX2030, ¶131. A POSITA would not have understood that selecting two different filtering options in drop down menus would satisfy the

claimed first and second reproducing modes. Ex. 2030, ¶131. As set forth immediately below, Petitioner's own evidence supports this conclusion. *Id.*

First, Petitioner's and Dr. Bederson's incorrect equating of filters and modes for limitation [11.a] stands in contrast to their understanding of "modes" when discussing Nozaki and the overall content of Nozaki. EX2030, ¶132. For example, in discussing limitations [8.g] and [8.h], Petitioner acknowledges that "Nozaki teaches that '[f]irst, the user sets a shooting mode of the electronic camera to a 'face registration mode' by using the operating member 23.'" Pet. at 13 (citing Ex. 1006, Fig. 2 (flowchart step S101), [0062]). Earlier in paragraph [0062], Nozaki states that "[t]he 'face registration mode' is a type of shooting mode." Ex. 1006, [0062].

As admitted by Dr. Bederson, Nozaki further differentiates between "face registration mode" and the "face recognizing shooting mode," where the latter is a different type of shooting mode selected by the user which performs a different function. *See id.* at [0084]; EX2031, at 19:19-23; EX2030, ¶133. For example, when describing Figures 3(a)-(b), Nozaki discusses a "mode selection screen" on the liquid crystal display 24, and a user can select between a "face registration mode" and a "face recognizing shooting mode" (among other options) on the mode selection screen:



See EX1006 at Figure 3(a), [0063], [0085]; EX2030, ¶134.

Depending on which mode the user selects, wholly different processing operations are performed by the CPU 26 in Nozaki. EX2030, ¶135; *compare* EX1006 at [0062]-[0083] (“Operations in Face Registration Mode”) and Figure 2 (flow chart relating to the Face Registration Mode) *with* [0084]-[0092] (“Operations in Face Recognizing Shooting Mode”) and Figure 7 (flow chart relating to the Face Recognizing Shooting Mode). Petitioner and Dr. Bederson acknowledge when analyzing Claim 84 that “Nozaki states that ‘[t]he input button of the operating member 23 accepts switching input, for example, shooting modes of an electronic camera (such as normal shooting mode, regeneration mode, face registration mode, and face recognizing shooting mode).’” Pet. at 39-40; EX1005, ¶146 (citing to Ex. 1006, [0049]); EX2030, ¶136; *see also* EX2031, at 25:21-26:8. In other words, Nozaki uses “mode” consistently with its plain and ordinary meaning as understood

by a POSITA—*i.e.*, an operational state that a system has been switched to. EX2030, ¶137.

Second, such a plain and ordinary meaning of the word “mode,” an operational state of a device, is supported by the '848 Patent. *See* Section III, *supra*. Dr. Bederson claims “the filtered search of Haitani *resembles* the ‘standard reproducing mode’ and ‘express reproducing mode’ disclosures of the '848 patent.” *See* EX1005, ¶95 (emphasis added). But a POSITA would not understand that this disclosure in the '848 Patent “resembles” the filtering search feature in Haitani, which merely separates data based on user input. EX2030, ¶141; *see also* Ex. 1001, 9:20-22; 9:29-30; 9:46-47; *see also id.* at Figure 9. Rather, POSITA would understand that this disclosure in the '848 Patent conveys that a user selects different modes that yield different operations, here, choosing specific chapters and playing back select information. EX2030, ¶141. On cross-examination, Dr. Bederson acknowledged Haitani's disclosure of multiple modes in which device 10 may operate (EX2031, at 32:4-33:22) and that Haitani distinguishes modes from filters (*id.* at 49:13-18). Simply put, Haitani's filters do not “resemble” modes. EX2030, ¶141.

Third, a POSITA's understanding of what is a “mode,” as claimed in limitation [11.a], is further supported by extrinsic evidence. For example, multiple dictionary definitions distinguish “filter” and “mode” consistent with the '848 Patent

and contrary to the Petition's application of filter. EX2030, ¶143. *See also* Section III, *supra*. As further explained above, even Dr. Bederson, when not advocating on behalf of Petitioner, uses "mode" in accordance with its plain and ordinary meaning—*i.e.*, an operational state—and not interchangeably with "filter." Ex. 1012 at Fig. 3, page 20. Dr. Bederson testified that Haitani's use of the word filter is consistent with the definition of filter posed as "something that separates data or signals in accordance with specified criteria." EX2031, at 38:16-39:20.

Fourth, in addition to the above evidence, the disclosure of Haitani *itself* confirms that that the filtering features fail to teach the first and second reproducing modes. EX2030, ¶145. Specifically, Haitani draws a clear distinction between the filtering and mode terms and used them accordingly. EX2030, ¶146. This was confirmed by Dr. Bederson at deposition. EX2031 at 49:13-18.

For example, Haitani refers to a "review mode" where "the portable device will organize the images into a virtual." EX1007, 18:59-60. Haitani states that "[t]he review mode also displays time and location filter menus that allow a user to filter through the images stored by the portable device." *Id.* at 20:66-21:1. Haitani further discloses that "[i]n a review mode, the portable device allows the user to create one or more virtual photo albums that use a filter relating to individuals identified in the images. The filter may be related to one person or may be related to multiple people such as a group preset by the user (e.g. a user's immediate family, a filter for high

school friends of the user, etc.).” *Id.* at 21:22-28; *see also id.* 21:6-15; EX2030, ¶147; EX2031, at 34:23-35:12; 40:12-44:8.

In addition, Haitani further uses the term “mode” in reference to operational states, noting that “[d]evice 10 may be arranged to operate in one or more position determination modes including, for example, a standalone mode, a mobile station (MS) assisted mode, and/or a MS-based mode.” *See id.* at 29:61-64; *see also id.* at 29:65-30:37 (describing the standalone mode, MS-assisted mode, and MS-based mode), 23:14-16 (describing a “camera mode” where the “device obtains location name information for the area in which the device is located from a remote database using the cellular transceiver”), 33:60-34:26 (describing switching a smartphone from “one mode to another mode (such as switching from a normal ringer mode to a meeting ringer mode” and a normal phone mode and a speakerphone mode). EX2030, ¶148. Thus, Haitani clearly distinguishes between modes and filters and does not use them interchangeably. *Id.*, ¶149.

In light of all of the evidence, including the passages from Haitani itself, Petitioner’s argument falls short when the Petition argues that “[a] POSITA would have understood that these modes of searching for images/videos are discrete from each other, and that using a single filter constitutes a reproducing mode that reproduces a broader range of images/videos for display than reproducing modes that combine the original filter with one or more additional filters” (Pet. at 26-27)

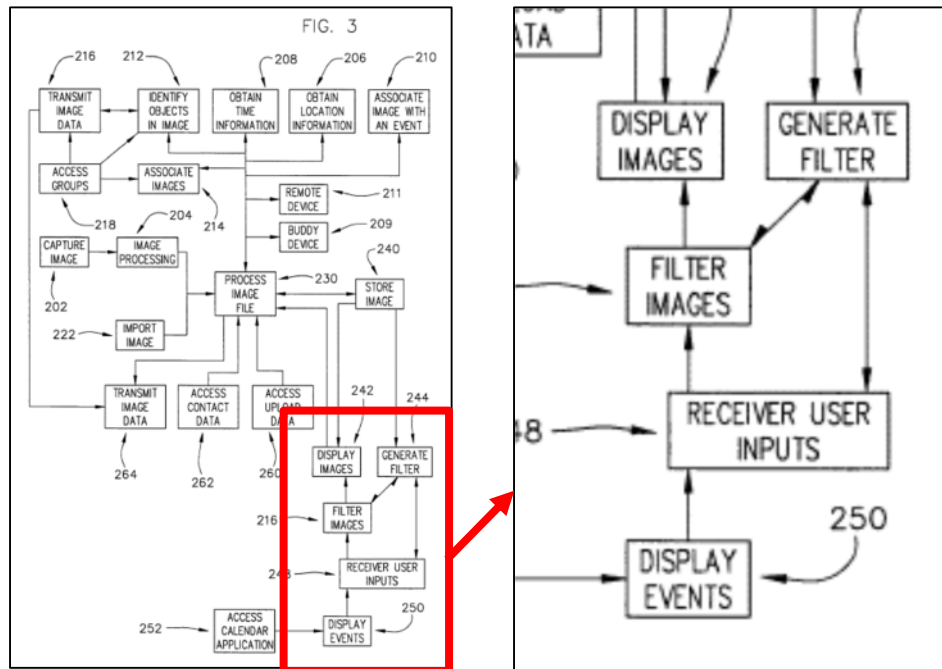
and “[a] POSITA would have understood Haitani to teach that a user may combine one or more of these additional filters with the face-recognition filter to employ a different reproducing mode that picks out a more narrowly focused set of images/videos” (*id.* at 27). EX2030, ¶150.

A POSITA would not treat modes and filters the same—Haitani itself confirms this—and would not conclude that the filters in Haitani teach or disclose the first and second reproducing modes as claimed in limitation [11.a]. Haitani explains various modes and those modes describe different operating states of the portable device whereas the filters do not. EX2030, ¶151. Dr. Bederson acknowledges this point when he referred to the filters as “features” not “modes” when discussing limitation [8.i]. *See* EX1005, ¶91 (“a POSITA would be motivated to add the filtered search and reproduction **feature** from Haitani to the Nozaki device, because adding such a feature would greatly improve the efficiency of searching for photos of registered individuals”) (emphasis added). EX2030, ¶151.

Nor does Haitani disclose any separate processing occurring in the processing circuit 32 or microprocessor 26 relating to the different filtering operations which would be expected of different modes. *Id.*, ¶152. Such a fact is not surprising as the different filters are only shown in relation to the same “review mode”—the Pictures & Videos interface in Figures 5-9. *Id.* Nor is there any evidence that the portable device operates differently depending on the filtering drop down options chosen as

opposed to a user switching between the one of the position determination modes (a standalone mode, a mobile station (MS) assisted mode, and/or a MS-based mode).

Id. Indeed, Figure 3 further supports that different filters are not modes:



EX1007, Fig. 3. Rather, Figure 3 shows the basic filter feature over a couple of generic boxes but such disclosure does not demonstrate that the filtering feature is the claimed first and second reproducing modes as claimed in limitation [11.a]. EX2030, ¶152.

Finally, a POSITA would have no incentive or motivation to incorporate Haitani's filtering functionality into Nozaki because doing so would still not disclose the claimed first and second reproducing modes. *Id.*, ¶153. The Petition claims that Nozaki "already suggests sorting the index images" (Pet. at 28), but such an assertion is refuted by the earlier claim that "Nozaki does not explore the ways that the

recorded information can be used to tailor the reproduction search process to produce broader or narrower results.” Pet. at 8; EX2030, ¶153. The Petition then summarily concludes, without any support, that implementing Haitani into Nozaki “would have required a minimal number of changes to Nozaki’s existing design.” *See id.* at 29. Neither the Petition nor Dr. Bederson identifies any changes or modifications to Nozaki that allegedly are within the skill in the art at the time. EX2030, ¶153.

Simply put, a POSITA would recognize that the Nozaki-Haitani combination, and specifically the filters in Haitani, does not disclose the first and second reproducing modes as claimed in limitation [11.a]. *Id.*, ¶154.

D. Nozaki In View Of Haitani Does Not Disclose Limitation [11.b] Of Claim 11.

Neither Nozaki nor Haitani, or the combination thereof, disclose a first and second reproducing mode for reproducing the image information as claimed in limitation [11.b]. *Id.*, ¶155. The Petition asserts “[a]s discussed above for limitation [11a], Haitani discloses different modes of reproducing data that use one filter or a combination of filters.” Pet. at 29. For the reasons expressed above in Section IV.C., Haitani fails to disclose a first and second reproducing mode. *Id.*, ¶157.

Limitation [11.b] adds a temporal element to the first and second reproducing modes—“wherein a reproducing time required for reproducing the image information under the first reproducing mode is shorter than a reproducing time

required for reproducing the image information under the second reproducing mode.” See EX1001, 16:29-33. The Petition claims this element is met through Haitani’s filters. Pet. at 29. However, neither Nozaki nor Haitani disclose claim element [11b]. EX2030, ¶159.

First, as set forth above with respect to limitation [11.a], Haitani’s filters are not modes and, thus, the combination of Nozaki and Haitani does not meet limitation [11.b] for that reason alone. EX2030, ¶160.

Second, even if the filters could be read as modes (and they cannot), both the Petition and Dr. Bederson provide nothing but a conclusory argument/opinion regarding the reproduction time for the first and second reproducing modes. There is no evidence within Haitani or any extrinsic evidence (*e.g.*, something that incorporates the filtering feature of Haitani) to demonstrate that the reproducing time for the first mode would be shorter than the second mode. EX2030, ¶161. There is nothing in Haitani to indicate any reproduction speed of the filtering operations, whether for one or multiple filters, let alone in the specifically claimed arrangement, but the Petition ignores that fact and are not supported by evidence from Haitani. *Id.*

In fact, Petitioner’s hindsight driven analysis is illustrated by assignment of the narrower search as the first mode and the broader search as the second mode. Pet. at 29; EX2030, ¶162. Petitioner’s assertion is wrong when it is argued (Pet. at 29) that the reproducing time for the first mode (narrower search) would be shorter

than a reproducing time for a second mode (broader search) because the first mode reproduces fewer image/video files than the second mode. EX2030, ¶162. Such an argument fails to consider the totality of the filtering and display process. *Id.* The time taken to filter data and display results is dependent on many factors including the type of data and how it's structured and indexed and cannot simplistically be attributed to the number of data items ultimately displayed as per the Petition's and Dr. Bederson's reductionist argument. *Id.*

Moreover, the Petition's reliance on the reproduction modes in the '848 Patent (*e.g.*, the standard, express, superexpress reproducing modes) does not support the position for the same reasons discussed above for limitation [11.a]. Pet. at 29. Namely, a POSITA would understand that the disclosure in the '848 Patent for the three different reproduction modes conveys that a user selects different modes that yield different operations such as choosing specific chapters and playing back select information. EX2030, ¶163. A POSITA would not understand that this disclosure in the '848 Patent as being "consistent" with the filtering search feature in Haitani, which merely separates data based on user input. *Id.*

In sum, a POSITA would recognize that the Nozaki-Haitani combination, and specifically the filters in Haitani, does not disclose the first and second reproducing modes as claimed in limitation [11.b]. Nor has Petitioner provided any evidence that

Haitani's filtering is faster/slower depending on which filters are applied. EX2030, ¶¶163-164.

E. Nozaki In View Of Haitani Does Not Disclose Limitation [11.c] Of Claim 11.

Neither Nozaki nor Haitani disclose a first and second reproducing mode for reproducing the image information as claimed in limitation [11.c]. For the reasons expressed above in Section IV.A, Haitani fails to disclose a first and second reproducing mode. EX2030, ¶165. Limitation [11.c] adds a limitation related to the image information in the first and second reproducing modes—"the image information reproduced under the second mode includes the image information reproduced under the first reproducing mode and other of the image information not reproduced under the first reproducing mode." *See* EX1001, 16:33-37.

The Petition again argues this element is met through Haitani's filters. Pet. at 30. However, Haitani's filters are not modes and, thus, the combination of Nozaki and Haitani does not meet limitation [11.c] for that reason alone. EX2030, ¶¶169-170.

Regardless, even if the filters could be read as modes (and they cannot), the Petition and Dr. Bederson provide nothing but a conclusory argument/opinion regarding the content of the first and second reproducing modes as claimed. EX2030, ¶171. They point to no evidence within Haitani or extrinsic evidence to demonstrate

that the purportedly broader second reproducing mode includes images/videos in the first reproducing mode plus other image information not in the first mode as claimed.

Id. The narrower filter identified by Dr. Bederson comprising two filters—a face recognizing data plus a date/time range—could comprise the entire universe of face-recognition images in the broader filter, *i.e.*, all of the stored images were taken of a single person on a single day (*e.g.*, Christmas Day). *Id.* In that hypothetical, which Haitani does not preclude, the broader filter would not have any additional or other images/videos that are not in the narrower filter—there would be complete overlap between the two sets of images. On cross-examination, Dr. Bederson admitted this. EX2031 at 60:3-12. The Petition ignores that fact and is not supported by evidence from Haitani. EX2030, ¶171.

In sum, a POSITA would recognize that the Nozaki-Haitani combination, and specifically the filters in Haitani, does not disclose the first and second reproducing modes as claimed in limitation [11.c]. *Id.*, ¶¶172-173.

F. Nozaki in view of Haitani Does Not Disclose Limitation [12.a] of Claim 12.

Neither Nozaki nor Haitani, or the combination thereof, disclose a first and second reproducing mode, let alone a third reproducing mode, for reproducing the image information as claimed in limitation [12.a]. *Id.*, ¶174-176. Again the Petition relies on Haitani's filters to disclose the third reproducing mode. In summary fashion

Petitioner argues: “For example, a first mode might use face registration data as a filter, a second mode might add date/time as an additional filter, and a third mode might further add a third filter (e.g., location or events). EX1005, ¶ 103. A POSITA would have known that each mode would generate broader or narrower results.”

As set forth above, Haitani's filters are not modes, and thus do not meet this limitation even if combined with Nozaki. EX2030, ¶¶174-176. Even if the filters could be read as modes (and they cannot), the Petition is entirely conclusory regarding what constitutes the first, second, and third reproducing modes as claimed. *Id.*, ¶180. Indeed, on cross-examination Dr. Bederson admitted he is not picking any specific filter, but relies on Haitani's disclosures of filters generally. EX2031 at 62:18-25. This is problematic because, even if the filters were modes, it is clear that the Petition and Dr. Bederson fail to maintain any cohesive theory as to which filters are which specific modes and thus fails to map their theories to the claim language:

Q: [Y]ou're not limiting yourself to a particular filter as applied to each respective mode?

A: That's right. I'm relying on Haitani's general use of filtering, and I provide some examples of possible filters that a person of skill in the art reading Haitani would understand.

EX2031 at 62:18-25.

A POSITA would recognize that the Nozaki-Haitani combination, and specifically the filters in Haitani, does not disclose the first and second reproducing modes as claimed in limitation, nor would a third reproducing mode be obvious to POSITA in light of any Nozaki-Haitani combination. EX2030 at ¶183.

G. Nozaki In View Of Haitani Does Not Disclose Limitation [12.b] Of Claim 12.

Neither Nozaki nor Haitani disclose a first and second reproducing mode, let alone a third reproducing mode, for reproducing the image information as claimed in limitation [12.b]. Limitation [12.b] adds a temporal element to the first and second reproducing modes—“wherein a reproducing time required for reproducing the image information under the third reproducing mode is longer than the reproducing time required for reproducing the image information under the second reproducing mode.” See EX1001, 16:45-49; EX2030, ¶183.

Petitioner and Dr. Bederson frame their argument for element [12b] as follows: A POSITA would have known that each mode would generate broader or narrower results, with the broadest mode being a “third” mode having the characteristics recited in this limitation, i.e., a reproducing time longer than the second mode. But this is nothing but vague and conclusory. EX2030, ¶189. No evidence is cited to in Haitani or elsewhere to demonstrate the reproducing time for the third reproduction mode is longer than the second reproducing mode. *Id.* There

is nothing in Haitani to indicate any reproduction speed of the filtering operations, whether for one or multiple filters, let alone in the specifically claimed arrangement.

Id.

Again, similar to the analysis in element [11.b], Petitioner's hindsight driven analysis is illustrated by the shifting assignment of the narrower search as the first mode and the broader search as the third mode. Pet. at 31. Petitioner's assertion is wrong when it is argued (Pet. at 31) that a "POSITA would have known that each mode would generate broader or narrower results, with the broadest mode being a "third" mode having the characteristics recited in this limitation, i.e., a reproducing time longer than the second mode. EX1005, ¶104." *Id.* Such an argument fails to consider the totality of the filtering and display process. EX2030, ¶191. The time taken to filter data and display results is dependent on many factors including the type of data and how it's structured and indexed and cannot simplistically be attributed to the number of data items ultimately displayed as per the Petition's and Dr. Bederson's reductionist argument. *Id.*

Moreover, on cross-examination Dr. Bederson did an about-face regarding his element [12b] opinions when he testified:

A: The three modes I gave examples for regarding limitation 12(a) would actually have to be reversed to meet the limitation 12(b). So the longer one, the third mode, would be only one filter, not all three filters. I just

want to make it clear that filters 1, 2 and 3 from 12(a) were examples that met 12(a), but if you want to use those same examples for 12(b), then the third mode would have to apply to the example where there was only one filter, not all three filters.

Q: So in 12(a), you characterize the first mode as a face registration mode, but that would have to be the third mode in element 12(b)?

A: If we want to use those particular examples in 12(b), then, yes, that's right.

EX2031 at 65:11-66:7; EX2030, ¶190. The Federal Circuit has made clear that a “word or phrase used consistently throughout a claim should be interpreted consistently.” *Phonometrics, Inc. v. N. Telecom Inc.*, 133 F.3d 1459, 1465 (Fed. Cir. 1998); *see also Digital Biometrics, Inc. v. Identix, Inc.*, 149 F.3d 1335, 1345 (Fed. Cir. 1998) (“whatever interpretation we assign should encompass both uses because the same word appearing in the same claim should be interpreted consistently”). So too when applying prior art to such claims. Petitioner and Dr. Bederson's fluid assignment of the first, second, and third modes throughout the Petition highlights their hindsight-driven analysis when attempting to combine Nozaki and Haitani. EX2030, ¶191.

Petitioner and Dr. Bederson's reliance on the reproduction modes in the '848 Patent (*e.g.*, the standard, express, superexpress reproducing modes) do not support

his opinions for the same reasons set forth above. See EX1005, ¶104. Namely, a POSITA would understand that the disclosure in the '848 Patent for the three different reproduction modes conveys that a user selects different modes that yield different operations such as choosing specific chapters and playing back select information. EX2030, ¶192. A POSITA would not understand that this disclosure in the '848 Patent as being "consistent" with the filtering search feature in Haitani as claimed by Dr. Bederson (EX1005, ¶104), which merely separates data based on user input. *Id.*

In sum, a POSITA would recognize that the Nozaki-Haitani combination, and specifically the filters in Haitani, does not disclose the first and second reproducing modes as claimed in limitation [12.b]. *Id.*, ¶193.

H. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Haitani To Disclose Limitations [13.h]-[13.j] Of Claim 13

A POSITA would not have found it obvious to combine Nozaki with Haitani to comprise a processor configured according to limitations [13.h]-[13.j]. EX2030, ¶195. Petitioner and Dr. Bederson largely refer back to prior sections for their analysis for limitations [13.h]-[13.j]. Similarly, Patent Owner incorporates Section IV.B above relating to limitation [8.i]. Additionally, in limitations [13.h]-[13.j], Petitioner and Dr. Bederson reference Haitani's filters and forward additional, unsupported and hindsight-driven opinions regarding why a POSITA would

incorporate the Haitani filters into Nozaki to teach limitations [13.h]-[13.j]. EX2030, ¶¶195-198.

I. Nozaki In View Of Haitani Does Not Disclose Limitations [16.a]-[16.c] Of Claim 16

For limitation [16.a], Petitioner and Dr. Bederson only cross-reference arguments for claim element [11.a] in Section VI.C.2 of the Petition and Section IX.C.2. of Dr. Bederson's declaration. Neither provide any additional arguments or opinions for limitation [16.a]. Accordingly, the reasons expressed above as to why the combination of Nozaki in view of Haitani does not disclose claim element [11.a] are equally applicable to claim element [16.a] and they are incorporated herein by reference. EX2030, ¶199.

For limitation [16.b], Petitioner and Dr. Bederson again only cross-reference arguments for claim element [11.b] in the Petitioner's Section VI.C.2. and in Section IX.C.3 of Dr. Bederson's declaration. Neither provide any additional arguments or opinions for limitation [16.b]. Accordingly, the reasons expressed above as to why the combination of Nozaki in view of Haitani does not disclose claim element [11.b] are equally applicable to claim element [16.b] and they are incorporated herein by reference. EX2030, ¶200.

For limitation [16.c], the Petition and Dr. Bederson only cross-reference arguments for claim element [11.c] in Section VI.C.2. of the Petition and Section

IX.C.2 of Dr. Bederson's declaration. They do not provide any additional arguments or opinions for limitation [16.c]. Accordingly, the reasons expressed above as to why the combination of Nozaki in view of Haitani does not disclose claim element [11.c] are equally applicable to claim element [16.c] and are incorporated herein by reference. EX2030, ¶201.

In sum, the combination of Nozaki and Haitani does not disclose each element for challenged claim 16. *Id.*, ¶202.

J. Nozaki In View Of Haitani Does Not Disclose Limitations [17.a]-[17.b] Of Claim 17

For limitation [17.a], Petitioner only cross-references arguments for claim element [12.a] in Section VI.D.2. Pet at 35. No additional arguments are provided for limitation [17.a]. Accordingly, the reasons expressed above as to why the combination of Nozaki in view of Haitani does not disclose claim element [12.a] are equally applicable to claim element [17.a] and are incorporated herein by reference. EX2030, ¶203.

For limitation [17.b], Petitioner only cross-references arguments for claim element [12.b] in Section VI.D.3. Pet at 35. Accordingly, the reasons expressed above as to why the combination of Nozaki in view of Haitani does not disclose claim element [12.b] are equally applicable to claim element [17.b] and are incorporated herein by reference. *Id.*, ¶204.

In sum, the combination of Nozaki and Haitani do not disclose each element for challenged claim 17. *Id.*, ¶205.

K. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Haitani To Disclose Limitations [18.g]-[18.i] Of Claim 18

A POSITA would not have found it obvious to combine Nozaki with Haitani to comprise a processor configured according to limitations [18.g]-[18.i]. *Id.*, ¶206. Petitioner's arguments for limitations [18.g]-[18.i] only cross references Sections VI.E.9-11. Pet. at 35-36. Accordingly, for the reasons set forth above as to why the combination of Nozaki and Haitani does not disclose limitations [13.h]-[13.j]. EX2030, ¶207.

In sum, a POSITA would not be motivated to combine Nozaki with Haitani to teach element [8.i] and Section IV.B are equally applicable to limitations [18.g]-[18.i]. Specifically, a POSITA would not be motivated to incorporate the filters of Haitani into Nozaki. Accordingly, a POSITA would not be motivated to combine Nozaki with Haitani to teach limitations [18.g]-[18.i]. EX2030, ¶¶208-209.

L. Nozaki In View Of Haitani Does Not Disclose Limitations [19.a]-[19.c] Of Claim 19

Petitioner only cross-references arguments for claim element [11.a] in Section VI.C.2. Petitioner's arguments for limitation [19.a] only cross-reference arguments for claim element [11.a] in Section VI.C.2 of the Petition. Pet. at 36. Petitioner does not provide any additional arguments or opinions for limitation [19.a]. Accordingly,

the reasons expressed above in Section IV.C as to why the combination of Nozaki in view of Haitani does not disclose claim element [11.a] are equally applicable to claim element [19.a] and are incorporated herein by reference. EX2030, ¶210.

For limitation [19.b], Petitioner only cross-references arguments for claim element [11.b] in Section VI.C.3. Petitioner's arguments for limitation [19.b] only cross-reference arguments for claim element [11.b] in Section VI.C.3 of the Petition. Pet. at 36. Petitioner does not provide any additional arguments or opinions for limitation [19.b]. Accordingly, the reasons expressed above in Section IV.D as to why the combination of Nozaki in view of Haitani does not disclose claim element [11.b] are equally applicable to claim element [19.b] and are incorporated herein by reference. EX2030, ¶211.

For limitation [19.c], Petitioner only cross-references arguments for claim element [11.c] in Section VI.C.4. Petitioner's arguments for limitation [19.c] only cross-reference arguments for claim element [11.c] in Section VI.C.4 of the Petition. Pet. at 36. Petitioner does not provide any additional arguments or opinions for limitation [19.c]. Accordingly, the reasons expressed above in Section IV.E as to why the combination of Nozaki in view of Haitani does not disclose claim element [11.c] are equally applicable to claim element [19.c] and are incorporated herein by reference. EX2030, ¶212.

In sum, the combination of Nozaki and Haitani does not disclose each element for challenged claim 19. *Id.*, ¶213.

M. Nozaki In View Of Haitani Does Not Disclose Limitations [20.a]-[20.b] Of Claim 20

Petitioner only cross-references arguments for claim element [12.a] in Section VI.D.2. Petitioner's arguments for limitation [20.a] only cross-reference arguments for claim element [12.a] in Section VI.D.2 of the Petition. Pet. at 36. Petitioner does not provide any additional arguments or opinions for limitation [20.a]. Accordingly, the reasons expressed above in Section IV.F as to why the combination of Nozaki in view of Haitani does not disclose claim element [12.a] are equally applicable to claim element [20.a] and are incorporated herein by reference. EX2030, ¶214.

Petitioner also only cross-references arguments for claim element [12.b] in Section VI.D.3. Petitioner's arguments for limitation [20.b] only cross-reference arguments for claim element [12.b] in Section VI.D.3 of the Petition. Pet. at 36. Petitioner does not provide any additional arguments or opinions for limitation [20.b]. Accordingly, the reasons expressed above in Section IV.G as to why the combination of Nozaki in view of Haitani does not disclose claim element [12.b] are equally applicable to claim element [20.b] and are incorporated herein by reference. EX2030, ¶215.

In sum, the combination of Nozaki and Haitani does not disclose each element for challenged claim 20. *Id.*, ¶216.

N. Petitioner Fails To Show Nozaki In View Of Haitani Discloses Limitations [16.a], [17.a], [19.a], and [20.a]

In addition to the reasons set forth above in Sections IV.I-M with respect to Claims 16-17,19-20, Petitioner has failed to show by a preponderance of the evidence that Claims 16-17,19-20 are unpatentable because Petitioner has offered no proof for limitations [16.a],[17.a],[19.a], and [20.a] that Nozaki in view of Haitani discloses a “reproducer to selectively and *sequentially* reproduce the image information picked out based on the predetermined condition in a reproducing mode set from one of a first reproducing mode and a second reproducing mode....” Petitioner completely glosses over these limitations by its reference back to limitations [11.a] and [12.a], respectively. This failure of proof is fatal to Petitioner’s analysis for Claims 16-17, 19-20. *See* EX2030, ¶¶199,203,210,214.

V. GROUND 2: NOZAKI IN VIEW OF HAITANI IN FURTHER VIEW OF GRAHAM DOES NOT RENDER CLAIM 84 OBVIOUS

For Ground 2, neither the Petitioner nor Dr. Bederson demonstrate that Nozaki alone anticipates challenged claim 84. EX2030, ¶217. In an attempt to fill in the gaps of the deficiencies of Nozaki, Petitioner and Dr. Bederson have failed to show that it would have been obvious to combine Nozaki with Haitani and/or Graham. Even if combining Nozaki with Haitani and Graham was obvious, Petitioner and Dr.

Bederson have failed to show that the combination of Nozaki, Haitani, and Graham disclose each element of challenged claim 84. *Id.*

A. A POSITA Would Not Have Found It Obvious To Combine Nozaki, Haitani, And Graham For Claim 84

Ground 2 initially fails because Petitioner and Dr. Bederson have stated only vague, conclusory, and unsupported reasons to combine Nozaki, Haitani, and Graham to render obvious challenged claim 84. Pet. at 37-38; *see also* Ex. 1005, Section X(A). EX2030, ¶218. Petitioner claims that Graham, Nozaki and Haitani are compatible with and complementary to each other, and a POSITA would have been motivated to combine them for this additional reason. Petitioner again focuses on Haitani's search filters but, as explained above in Sections III and IV.A-C, Haitani's filters are not modes and do not teach or disclose the first, second, or third reproducing modes of challenged claims 11-12, 16-17, and 19-20. Thus, a POSITA would not be motivated combine Haitani with Nozaki. EX2030, ¶220.

Regarding Graham, the Petition is unclear as to whether it argues that a POSITA would have allegedly found it obvious to combine Graham with the Nozaki-Haitani combination, or obvious to combine Graham with only Nozaki. *Id.*, ¶221. It states, "A POSITA would have also found it obvious to modify the Nozaki device to incorporate the disclosures in Graham, which are directed to searching for and reproducing specific segments within individual video files." Pet. at 37-38; Ex.

1005, ¶141. Petitioner and Dr. Bederson appear to presume that Graham's alleged method of segmenting videos could be compatible with Nozaki alone (not the Nozaki-Haitani combination that Graham is being added to) but, again, there is no support for such a statement. EX2030, ¶221.

Petitioner's argument for a Nozaki-Haitani-Graham combination is incorrect because the design requirements for Nozaki, Haitani, and Graham are substantially different. *Id.*, ¶222. In addition, a POSITA would not be motivated to combine the teachings of Nozaki, Haitani, and Graham because they are directed to solving different problems and use different structures to solve these problems. *Id.* Petitioner and Dr. Bederson have not considered the three references as a whole and has not accounted for these differences. Instead, they select portions of each reference and use hindsight to assemble a new system without accounting for the different objectives and goals of the systems in Nozaki, Haitani, and Graham. *Id.*

The Petition also fails to explain how a POSITA would implement the video-segmenting from Graham in a portable device like Nozaki, let alone the combination of Nozaki-Haitani to which Graham is being added. *Id.*, ¶223. Instead, Petitioner and Dr. Bederson invent a purported need, describe some benefits in generalities ("improve the efficiency"), and claim Graham's video-segmenting methods "could have easily been implemented in the Nozaki device." Pet. at 38. But describing potential improvements that are accomplished by the claims of the '848 Patent is the

definition of hindsight. EX2030, ¶223. Neither Petitioner nor its expert attempts to quantify such “easy” implementation techniques. Implementing an entirely different function on a processor cannot necessarily be expected to be easy. *Id.*

For all of the foregoing reasons, a POSITA would not combine Nozaki, Haitani, and Graham. *Id.*, ¶224.

B. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Haitani To Disclose Limitation [84.c.vii] Of Claim 84

A POSITA would not have found it obvious to combine Nozaki with Haitani to comprise a processor that can “selectively reproduce the recorded image which includes the registered specific person” as claimed in limitation [84.c.vii]. EX2030, ¶225. Petitioner's analysis for limitation [84.c.vii] only cross references Section VI.B.10. Pet. at 41. For the same reasons discussed above with respect to limitation [8.i] for the Nozaki-Haitani combination a POSITA would not be motivated to combine Nozaki with Haitani to teach element [8.i] and Section IV.B is equally applicable to limitation [84.c.vii]. Specifically, a POSITA would not be motivated to incorporate the filters of Haitani into Nozaki. Accordingly, a POSITA would not be motivated to combine Nozaki with Haitani to teach limitation [84.c.vii]. EX2030, ¶¶226-228.

C. A POSITA Would Not Have Found It Obvious To Combine Nozaki with Haitani to Disclose Limitation [84.d] of Claim 84

A POSITA would not have found it obvious to combine Nozaki with Haitani to disclose “a touch panel adhered to a screen of the display, wherein the first setting mode and the second setting mode are each selected using the touch panel” as claimed in limitation [84.d]. EX2030, ¶229. Petitioner and Dr. Bederson concede that Nozaki does not disclose this limitation in full. Pet. at 42-44; EX1005, ¶157.

Dr. Bederson notes that Haitani discloses a touch panel and opines that “A POSITA would have known—with or without the disclosures in Haitani—that Nozaki’s display and operating member configuration could be modified to be a touch-screen interface. Such a modification would have been a matter of design choice, and would have required a simple substitution within the skill of a POSITA.” *See id.* This is incorrect. EX2030, ¶231. Haitani’s disclosure of a touch panel was in the context of a portable handheld device, such as a cell phone. *See* EX1006, 2:9-11. That is not surprising considering that the assignee of Haitani is Qualcomm, one of the—if not the—biggest cell phone developers when the application for Haitani was filed (March 22, 2007). EX2030, ¶232. However, there is nothing to suggest that a POSITA would use a touch screen application in Nozaki. Nozaki is an electronic camera, which has a priority date tracing back to November 25, 2005 (almost an entire year earlier than Haitani’s earliest date of December 5, 2006), and its applicant

was Nikon Corporation, a leader in digital camera, not cell or smartphone technology. Indeed, it appears that Nikon did not incorporate touch screen technology into its digital cameras until early 2009, well after the priority date of the '848 Patent (May 19, 2008). EX2030, ¶232.

In addition, a POSITA would not be motivated to combine the touch panel of Haitani into Nozaki because they are directed to solving different problems and use different structures to solve these problems. *Id.*, ¶233. Petitioner has not considered the references as a whole and has not accounted for these differences. Instead, Petitioner selected portions of each reference and used hindsight to assemble a new system without accounting for the different objectives and goals of the systems in Nozaki and Haitani. *Id.* Petitioner's claim that such a combination would be "more intuitive for users" is pure speculation and further hindsight that is not supported by any evidence. *Id.*

Accordingly, a POSITA would not be motivated to combine Nozaki with Haitani to teach limitation [84.d]. *Id.*, ¶234.

D. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Graham To Disclose Limitation [84.h.i] Of Claim 84

A POSITA would not have found it obvious to combine Nozaki with Graham to comprise a processor that "automatically sets a plurality of sections corresponding to the video information of the scene" as claimed in limitation [84.h.i]. EX2030,

¶235. Petitioner concedes that Nozaki does not disclose this limitation and uses Graham to attempt to fill in the gaps. Pet. at 47-50. But Petitioner errs in attempting to combine Graham to only Nozaki, not the Nozaki-Haitani combination (or Nozaki alone within that combination) that Petitioner relies on to disclose limitations [84.pre]-[84.h] and [84.i]. *Compare* Pet. at 47-50 with 38-46; *see also* EX2030, ¶237. In other words, the Petition uses two different two-reference combinations (Nozaki-Haitani and Nozaki-Graham) to purportedly disclose each of the limitations of claim 84 but does not provide any reasoning or motivation that a POSITA would look to combine all three references to disclose claim 84 in full. Petitioner's piecemeal analysis should be rejected for this reason alone. EX2030, ¶237.

Moreover, the Petition offers nothing but improper hindsight to combine Graham with only Nozaki (not the Nozaki-Haitani combination). Pet. at 47-50; *see also* EX1005 at ¶¶165-167. EX2030, ¶238. Although Graham discloses a method of “retrieving and displaying multimedia information” such as “video information” wherein “thumbnail images” of “video keyframes” are “extracted from the video information... at various points in time using a specified sampling rate,” Graham is solving a wholly different problem with different hardware than Nozaki. EX2030, ¶239; *see also* EX1008, [0060]-[0062], [0088]. Particularly, Graham sought to solve problems associated with reading large quantities of electronic information, presenting a solution that would allow a user to read an electronic document

horizontally rather than vertically. EX2030, ¶¶239-240; *see also* EX1008, [0013]-[0014]; [0060], [0067] (also discussing the GUI allows a user to “horizontally” read or skim multimedia documents).

Moreover, Graham discloses searching for information by text or words, not by face information. EX2030, ¶241; *see, e.g.*, EX1008 at [0018], [0123]-[0142], claim 15. Petitioner's reason (Pet. at 49-50) for combining Graham with Nozaki alone is entirely conclusory. EX2030, ¶242. Petitioner argues:

A POSITA would have recognized that the method of reproducing video information disclosed in Graham would be compatible with the Nozaki device because, for example, the vertical display setup in Graham is similar to the vertical listing of ‘face recognizing data’ shown on the lower part of the ‘detailed information screen’ (Figure 5) in Nozaki. EX1005, ¶167. A POSITA would have recognized that the Nozaki device could display the video keyframes of Graham as part of its ‘regeneration mode’ for video files, and a POSITA would have been motivated to desired portion of a video file.

However, the Petition points to nothing in Graham that would suggest its video keyframing methodology is compatible with Nozaki. Nor is the vertical setup in Graham similar to the information in Figure 5 of Nozaki. EX2030, ¶243. Graham discloses a wholly different interface, showing numerous thumbnails associated with a video image that have text/words associated with a thumbnail image whereas Nozaki shows a thumbnail of person's face with no text associated with the video

that the thumbnail represents; rather, Nozaki provides information associated with the recording details (*e.g.*, frame rate, focus, shooting mode, etc.) *Id.*

Finally, the Petition's attempt to reconcile Graham's purported ability to "assimilate large amounts of information" with Nozaki again fails to recognize the differences between Nozaki and Graham. EX2030, ¶244. While Graham is attempting to solve problems associated with users "assimilate[ing] vast quantities of information in a short period of time," as discussed above, Graham's solution is wholly different than Nozaki's disclosure associated with storing images and video files. *Id.* A POSITA would not recognize that Graham's solution would apply equally nor would modifying Nozaki be a simple design choice or modification. *Id.*

Accordingly, a POSITA would not be motivated to combine Nozaki with Graham to teach limitation [84.h.i]. *Id.*, ¶245.

E. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Graham To Disclose Limitation [84.h.ii] Of Claim 84

A POSITA would not have found it obvious to combine Nozaki with Graham to comprise a processor that "generates a plurality of thumbnails corresponding to the plurality of sections, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, and the display displays the plurality of thumbnails" as claimed in limitation [84.h.ii]. EX2030, ¶246.

In support of the Petition, Dr. Bederson states that:

As discussed above in limitation [84h.ii], Graham discloses the use of a plurality of “thumbnail images” corresponding to “video keyframes” that are “extracted from the video information... at various points in time using a specified sampling rate” and then displayed to the user in a vertical interface. *See Supra* Section X.B.18. A POSITA would have found it obvious to modify Nozaki as recited in this limitation. *See Supra* Section X.B.18.

EX1005, ¶168.

To the extent the Petition incorporates Dr. Bederson's opinions regarding limitation [84.h.i] for the Nozaki-Graham combination into his opinions for limitation [84.h.ii] for the Nozaki-Graham combination, Patent Owner incorporates the arguments above in Section V.D in limitation [84.h.i] herein for element [84.h.ii]. In sum, the arguments that a POSITA would not be motivated to combine Nozaki with Graham to teach element [84.h.i] are equally applicable to limitation [84.h.ii]. EX2030, ¶248.

Accordingly, a POSITA would not be motivated to combine Nozaki with Graham to teach limitation [84.h.ii]. *Id.*, ¶249.

VI. GROUND 3: NOZAKI IN VIEW OF HAITANI IN FURTHER VIEW OF KIM DOES NOT RENDER CLAIM 84 OBVIOUS

For Ground 3, Petitioner attempts to fill in the gaps of the deficiencies of Nozaki and Haitani with Kim. But Petitioner and Dr. Bederson have failed to show

that it would have been obvious to combine Nozaki with Haitani and/or Kim. Even if combining Nozaki with Haitani and Kim was obvious, Petitioner and Dr. Bederson have failed to show that the combination of Nozaki, Haitani, and Kim disclose each element of challenged claim 84.

A. A POSITA Would Not Have Found It Obvious To Combine Nozaki, Haitani, and Kim for Claim 84

Ground 3 initially fails because the Petition states only vague, conclusory, and unsupported reasons to combine Nozaki, Haitani, and Kim to render obvious challenged claim 84. Pet. at 52-53. Like Petitioner's use of Graham for Ground 2, Petitioner claims that "Kim, Nozaki and Haitani are compatible with and complementary to each other, and in my opinion a POSITA would have been motivated to combine them for this additional reason." Pet. at 52. This is incorrect. EX2030, ¶250.

Again the Petition focuses on Haitani's search filters but, as explained in Sections III and IV.A-C, Haitani's filters are not modes and do not teach or disclose the first, second, or third reproducing modes of challenged claims 11-12, 16-17, and 19-20. Thus, a POSITA would not be motivated to combine Haitani with Nozaki.

The Petition is unclear as to whether it argues that a POSITA would have allegedly found it obvious to combine Kim with the Nozaki-Haitani combination, or obvious to combine Kim with only Nozaki, stating "A POSITA would have also

found it obvious to modify the Nozaki device to incorporate the disclosures in Kim, which are directed to searching for and reproducing specific segments within individual video files.” Pet. at 52. Petitioner presumes that Kim’s alleged method of segmenting videos could be compatible with Nozaki alone (not the Nozaki-Haitani combination that Kim is being added to) but, again, there is no support for such a statement. EX2030, ¶254.

The design requirements for Nozaki, Haitani, and Kim are substantially different. *Id.*, ¶255. In addition, a POSITA would not be motivated to combine the teachings of Nozaki, Haitani, and Kim because they are directed to solving different problems and use different structures to solve these problems. *Id.* Petitioner and Dr. Bederson have not considered the three references as a whole and have not accounted for these differences. Instead, they select portions of each reference and use hindsight to assemble a new system without accounting for the different objectives and goals of the systems in Nozaki, Haitani, and Kim. *Id.*

For example, Petitioner and Dr. Bederson fail to explain how a POSITA would implement the video-segmenting from Kim in portable device like Nozaki, let alone the combination of Nozaki-Haitani to which Kim is being added. *Id.*, ¶256. Instead, Dr. Bederson invents a purported need, describes some benefits in generalities (“improve the efficiency”), and claims Kim’s video-segmenting methods “could have easily been implemented in the Nozaki device.” *Id.* But

describing potential improvements that are accomplished by the claims of the '848 Patent is the definition of hindsight. Neither Petitioner nor its expert attempts to quantify such “easy” implementation techniques. Implementing an entirely different function on a processor cannot necessarily be expected to be easy. *Id.*

For all of the foregoing reasons, a POSITA would not combine Nozaki, Haitani, and Kim. *Id.*, ¶257.

B. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Haitani To Disclose Limitation [84.c.vii] Of Claim 84

A POSITA would not have found it obvious to combine Nozaki with Haitani to comprise a processor that can “selectively reproduce the recorded image which includes the registered specific person” as claimed in limitation [84.c.vii]. EX2030, ¶¶258-260. Petitioner's analysis for limitation [84.c.vii] cross references Sections VI.B.1-17. Pet. at 53. For the same reasons discussed above with respect to limitation [8.i] for the Nozaki-Haitani combination a POSITA would not be motivated to combine Nozaki with Haitani to teach element [8.i] and Section IV.A is equally applicable to limitation [84.c.vii]. Specifically, a POSITA would not be motivated to incorporate the filters of Haitani into Nozaki. Accordingly, a POSITA would not be motivated to combine Nozaki with Haitani to teach limitation [84.c.vii]. EX2030, ¶¶258-260.

C. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Haitani To Disclose Limitation [84.d] Of Claim 84.

For claim limitations [84pre]-[84h], for the Nozaki-Haitani-Kim combination, the Petition merely cites back to the analysis for the Nozaki-Haitani-Graham combinations in Sections VI.B.1-17. Thus, for the same reasons set forth above in Sections V.A-B herein, the Nozaki-Haitani-Kim combination fails to teach limitation [84.d]. Namely, a POSITA would not be motivated to combine Nozaki with Haitani to teach limitation [84.d]. EX2030, ¶¶261-263.

D. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Kim To Disclose Limitation [84.h.i] Of Claim 84

A POSITA would not have found it obvious to combine Nozaki with Kim to comprise a processor that “automatically sets a plurality of sections corresponding to the video information of the scene” as claimed in limitation [84.h.i]. EX2030, ¶264. Petitioner concedes that Nozaki does not disclose this limitation and uses Kim to attempt to fill in the gaps. Pet. at 53-56. But the Petition errs in attempting to combine Kim to only Nozaki, not the Nozaki-Haitani combination (or Nozaki alone within that combination) that the Petition relies on to disclose limitations [84.pre]-[84.h] and [84.i]. EX2030, ¶266. More specifically, the Petition uses two different two-reference combinations (Nozaki-Haitani and Nozaki-Kim) to purportedly disclose each of the limitations of claim 84 but does not provide any reasoning or motivation that a POSITA would look to combine all three references to disclose

claim 84 in full. *Id.* The Petition's piecemeal analysis should be rejected for this reason alone.

Moreover, the Petition and Dr. Bederson provide nothing but improper hindsight to combine Kim with only Nozaki (not the Nozaki-Haitani combination). *See id.* at ¶¶174-176. Although Kim discloses a method of "video partitioning," Kim is solving a wholly different problem with different hardware than Nozaki. *See* Ex. 1009, Kim, at 6 ("The technical problem to be solved by the present invention is to provide an apparatus and method for high-speed partition of a video according to topic based on detected main characters."). EX2030, ¶¶267-268. In contrast, Nozaki defines the problem that it attempts to solve in part as follows: "to provide an electronic camera that can easily perform registration shooting when generating face recognizing data." *See* EX1006, [0006]-[0008].

The Petition's reason for combining Kim with Nozaki alone is entirely conclusory. EX2030, ¶269. Petitioner argues:

A POSITA would have found it obvious that the role of the 'face detecting unit' disclosed in Kim could be filled by the face-recognition technology in Nozaki. EX1005, ¶175. Moreover, a POSITA would have found it obvious that Kim's 'multimedia content indexing technique' would be compatible with the list of face-recognition data in the 'lower part' of Figure 5 above, because the listing of face recognizing data could be used to identify "key frames" in a video file

and generate 'chapter' or 'segment' markers for said file as disclosed in Kim.

Id. But Petitioner and Dr. Bederson point to nothing in Kim that would suggest its multimedia content indexing technique is compatible with Nozaki. EX2030, ¶¶269-270. Kim discloses a wholly different interface than Figure 5 of Nozaki, which provides information associated with the recording details (*e.g.*, frame rate, focus, shooting mode, etc.). *Id.*, ¶270.

Petitioner further argues that:

A POSITA would have been motivated to modify the Nozaki device to include the automatic video segmenting functionality of Kim to improve the efficiency with which a user could search for and locate specific people in large (lengthy) video files. EX1005, ¶176. Kim recognizes that its segmenting function results in increased convenience of the user and 'allow[s] users to easily browse or search a desired part' of a video file. EX1009, 7. A POSITA would have appreciated that these benefits could apply to the Nozaki device.

Pet. at 56. Again, this is incorrect. EX2030, ¶271. Petitioner's generic references to alleged "increased convenience" and that the combination could have "benefits" is pure hindsight. *Id.*, ¶272.

Accordingly, a POSITA would not be motivated to combine Nozaki with Kim to teach limitation [84.h.i]. *Id.*, ¶273.

E. A POSITA Would Not Have Found It Obvious To Combine Nozaki With Kim To Disclose Limitation [84.h.ii] Of Claim 84

A POSITA would not have found it obvious to combine Nozaki with Kim to comprise a processor that “generates a plurality of thumbnails corresponding to the plurality of sections, wherein each of the plurality of thumbnails is associated with the same video information corresponding to the scene, and the display displays the plurality of thumbnails” as claimed in limitation [84.h.ii]. EX2030, ¶274. The Petition states: “Similar to limitation [84h.i] above, a POSITA would have found it obvious to combine Kim and Nozaki to obtain this limitation. Nozaki discloses displaying thumbnail images of a person's face in its listing of face recognizing data in the lower part of Figure 5, wherein the thumbnail images show index images of a person's face corresponding to each instance in the image/video files in which each piece of face recognition data was captured.” Pet. at 57 (*citing* Ex. 1005, ¶178).

Patent Owner incorporates all of Section VI.D above with respect to [84.h.i] for element [84.h.ii]. In sum, a POSITA would not be motivated to combine Nozaki with Kim to teach element [84.h.i] are equally applicable to limitation [84.h.ii]. EX2030, ¶276.

The Petition further argues that “A POSITA would have found it obvious to modify Nozaki so that it could list the key frame ‘chapters’ of Kim using thumbnails of the key frame as disclosed in Kim, to aid users in navigating to specific portions

of a video file.” Pet. at 57. However, modifying Nozaki as suggested by Petitioner and Dr. Bederson to aid users is pure hindsight. No reason or motivation is provided that a POSITA would combine two different systems solving two different problems together. EX2030, ¶277.

Accordingly, a POSITA would not be motivated to combine Nozaki with Kim to teach limitation [84.h.ii]. *Id.*, ¶278.

VII. CONCLUSION

For at least the foregoing reasons, the Board should confirm patentability of Claims 11-12, 16-17, 19-20, and 84.

Dated: January 30, 2025

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on this 30th day of January, 2025, a copy of the attached PATENT OWNER RESPONSE TO PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 10,176,848, together with all exhibits was served by electronic mail to the attorneys of record, at the following addresses:

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CERTIFICATION PURSUANT TO 37 C.F.R. § 42.24(d)

Pursuant 37 CFR 42.24(d), the undersigned certifies that this Preliminary Response and complies with the type-volume limitation of 37 CFR §42.24(a). The word count application of the word processing program used to prepare this Patent Owner Response indicates that the Patent Owner Response contains 13,987 words, excluding the parts of the brief exempted by 37 C.F.R. § 42.24(a).

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