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)

Inter Partes Review

No. IPR2024-00867 | **U.S. Patent No. 10,176,848**

Petitioners' Presentation

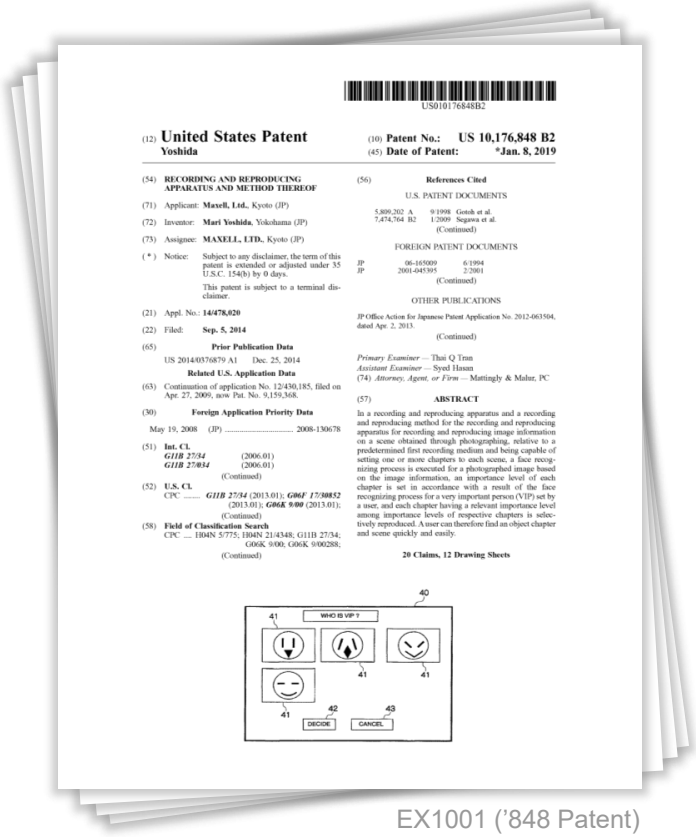
DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

IPR2024-00867 - Samsung
Ex. 1020 - Page 1

IPR2024-00867 Oral Argument Agenda

- ’848 Patent Overview
- Prior Art Combinations
- Analogous Art
- Claim Construction
- **Ground 1:** Nozaki + Haitani
- **Ground 2:** Nozaki + Haitani + Graham
- **Ground 3:** Nozaki + Haitani + Kim

’848 Patent: Register a VIP



US010176848B2

(12) **United States Patent**
Yoshida

(10) **Patent No.: US 10,176,848 B2**
(45) **Date of Patent: *Jan. 8, 2019**

(54) **RECORDING AND REPRODUCING APPARATUS AND METHOD THEREOF**

(71) Applicant: **Maxell, Ltd.**, Kyoto (JP)
(72) Inventor: **Mari Yoshida**, Yokohama (JP)
(73) Assignee: **MAXELL, LTD.**, Kyoto (JP)
(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
This patent is subject to a terminal disclaimer.
(21) Appl. No.: **14/478,020**
(22) Filed: **Sep. 5, 2014**
(65) **Prior Publication Data**
US 2014/0376879 A1 Dec. 25, 2014
Related U.S. Application Data
(63) Continuation of application No. 12/430,185, filed on Apr. 27, 2009, now Pat. No. 9,159,368.
(30) **Foreign Application Priority Data**
May 19, 2008 (JP) 2008-130678
(51) **Int. Cl.**
G11B 27/34 (2006.01)
G11B 27/034 (2006.01)
(Continued)
(52) **U.S. Cl.**
CPC ***G11B 27/34*** (2013.01); ***G06F 17/30852*** (2013.01); ***G06K 9/00*** (2013.01);
(Continued)
(58) **Field of Classification Search**
CPC H04N 5/775; H04N 21/4348; G11B 27/34; G06K 9/00; G06K 9/00288;
(Continued)

(56) **References Cited**
U.S. PATENT DOCUMENTS
5,809,202 A 9/1998 Gotoh et al.
7,474,764 B2 1/2009 Segawa et al.
(Continued)
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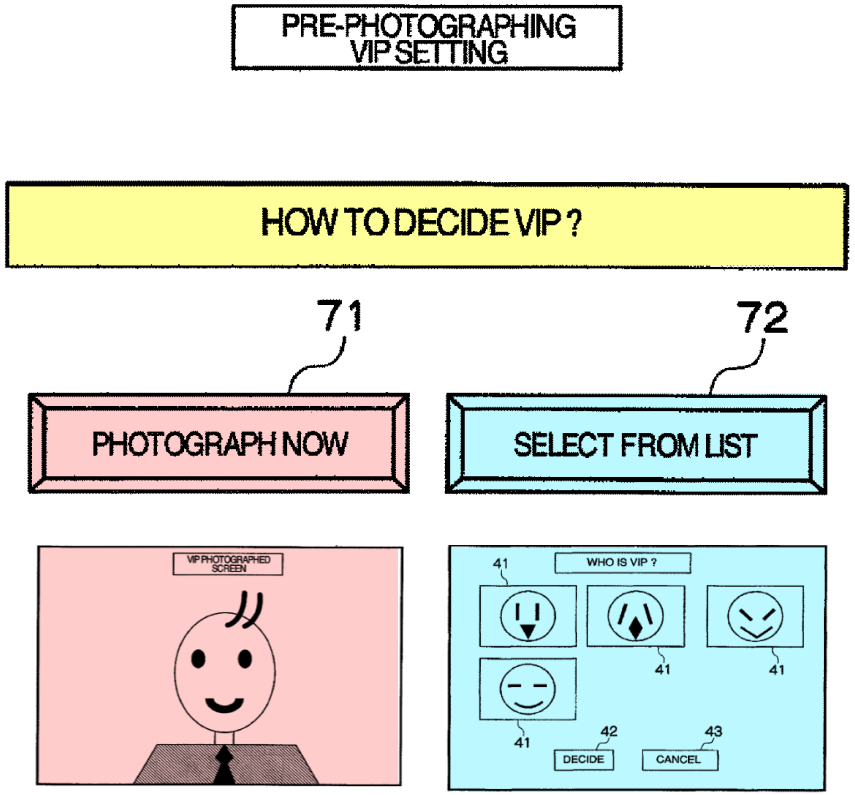
JP 06-165009 6/1994
JP 2001-045395 2/2001
(Continued)
OTHER PUBLICATIONS
JP Office Action for Japanese Patent Application No. 2012-063504, dated Apr. 2, 2013.
(Continued)
Primary Examiner — Thai Q Tran
Assistant Examiner — Syed Hasan
(74) *Attorney, Agent, or Firm* — Mattingly & Malur, PC

(57) **ABSTRACT**
In a recording and reproducing apparatus and a recording and reproducing method for the recording and reproducing apparatus for recording and reproducing image information on a scene obtained through photographing, relative to a predetermined first recording medium and being capable of setting one or more chapters to each scene, a face recognizing process is executed for a photographed image based on the image information, an importance level of each chapter is set in accordance with a result of the face recognizing process for a very important person (VIP) set by a user, and each chapter having a relevant importance level among importance levels of respective chapters is selectively reproduced. A user can therefore find an object chapter and scene quickly and easily.

20 Claims, 12 Drawing Sheets

EX1001 (’848 Patent)

’848 Patent



EX1001 (’848 Patent) at Figs. 14, 15, 16

’848 Patent: Assign Chapter Importance Levels

’848 Patent

With these processes, the highest chapter importance level of “1” is set to the chapter on which the VIP appears most frequently, and the lowest chapter importance level of “5” is set to the chapter on which the VIP appears least frequently.

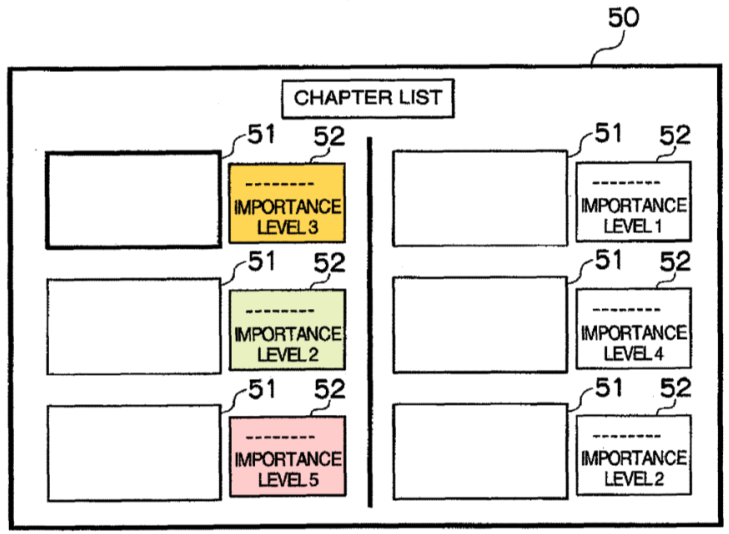
EX1001 (’848 Patent) at 8:50-53

FIG. 9

CHAPTER ID	CHAPTER IMPORTANCE LEVEL
001	5
002	1
003	5
004	3
005	1
006	5
007	5
008	5
009	3

EX1001 (’848 Patent) at Fig. 9

FIG. 11



EX1001 (’848 Patent) at Fig. 11

’848 Patent: Reproduce Based on Importance Levels

’848 Patent

(1-4) Reproducing Method Using Chapter Importance Level

Next, description will be made on an object scene reproducing method basing upon the chapter importance level of each chapter set in the manner described above. It is assumed in the following description that the chapter importance level is set in five steps, “1” being the highest chapter importance level, and “5” being the lowest chapter importance level. In the following, the chapter importance levels are distinguished for the purposes of convenience by calling the chapter importance level “1” superexpress, the chapter importance level “3” express, and the chapter importance level “5” standard.

EX1001 (’848 Patent) at 8:65-9:9
Petition (2024-05-01) at 2, 29; Petitioners’ Reply (2025-04-24) at 2

’848 Patent: Reproduce Based on Importance Levels

’848 Patent

importance level set to each chapter. Namely, in the “standard reproducing mode”, the chapters having the chapter importance level “5” or smaller (the chapters having the chapter importance levels “1” to “5”, i.e., all chapters) are reproduced in this mode of the embodiment.

* * *

scene reproducing. Namely, in the express reproducing mode”, only the chapters having the chapter importance level “3” or smaller (only the chapters having the importance levels “1” to “3”) are reproduced. Therefore, as cue

* * *

Namely, in the “super express reproducing mode”, only the chapters having the chapter importance level “1” are reproduced.

EX1001 (’848 Patent) at 9:24-54
Petition (2024-05-01) at 2, 29

’848 Patent: Chapter Select Reproducing Function

’848 Patent

Therefore, the video camera **1** reproduces always the chapter having the chapter importance level “1” as any of the reproducing modes is selected, and each of other chapters is reproduced only when the reproducing mode is selected reproducing the chapter having the chapter importance level same as or smaller than that set to each of other chapters.

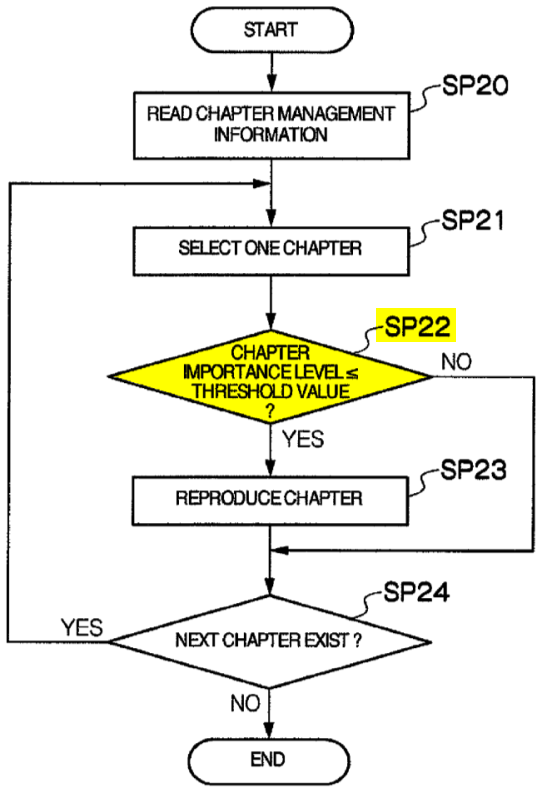
By utilizing this function (hereinafter called a chapter select reproducing function), the superexpress reproducing

EX1001 (’848 Patent) at 9:55-62
Petition (2024-05-01) at 2, 29; Petitioners’ Reply (2025-04-24) at 2

’848 Patent: Chapter Select Reproducing Function

’848 Patent

FIG. 10



EX1001 (’848 Patent) at Fig. 10

FIG. **10** illustrates the process contents of the system controller **5** regarding the chapter select reproducing function. The system controller **5** executes the chapter select reproducing process illustrated in FIG. **10** in accordance with a control program stored in the internal memory.

* * *

Next, in accordance with the ID information contained in the chapter management information, the system controller **5** selects the first chapter (e.g., the chapter having the smallest chapter ID) (Step SP**21**), and judges whether the chapter importance level of the chapter is a predetermined threshold value or smaller set to the present reproducing mode (Step SP**22**). The threshold value is “5” if the “standard reproducing mode” is set, “3” if the “express reproducing mode” is set, and “1” if the “superexpress reproducing mode” is set.

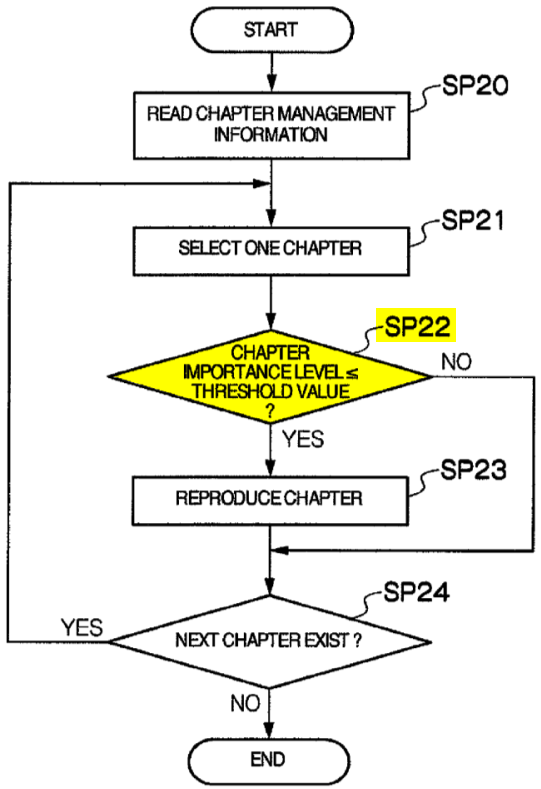
EX1001 (’848 Patent) at 10:4-25

Petitioners’ Reply (2025-04-24) at 2, 3

Selectively Reproduce Chapters By Using Threshold Values

’848 Patent

FIG. 10



EX1001 (’848 Patent) at Fig. 10

FIG. 9

CHAPTER ID	CHAPTER IMPORTANCE LEVEL
001	5
002	1
003	5
004	3
005	1
006	5
007	5
008	5
009	3

REPRODUCED CHAPTERS

STANDARD	EXPRESS	SUPEREXPRESS
X		
X	X	X
X		
X	X	
X	X	X
X		
X		
X		
X	X	

EX1001 (’848 Patent) at Fig. 9

mode (Step SP22). The threshold value is “5” if the “standard reproducing mode” is set, “3” if the “express reproducing mode” is set, and “1” if the “superexpress reproducing mode” is set.

EX1001 (’848 Patent) at 10:22-25

Petitioners’ Reply (2025-04-24) at 2, 3

Maxell's '848 Patent, Claims 8, 11-12

Disputed claims/limitations

Undisputed claims/limitations

Maxell's '848 Patent, Claim 8	
[8pre]	A recording and reproducing apparatus for recording and reproducing image information, comprising:
[8a]	a processor; and
[8b]	a memory coupled to the processor and storing instructions that, when executed by the processor, cause the processor to:
[8c]	capture a photograph and generate image information of the photograph;
[8d]	record the image information in a recording medium;
[8e]	execute a face-recognizing process on the image information to recognize a face;
[8f]	reproduce the recorded image from the recording medium;
[8g]	register a person in the image information as a specific person in a mode selected from a first setting mode and a second setting mode, wherein, when the first setting mode is selected, a person with a face is obtained by newly photographing the person in a photographing mode and thereafter registered as the specific person,
[8h]	and, when the second setting mode is selected, a person with a face in the image information is selected from a plurality of faces in the image information recorded in the recording medium and thereafter registered as the specific person; and
[8i]	selectively reproduce the recorded image information which includes the registered specific person.

Maxell's '848 Patent, Claim 11	
[11pre]	The recording and reproducing apparatus according to claim **8**, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:
[11a]	control the reproduction of the image information in a reproducing mode set from one of a first reproducing mode and a second reproducing mode,
[11b]	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, and the image information reproduced under
[11c]	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.

Maxell's '848 Patent, Claim 12	
[12pre]	The recording and reproducing apparatus according to claim **11**, wherein the memory further stores instructions that, when executed by the processor, cause the processor to:
[12a]	control the reproduction of the image information in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode,
[12b]	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.

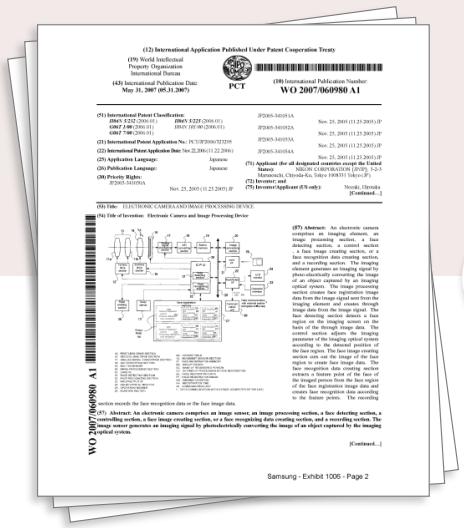
Grounds for Finding Invalidity

Ground	Claims	Stat. Basis	Prior Art
1	11, 12, 16, 17, 19, 20	35 U.S.C. § 103	Nozaki, Haitani
2	84	35 U.S.C. § 103	Nozaki, Haitani, Graham
3	84	35 U.S.C. § 103	Nozaki, Haitani, Kim

Petition (2024-05-01) at 1

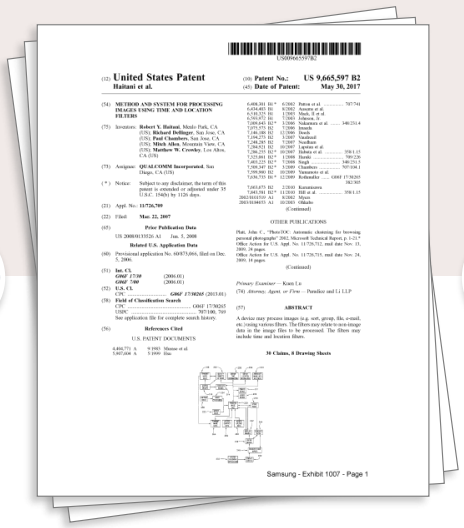
Prior Art Combinations

Primary Reference
(Ind. Cl. Elements)



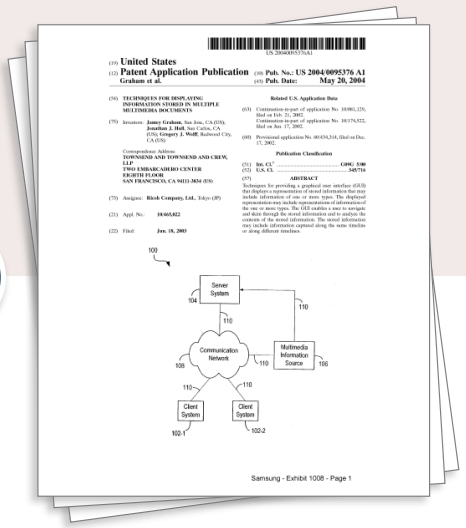
Nozaki
EX1006

Secondary Reference
(Reproducing Modes, Touch Screen)

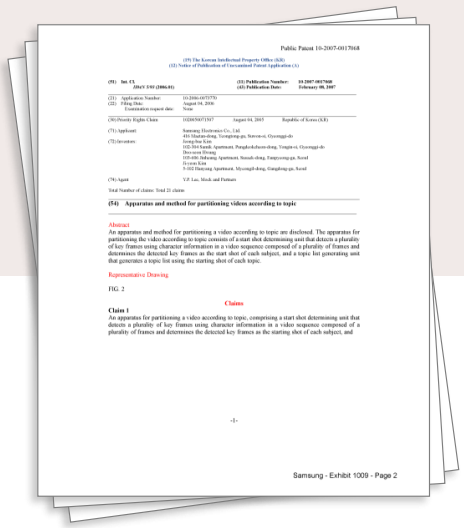


Haitani
EX1007

Secondary References
(Cl. 84 Video Segmenting with Thumbnails)



Graham
EX1008



Kim
EX1009

NO DISPUTE

No dispute that Graham/Kim disclose the additional limitations of Cl. 84

Analogous Art – Unrebutted by PO

Dr. Bederson

19. As explained in my initial declaration (EX1005), Nozaki and Haitani are analogous art to the '848 patent, and as a result it is my opinion that a POSITA would have found it obvious to combine them for that reason alone. The '848 patent describes "a recording and reproducing apparatus" that captures and reproduces video information in the context of, "e.g., a video camera." EX1001, 1:15-17. Nozaki and Haitani also disclose devices with digital cameras that can capture and reproduce image/video files. *See, e.g.*, EX1006, [0001], [0047], [0048]; EX1007, 2:8-17. Graham and Kim disclose similar devices in the same field of endeavor. EX1008, Fig. 3, [0010]-[0022], [0060]-[0062], [0088], [0318]; EX1009, 5-6.

20. Also as explained in my initial declaration (EX1005), the '848 patent, Nozaki, and Haitani are all directed to improving the photographing and reproducing efficiency of devices with digital cameras, including through the use of face recognition software. *See, e.g.*, EX1001, 1:15-2:62; EX1006, [0001]-[0040], [0110]-[0112], [0124]; EX1007, 1:24-49. Graham and Kim likewise are directed to addressing similar issues in devices with digital cameras. EX1008, Fig. 3, [0010]-[0022], [0060]-[0062], [0088], [0318]; EX1009, 5-6.

EX1017 (Reply Decl. of Dr. Benjamin Bederson) at 8
Petitioners' Reply (2025-04-24) at 7

Claim Construction: “mode”

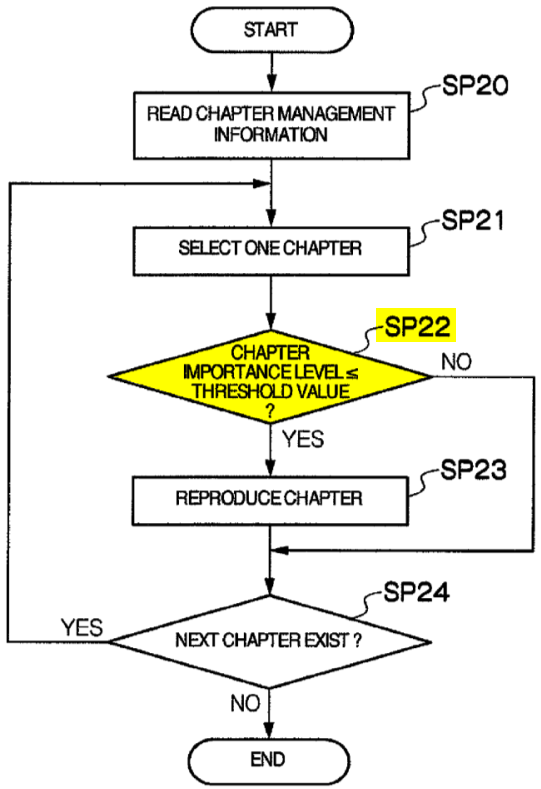
“mode”

Petitioners’ Proposed Construction	Patent Owner’s Proposed Construction
No construction necessary, plain and ordinary meaning Petitioners’ Reply (2025-04-24) at 1-6	“an operational state that a system has been switched to” POR 13 wherein “filters are not modes” POR 23

Selectively Reproduce Chapters By Using Threshold Values

’848 Patent

FIG. 10



EX1001 (’848 Patent) at Fig. 10

FIG. 9

CHAPTER ID	CHAPTER IMPORTANCE LEVEL
001	5
002	1
003	5
004	3
005	1
006	5
007	5
008	5
009	3

REPRODUCED CHAPTERS

STANDARD	EXPRESS	SUPEREXPRESS
X		
X	X	X
X		
X	X	
X	X	X
X		
X		
X		
X	X	

EX1001 (’848 Patent) at Fig. 9

mode (Step SP22). The threshold value is “5” if the “standard reproducing mode” is set, “3” if the “express reproducing mode” is set, and “1” if the “superexpress reproducing mode” is set.

EX1001 (’848 Patent) at 10:22-25

Petitioners’ Reply (2025-04-24) at 2, 3

Filters Are Thresholds

Dr. Balakrishnan

Q. Can you explain how a filter works?

A. I'll say a filter is some kind of code that – well, it's used as a definition on the chart. It uses patterns, masks, or some kind of criteria to compare data and only data that matches that criteria, but would pass through that filter.

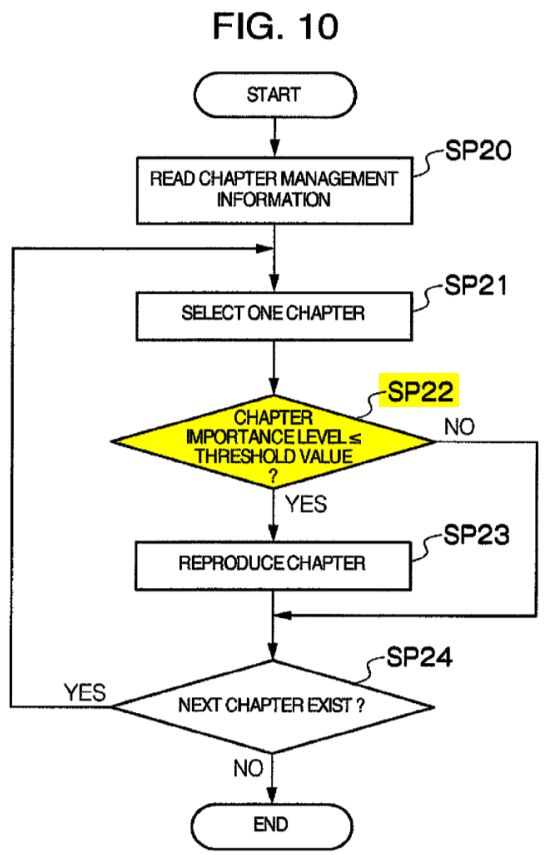
Q. So when you say a "kind of criteria," would that be some sort of, like, a threshold?

A. It depends one what the filter is, but it could be -- maybe I'll ask what threshold are you talking about? Are you saying a threshold, "Give me all the pictures above a certain size," and the size is the threshold, then, yes, that could be filtering based on size, for example.

EX1018 (Balakrishnan Depo. Tr.) at 47:18-48:9
Petitioners' Reply (2025-04-24) at 2, 3

PO Would Exclude the Preferred Embodiment

’848 Patent



EX1001 (’848 Patent) at Fig. 10

Dr. Balakrishnan

Q. And so running a single algorithm where you’re just switching out the filtering criteria is not -- each criteria that you’re using as a filter is not an indicator of a different mode; is that what you’re saying?

A. I think that is my high-level opinion, yeah, on this issue.

EX1018 (Balakrishnan Depo. Tr.) at 54:19-55:3

mode (Step SP22). The threshold value is “5” if the “standard reproducing mode” is set, “3” if the “express reproducing mode” is set, and “1” if the “superexpress reproducing mode” is set.

EX1001 (’848 Patent) at 10:22-25

Petitioners’ Reply (2025-04-24) at 2, 4

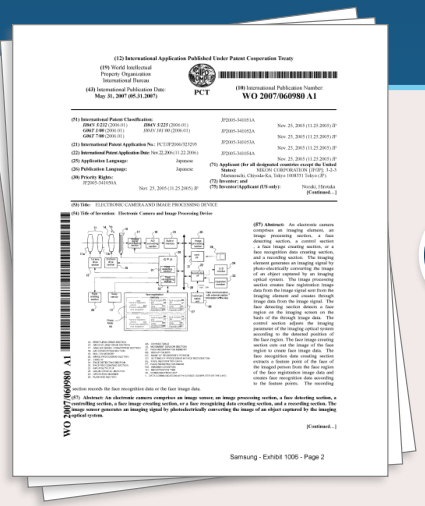
Maxell's Extrinsic Evidence

POR

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, 6th 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

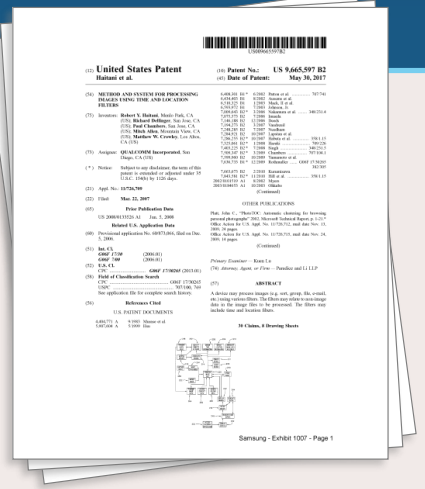
POR at 15

Ground 1



Nozaki

EX1006



Haitani

EX1007

Ground 1: Disputed Claims and Limitations

Disputed claims/limitations

Undisputed claims/limitations

'848 Patent, Claim 8	
[8pre]	recording/reproducing apparatus
[8a]	processor
[8b]	memory coupled to [a], storing instructions
[8c]	capture photo, generate image info
[8d]	record image info in recording medium
[8e]	execute face-recognizing process
[8f]	reproduce image from recording medium
[8g]	register person in one of 2 modes, where 1st mode includes newly photographing person
[8h]	where 2nd mode uses previously recorded photograph of person
[8i]	selectively reproduce images w/ person

'848 Patent, Claim 13	
[13pre]	recording/reproducing apparatus
[13a]	photographing sensor, generate image info
[13b]	record image info in recording medium
[13c]	reproduce image from recording medium
[13d]	processing circuitry
[13e]	execute face-recognizing process
[13f]	register person in one of 2 modes, where 1st mode includes newly photographing person
[13g]	where 2nd mode uses previously recorded photograph of person
[13h]	pick out image info w/ selected person
[13i]	pick out image based on user-selected condition
[13j]	selectively and sequentially reproduce images w/ person according to condition

'848 Patent, Claim 18	
[18pre]	recording/reproducing apparatus
[18a]	photographing sensor, generate image info
[18b]	record image info in recording medium
[18c]	reproduce image from recording medium
[18d]	processing circuitry
[18e]	execute face-recognizing process
[18f]	register person by newly photographing person [no 2nd mode requirement]
[18g]	pick out image info w/ selected person
[18h]	pick out image based on user-selected condition
[18i]	selectively and sequentially reproduce images w/ person according to condition

'848 Patent, Claim 11	
[11pre]	apparatus of claim 8
[11a]	control reproduction of image info in 2 reproduction modes
[11b]	reproducing time for 1st mode shorter than 2nd mode
[11c]	image info under 2nd mode includes 1st mode image info as well as new image info

'848 Patent, Claim 16	
[16pre]	apparatus of claim 13
[16a]	control reproduction of image info in 2 reproduction modes
[16b]	reproducing time for 1st mode shorter than 2nd mode
[16c]	image info under 2nd mode includes 1st mode image info as well as new image info

'848 Patent, Claim 19	
[19pre]	apparatus of claim 18
[19a]	control reproduction of image info in 2 reproduction modes
[19b]	reproducing time for 1st mode shorter than 2nd mode
[19c]	image info under 2nd mode includes 1st mode image info as well as new image info

'848 Patent, Claim 12	
[12pre]	apparatus of claim 11
[12a]	control reproduction in a 3rd mode as well
[12b]	reproducing time for 3rd mode longer than 2nd mode

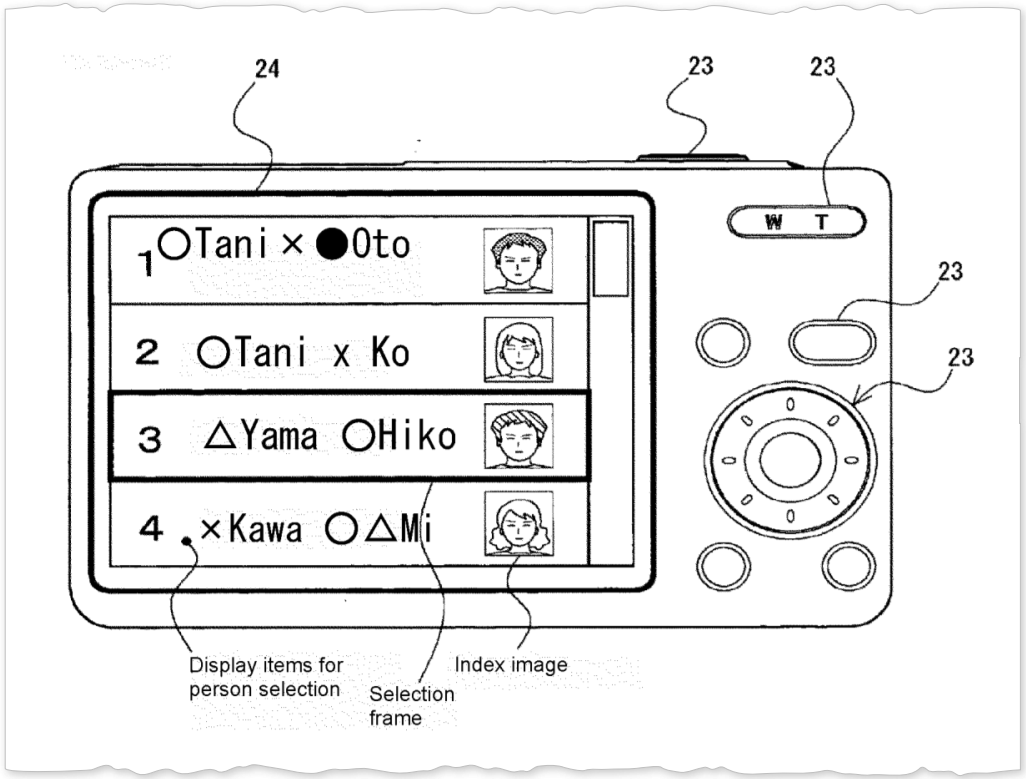
'848 Patent, Claim 17	
[17pre]	apparatus of claim 16
[17a]	control reproduction in a 3rd mode as well
[17b]	reproducing time for 3rd mode longer than 2nd mode

'848 Patent, Claim 20	
[20pre]	apparatus of claim 19
[20a]	control reproduction in a 3rd mode as well
[20b]	reproducing time for 3rd mode longer than 2nd mode

Nozaki: Selectively Reproducing Image Information [8i]

’848 Patent, Claim 11	
[8i]	selectively reproduce the recorded image information which includes the registered specific person.

Nozaki

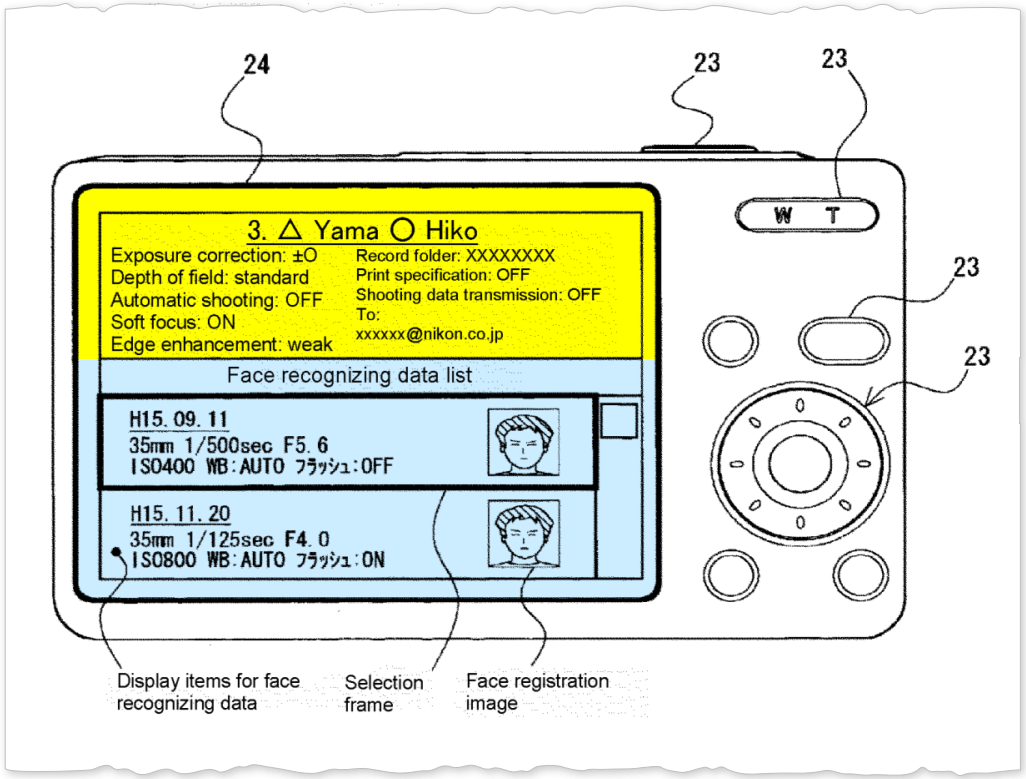


EX1006 (Nozaki) at Fig. 4
Petition (2024-05-01) at 21, 22

Nozaki: Selectively Reproducing Image Information [8i]

’848 Patent, Claim 11	
[8i]	selectively reproduce the recorded image information which includes the registered specific person.

Nozaki

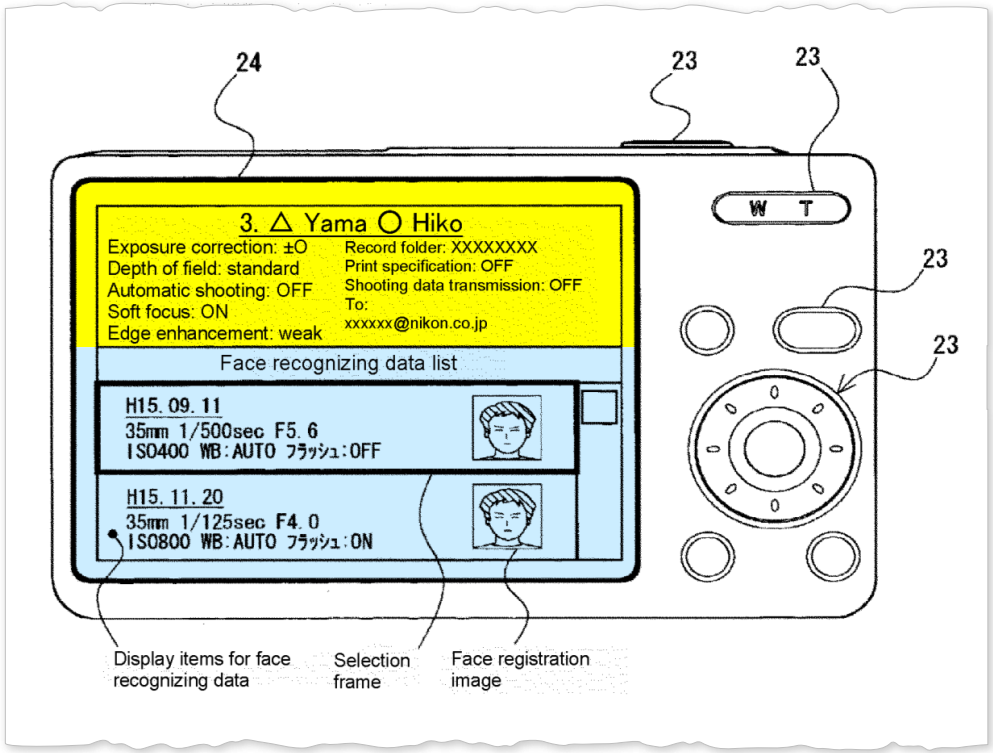


EX1006 (Nozaki) at Fig. 5
Petition (2024-05-01) at 22, 23

Nozaki and Haitani Render [8i] Obvious

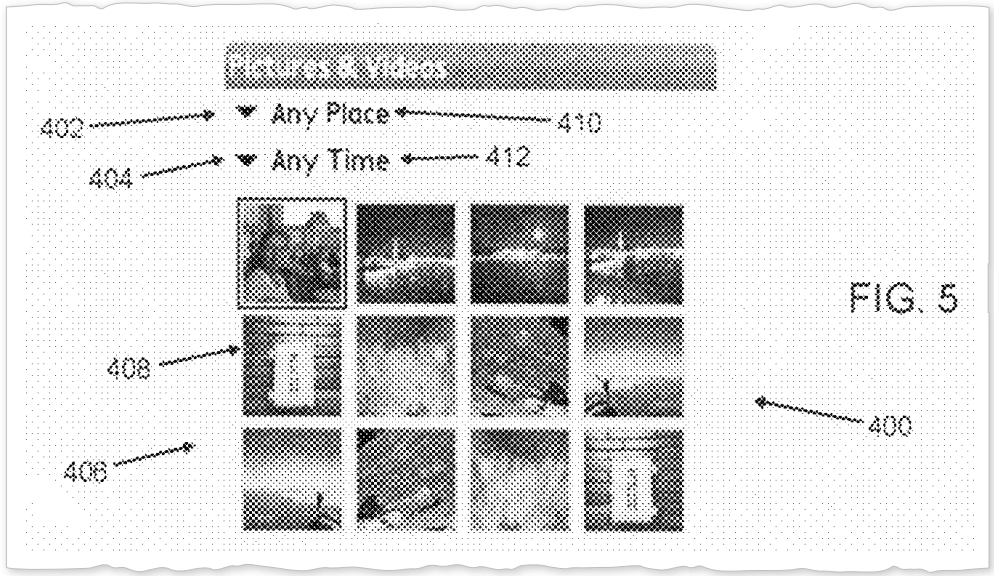
’848 Patent, Claim 11	
[8i]	selectively reproduce the recorded image information which includes the registered specific person.

Nozaki



EX1006 (Nozaki) at Fig. 5
Petition (2024-05-01) at 22, 23

Haitani



EX1007 (Haitani) at Fig. 5
POR at 26

Nozaki and Haitani Render [8i] Obvious

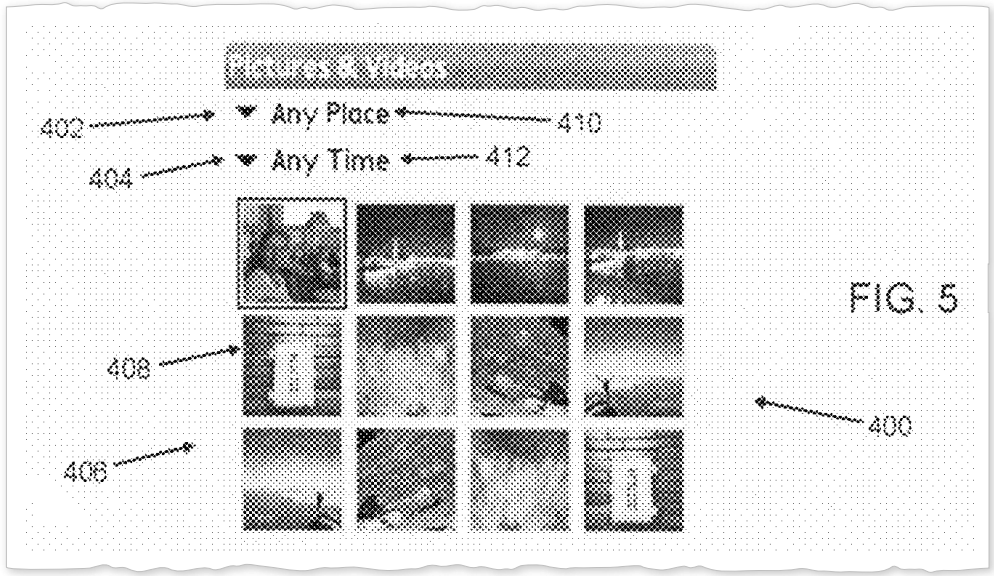
’848 Patent, Claim 11	
[8i]	selectively reproduce the recorded image information which includes the registered specific person.

Nozaki

[0111] Operation S1101: First, a user sets the electronic camera to a "regeneration mode" by using the operating member 23. The CPU 26 reads out face registration image data (shooting image data used in generating the face recognizing data) from the recording medium 29 or the built-in memory 19 and reproduces and displays a reproduced image of the face registration image data on the liquid crystal monitor 24. In addition, the CPU 26 is able to read out face registration image data from a computer (not illustrated) coupled via an external connecting terminal of the input output I/F 22 or the communication unit 30.

EX1006 (Nozaki) at [0111]
Petition (2024-05-01) at 25

Haitani



EX1007 (Haitani) at Fig. 5
POR at 26

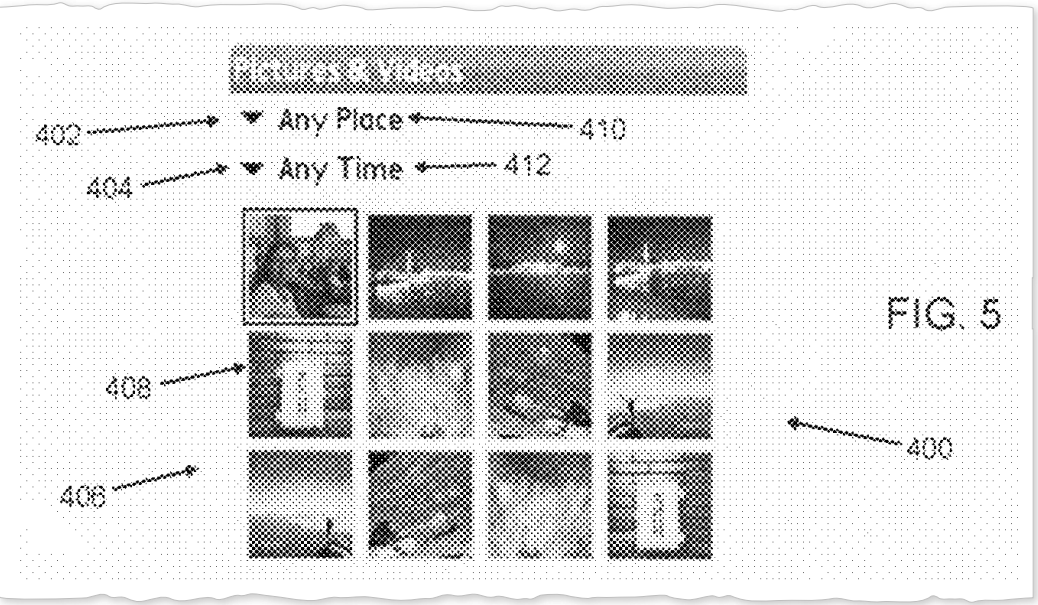
Dependent Claim Reproducing Mode Limitations

’848 Patent, Claim 11	
[11pre]	The recording and reproducing apparatus according to claim 8,
[11a]	wherein the memory further stores instructions that, when executed by the processor, cause the processor to: control the reproduction of the image information in a reproducing mode set from one of a first reproducing mode and a second reproducing mode,
[11b]	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, and
[11c]	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.

’848 Patent, Claim 12	
[12pre]	The recording and reproducing apparatus according to claim 11,
[12a]	wherein the memory further stores instructions that, when executed by the processor, cause the processor to: control the reproduction of the image information in the reproducing mode set from one of the first reproducing mode, the second reproducing mode, and a third reproducing mode,
[12b]	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.

Nozaki and Haitani Render 1st, 2nd, 3rd Reproducing Modes Obvious

Haitani



EX1007 (Haitani) at Fig. 5
POR at 26

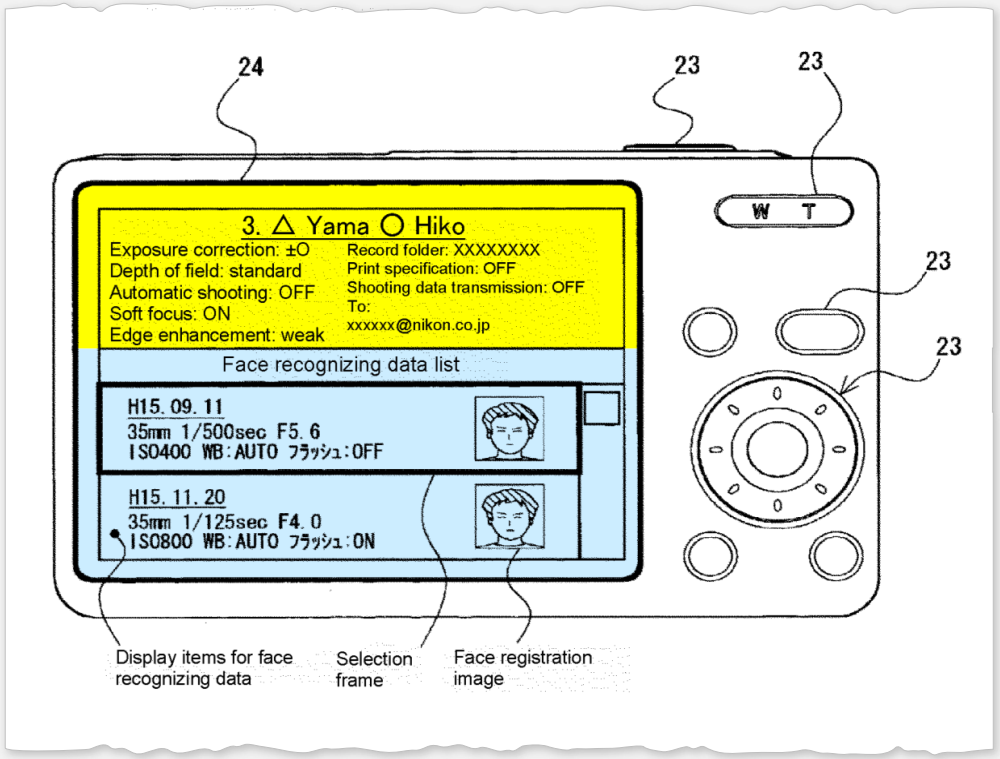
Petition

Haitani discloses that, "[i]f large numbers of image files exist," a device can "reduce the number of files through which a user needs to sort to select an image for sharing, viewing, or taking other actions" by "filtering images 246 using generated filters, pre-configured filters, user entered filters, or some other type of filter." EX1005, ¶ 97; EX1007, 10:61-66. Haitani teaches that its filters may employ a "combination of the non-image data… which may be associated with an image file." EX1007, 10:66-11:3. As discussed for limitations [8i], face-recognition data is a type of "non-image data" that Haitani teaches for use as a filter, and which a user may select in order to pick out images/videos that contain a registered person. *See Supra* Section VI.B.10. Haitani also discloses other non-image filters including, among other things, a "time filter" and an "event-related filter" for sorting through and selectively displaying photo/video information. EX1005, ¶ 97; EX1007, 11:2-3, 12:16-17.

Petition (2024-05-01) at 27

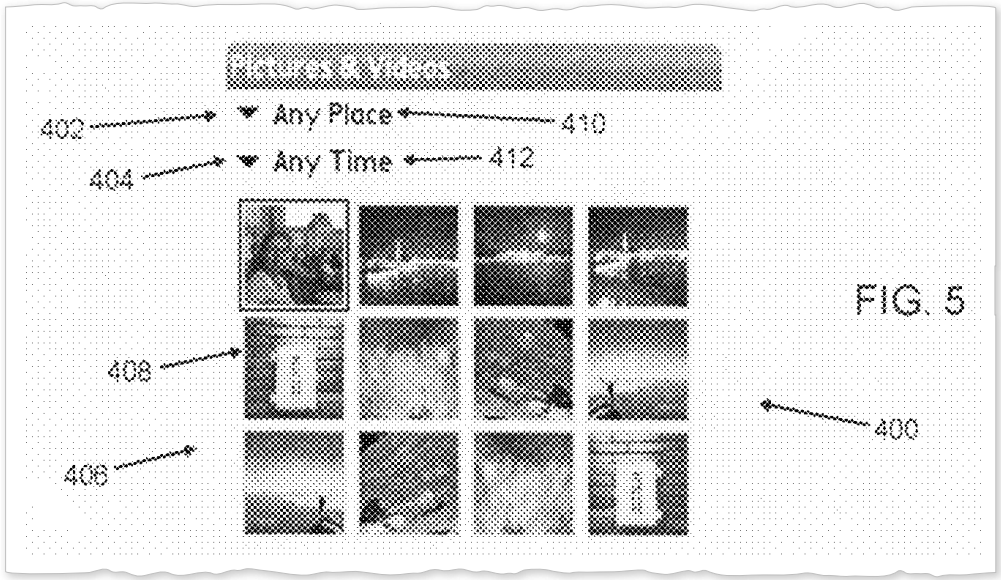
Different Reproducing Times

Nozaki



EX1006 (Nozaki) at Fig. 5
Petition (2024-05-01) at 22, 23

Haitani



EX1007 (Haitani) at Fig. 5
POR at 26

Different Reproducing Times

Dr. Balakrishnan

Q. Okay. Let's say I display on the screen two images. Would that have a longer reproducing time than displaying on the screen one image?

A. Yes, typically.

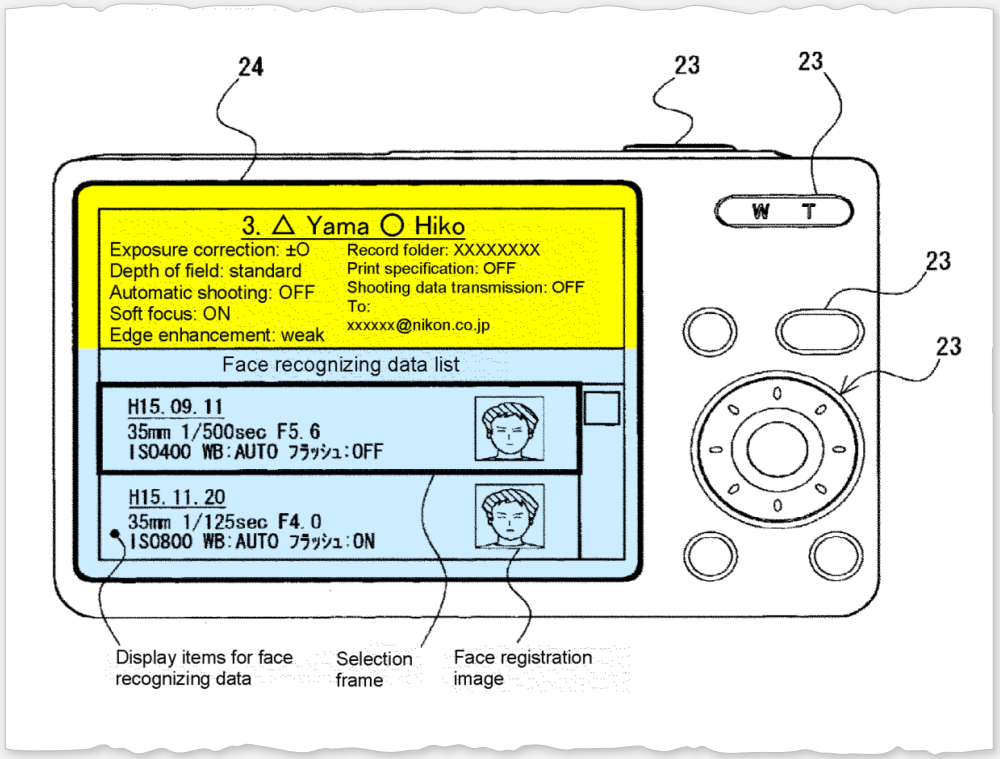
Q. Why?

A. Because it takes more time to read two images than it takes to read one image. Now, that assumes that both images are of the same size, et cetera. When I say, "size," I mean same amount of storage. If I have a 1-gigabyte image and the other one's a 1-kilobyte image, then they would take different times.

EX1018 (Balakrishnan Depo. Tr.) at 41:1-12
Petitioners' Reply (2025-04-24) at 15

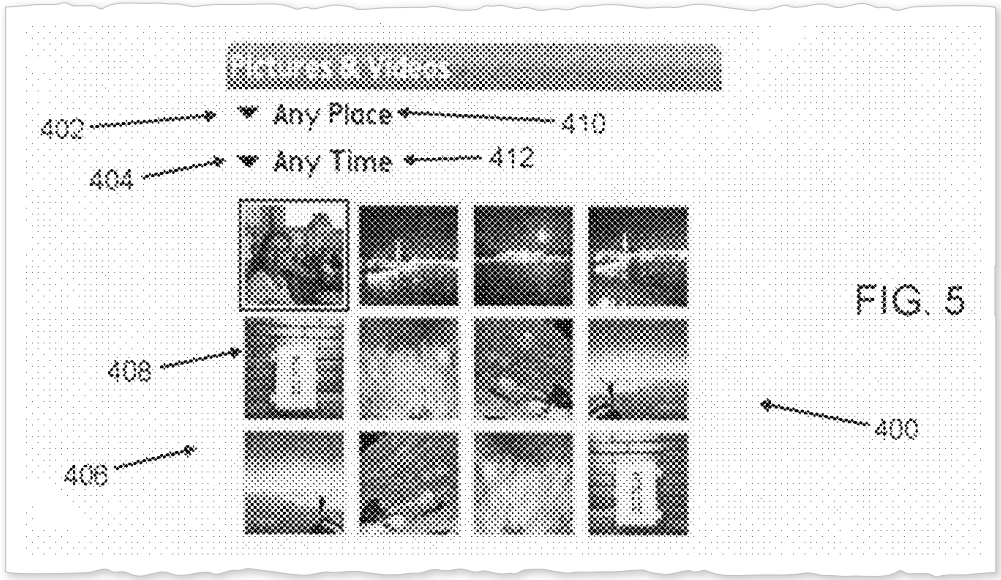
Different Reproduced Content

Nozaki



EX1006 (Nozaki) at Fig. 5
Petition (2024-05-01) at 22, 23

Haitani



EX1007 (Haitani) at Fig. 5
POR at 26

Different Reproducing Times

Dr. Balakrishnan

Q. Well, how do you know that the express reproducing mode is longer?

A. Than the superexpress? Because it contains more information and has to show more chapters, and so it's a super set of showing what was shown in the superexpress mode.

EX1018 (Balakrishnan Depo. Tr.) at 46:11-16

Ground 1: Disputed Claims and Limitations

Disputed claims/limitations

Undisputed claims/limitations

’848 Patent, Claim 8	
[8pre]	recording/reproducing apparatus
[8a]	processor
[8b]	memory coupled to [a], storing instructions
[8c]	capture photo, generate image info
[8d]	record image info in recording medium
[8e]	execute face-recognizing process
[8f]	reproduce image from recording medium
[8g]	register person in one of 2 modes, where 1st mode includes newly photographing person
[8h]	where 2nd mode uses previously recorded photograph of person
[8i]	selectively reproduce images w/ person

’848 Patent, Claim 13	
[13pre]	recording/reproducing apparatus
[13a]	photographing sensor, generate image info
[13b]	record image info in recording medium
[13c]	reproduce image from recording medium
[13d]	processing circuitry
[13e]	execute face-recognizing process
[13f]	register person in one of 2 modes, where 1st mode includes newly photographing person
[13g]	where 2nd mode uses previously recorded photograph of person
[13h]	pick out image info w/ selected person
[13i]	pick out image based on user-selected condition
[13j]	selectively and sequentially reproduce images w/ person according to condition

’848 Patent, Claim 18	
[18pre]	recording/reproducing apparatus
[18a]	photographing sensor, generate image info
[18b]	record image info in recording medium
[18c]	reproduce image from recording medium
[18d]	processing circuitry
[18e]	execute face-recognizing process
[18f]	register person by newly photographing person [no 2nd mode requirement]
[18g]	pick out image info w/ selected person
[18h]	pick out image based on user-selected condition
[18i]	selectively and sequentially reproduce images w/ person according to condition

’848 Patent, Claim 11	
[11pre]	apparatus of claim 8
[11a]	control reproduction of image info in 2 reproduction modes
[11b]	reproducing time for 1st mode shorter than 2nd mode
[11c]	image info under 2nd mode includes 1st mode image info as well as new image info

’848 Patent, Claim 16	
[16pre]	apparatus of claim 13
[16a]	control reproduction of image info in 2 reproduction modes
[16b]	reproducing time for 1st mode shorter than 2nd mode
[16c]	image info under 2nd mode includes 1st mode image info as well as new image info

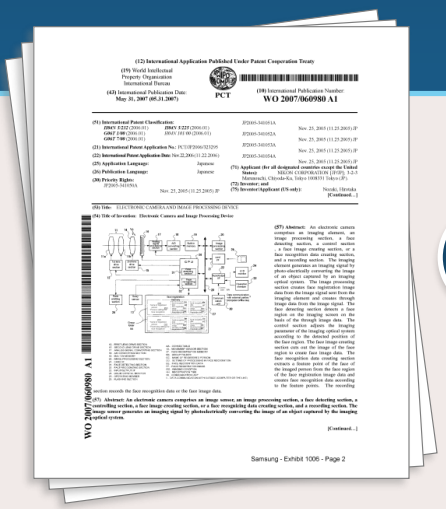
’848 Patent, Claim 19	
[19pre]	apparatus of claim 18
[19a]	control reproduction of image info in 2 reproduction modes
[19b]	reproducing time for 1st mode shorter than 2nd mode
[19c]	image info under 2nd mode includes 1st mode image info as well as new image info

’848 Patent, Claim 12	
[12pre]	apparatus of claim 11
[12a]	control reproduction in a 3rd mode as well
[12b]	reproducing time for 3rd mode longer than 2nd mode

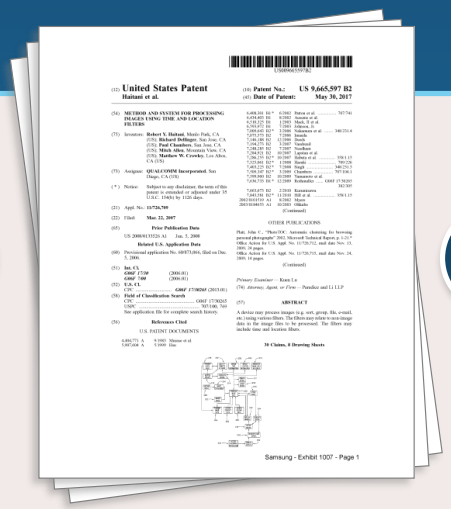
’848 Patent, Claim 17	
[17pre]	apparatus of claim 16
[17a]	control reproduction in a 3rd mode as well
[17b]	reproducing time for 3rd mode longer than 2nd mode

’848 Patent, Claim 20	
[20pre]	apparatus of claim 19
[20a]	control reproduction in a 3rd mode as well
[20b]	reproducing time for 3rd mode longer than 2nd mode

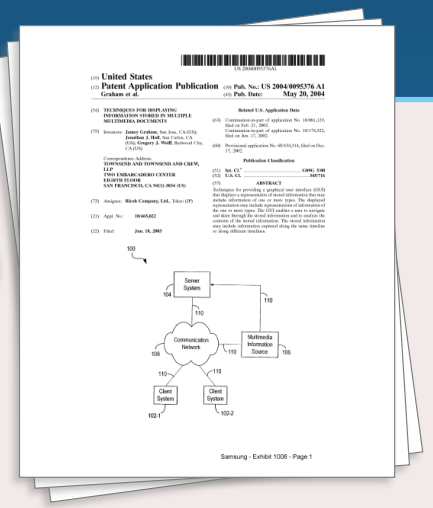
Ground 2



Nozaki
EX1006



Haitani
EX1007



Graham
EX1008

PO Disputes a Few Limitations for Ground 2

Disputed claims/limitations

Undisputed claims/limitations

’848 Patent, Claim 84	
[pre]	recording/reproducing apparatus
[a]	processor
[b]	display w/ 2 options: (1) capture video and (2) show recorded video
[c]	memory coupled to [a], storing instructions
[c.i]	capture photo, generate image info
[c.ii]	record image info in recording medium
[c.iii]	execute face-recognizing process
[c.iv]	reproduce image from recording medium
[c.v]	register person in one of 2 modes, where 1st mode includes newly photographing person
[c.vi]	where 2nd mode uses previously recorded photograph of person
[c.vii]	selectively reproduce images w/ person
[c.viii]	generate thumbnail w/ icon based on user-selected level of importance
[d]	touch panel adhered to screen for selecting the first or second setting mode
[e]	video camera w/ image data, wherein a recognized face is displayed w/ a frame surrounding at least a portion of the face
[f]	analog/digital converter to convert image data to a digital image signal
[g]	codec for compressing image, storing to memory
[h]	video camera captures video of a scene
[h.i]	processor auto-sets sections corresponding to the video information of the scene
[h.ii]	processor generates thumbnails corresponding to sections and displays them
[i]	display cropped images of recognized faces

Touch Panel Adhered to Display [84d]

Petitioners' Reply

First, PO fails to address Petitioners' evidence of obviousness in view of Nozaki alone, because a touch-screen interface was just one of a finite number of ways for users to control the type of device disclosed in Nozaki and it therefore would have been obvious to try. Petition 43. Second, it is undisputed that Nozaki, Haitani, and Graham all come from the same field of endeavor as the '848 patent, and therefore a POSITA would have been able to combine those references as explained in the Petition. Third, the claim recites "a recording and reproducing apparatus," which according to the '848 patent itself is "applicable to video cameras having various structures." EX1001, 13:36-42. There is no evidence to support PO's position that a POSITA would have been unwilling or incapable of combining the camera-related disclosures in these references. Finally, Haitani—the "Qualcomm patent"—makes its disclosures in the context of "digital cameras" that "may be stand-alone cameras or may be integrated into other devices such as cell phones (including Smartphones)." EX1007, 1:24-29.

Petitioners' Reply (2025-04-24) at 21

Segmenting Video with Thumbnails [84h.i], [84h.ii]

Petitioners' Reply

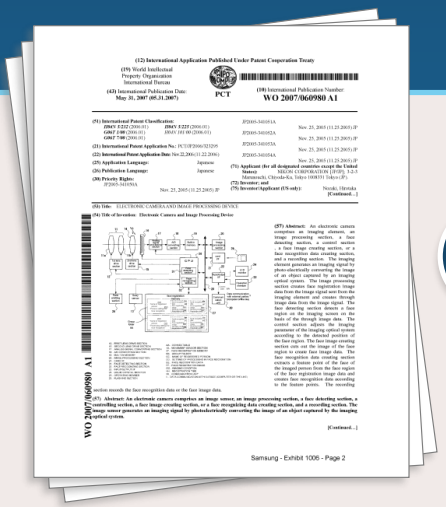
D. Limitation [84h.i]

PO does not dispute that Graham discloses this limitation and only challenges the obviousness of combining Graham with Nozaki and Haitani. As an initial matter, PO again argues—incorrectly—that Petitioners "use[] two different two-reference combinations" in the Petition. POR 55. This argument remains meritless. Ground 2 identifies the alleged combination, and the Petition and Dr. Bederson explain why and how a POSITA would have modified the Nozaki device in view of Haitani and Graham to render claim 84 obvious. Thus, Petitioners employ the same "combination" consistently in this and in all other asserted Grounds.

With respect to this limitation, PO fails to substantively address any of Petitioners' evidentiary support for finding both obviousness and motivation to combine. Instead, PO reprises its conclusory arguments. POR 55 ("Graham is solving a wholly different problem with different hardware than Nozaki"). PO also makes irrelevant allegations about Graham, such as asserting that "Graham discloses searching for information by text or words, not by face information" (POR 56), an argument that (1) ignores that the claim limitation does not require any specific method of segmenting, and (2) relies on a few paragraphs from the 105-page reference for support, none of which relate to the disclosures Petitioners cited.

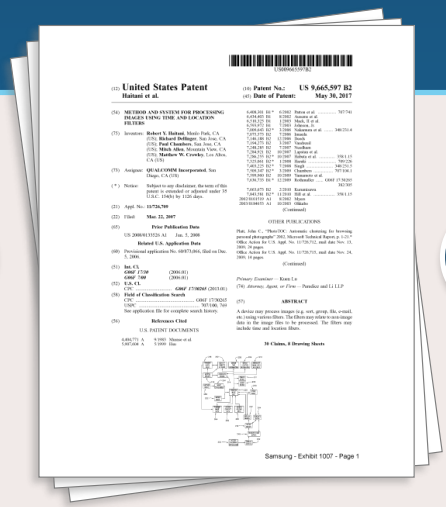
Petitioners' Reply (2025-04-24) at 22

Ground 3



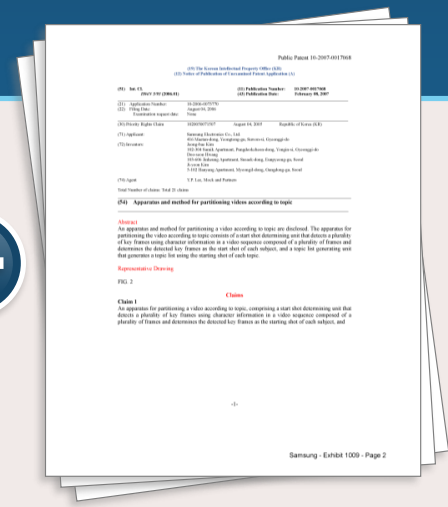
Nozaki

EX1006



Haitani

EX1007



Kim

EX1009

PO Disputes a Few Limitations for Ground 2

Disputed claims/limitations

Undisputed claims/limitations

’848 Patent, Claim 84	
[pre]	recording/reproducing apparatus
[a]	processor
[b]	display w/ 2 options: (1) capture video and (2) show recorded video
[c]	memory coupled to [a], storing instructions
[c.i]	capture photo, generate image info
[c.ii]	record image info in recording medium
[c.iii]	execute face-recognizing process
[c.iv]	reproduce image from recording medium
[c.v]	register person in one of 2 modes, where 1st mode includes newly photographing person
[c.vi]	where 2nd mode uses previously recorded photograph of person
[c.vii]	selectively reproduce images w/ person
[c.viii]	generate thumbnail w/ icon based on user-selected level of importance
[d]	touch panel adhered to screen for selecting the first or second setting mode
[e]	video camera w/ image data, wherein a recognized face is displayed w/ a frame surrounding at least a portion of the face
[f]	analog/digital converter to convert image data to a digital image signal
[g]	codec for compressing image, storing to memory
[h]	video camera captures video of a scene
[h.i]	processor auto-sets sections corresponding to the video information of the scene
[h.ii]	processor generates thumbnails corresponding to sections and displays them
[i]	display cropped images of recognized faces

PO Disputes a Few Limitations for Ground 2

Disputed claims/limitations

Undisputed claims/limitations

’848 Patent, Claim 84	
[pre]	recording/reproducing apparatus
[a]	processor
[b]	display w/ 2 options: (1) capture video and (2) show recorded video
[c]	memory coupled to [a], storing instructions
[c.i]	capture photo, generate image info
[c.ii]	record image info in recording medium
[c.iii]	execute face-recognizing process
[c.iv]	reproduce image from recording medium
[c.v]	register person in one of 2 modes, where 1st mode includes newly photographing person
[c.vi]	where 2nd mode uses previously recorded photograph of person
[c.vii]	selectively reproduce images w/ person
[c.viii]	generate thumbnail w/ icon based on user-selected level of importance
[d]	touch panel adhered to screen for selecting the first or second setting mode
[e]	video camera w/ image data, wherein a recognized face is displayed w/ a frame surrounding at least a portion of the face
[f]	analog/digital converter to convert image data to a digital image signal
[g]	codec for compressing image, storing to memory
[h]	video camera captures video of a scene
[h.i]	processor auto-sets sections corresponding to the video information of the scene
[h.ii]	processor generates thumbnails corresponding to sections and displays them
[i]	display cropped images of recognized faces