

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC,
Petitioner,

v.

138 EAST LCD ADVANCEMENTS LIMITED,
Patent Owner.

Case No. IPR2024-00959
U.S. Patent No. 7,428,082

PATENT OWNER'S RESPONSE

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Number	Description
2001	Declaration of Nikolaos Papanikolopoulos, Ph.D.
2002	CV of Nikolaos Papanikolopoulos, Ph.D.
2003	Deposition Transcript of Robert Stevenson
2004	ICC White Paper No. 7
2005	Microsoft Press Computer Dictionary, 1999 Ed. (excerpt)

I. PATENT OWNER’S OPPOSITION TO INSTITUTED GROUNDS

Pursuant to 37 C.F.R. § 42.120, 138 East LCD Advancements Limited (“Patent Owner”) submits the following Response regarding this inter partes review instituted against U.S. Patent No. 7,428,082 (“the ’082 patent”). Because, as set forth below, Petitioner Google LLC has not met its burden of proof, and because Patent Owner presents the Board with facts that demonstrate the patentability of the challenged claims, the claims must be confirmed.

Petitioner bears “the burden of proving a proposition of unpatentability by a preponderance of the evidence.” 35 U.S.C. § 316(e). Petitioner has failed to meet its burden. The asserted references, alone or in combination as presented in the Grounds, do not disclose all limitations of any challenged claim. In particular, Petitioner fails to meet its burden to show that any of the references it relies on—Kuwata, Fisher, or Ohga—teach or suggest key claim limitations relating to retrieving particular kinds of data called “image processing control data” from another data source. Petitioner further fails to meet its burden to show that a person of ordinary skill in the art would have been motivated to combine Kuwata with one or both of Fisher and Ohga, given the contradictory teachings of those references. None of the references, alone or in combination, renders obvious the claimed inventions. The Board therefore should find in favor of Patent Owner and determine all challenged claims not unpatentable.

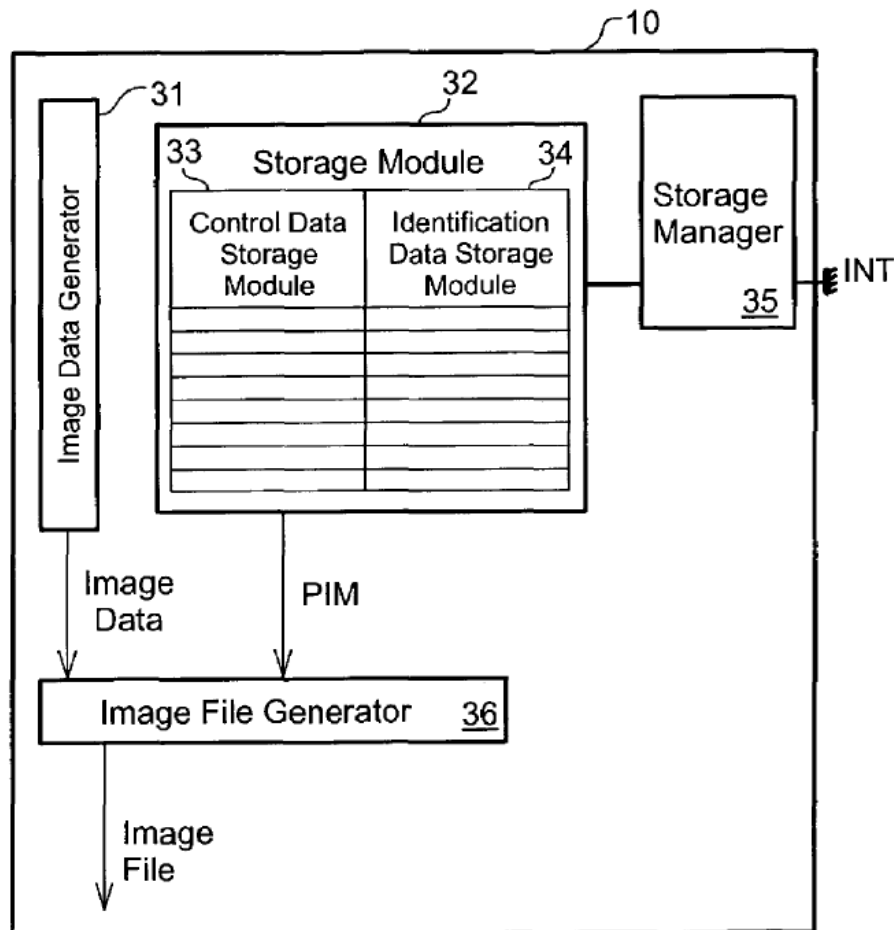
II. THE '082 PATENT

The '082 patent claims improvements in processing digital image data to achieve desired visual characteristics. In particular, the '082 claimed inventions improve the way that image generators, such as digital cameras, (1) generate and store digital image-related data that includes image data and image processing control data, *as well as specification data identifying the image processing mode and control data*; and (2) update the control data in the system *based on the specification data*, for example, to implement new image processing modes that modify the image data in different ways. Ex. 1001, 1:44-2:9, 5:58-65, 6:28-30. Image processing control data may be, for example, a set of parameters used to control an image processing mode, e.g., “sunset.” *Id.*, 8:66-9:2, Fig. 7.

Instead of attaching the control data to the image data as in prior image generators, the claimed image generator includes a control data storage module that stores image processing control data, including specification data and control data, separate from the image data. *Id.*, 1:24-30. The '082 patent relates the image data to detached control data and thus facilitates updating that control data with new data corresponding to selected specification data. Compared to prior art systems, the methods and systems claimed by the '082 patent reduce the resources required to perform digital image data processing to achieve the user's desired

visual characteristics and increase the functionality of image generators by providing new or improved image processing modes.

Figure 3 illustrates the structure of the image-related-data generator (the digital camera, e.g.):



Ex. 1001, Fig. 3.

The “control data storage module 33” stores the image processing control data, which are “PIMs” (Print Image Matching) in a preferred embodiment. *Id.*, 7:27. The PIMs include “various information such as the following: gamma values

of the DSC [digital still camera] 10, setting parameters for contrast and color balance, and color space parameters that identifies the color space where the image data is defined.” *Id.*, 6:63-66. The PIMs may further include “various parameters related to the shooting condition: exposures, white balances, apertures, shutter speeds, and zoom settings.” *Id.*, 6:67-7:2.

Because the structure of the image-related-data generator allows PIMs to be “pre-stored in the DSC” (*id.*, 5:64), the image generating system allows storing the control data separate from the image data. Specifically, the “image file generator” acts as a relating module, relating image data and control data. *Id.*, 7:29-32. This structure improves upon prior systems that required the control data to be attached to the image data, because storing the control data separately facilitates updating that data.

More specifically, the illustrated “storage manager” “manages the PIMs stored in the control data storage module 33 by storing update data.” *Id.*, 7:34-35. The storage manager is responsible for retrieving update data when requested. *Id.*, 7:37-39. The storage manager therefore improves upon how a conventional image generator operates and handles image data and control data by updating particular control data in the control data storage module ***based on specification data that identifies that control data***. The claimed modules provide specific improvements over prior image generators by creating a novel image-related-data generator

having a unique structure including a control data storage module, a relating module, and a storage manager that improves the manner in which image generators store and retrieve image data and control data.

Claim 1 of the '082 patent recites how to achieve these improvements by providing a new storage structure that separates the image processing control data from the image data, distributes control data updates to a storage module, and relates the image data to the image processing control data in a separate image file generator or “relating module.” Claim 1 recites:

1. An image related data generator, connectable to a server, comprising:
 - an image data generator configured to generate image data;
 - a control data storage module pre-storing image processing control data to control image processing of the image data;
 - a relating module configured to relate the image data to the image processing control data; and
 - a storage manager configured to update at least a part of the image processing control data stored in the control

data storage, based on specification data, which specifies the image processing control data to be updated, wherein the image processing control data is to be used in processing of the image data by an image processing device that receives the image data and the image processing control data that are transferred from the image related data generator.

Ex. 1001, 15:8-23.

The '082 patent describes a further embodiment in which a personal computer communicates with the update data server and acts as an image related data editor. *Id.*, 12:60-64. Claim 7, which is directed to the “image related data editor” embodiment, recites:

7. An image related data editor, connectable to a server, comprising:
an input module configured to input image data and attribute data related to the image data, the attribute data including at least one of image processing control data to control image processing of the image data and identification data to identify the image processing control data;

an update data acquiring module configured to acquire update data of the image processing control data based on the attribute data from the server; and a relating module configured to relate the image data to the update data, wherein the image processing control data is to be used in processing of the image data by an image processing device that receives the image data and the image processing control data that are transferred from the image related data editor.

Ex. 1001, 15:47-63.

Claims 8 and 9 of the '082 patent are directed to the update data server, which provides the update data to the DSC in response to received specification data. Claim 8 recites:

8. An update data transmit apparatus, connectable to a predetermined peripheral device, comprising:
an update data storage module for storing in advance update data for image processing control data to control image processing of image data, the update data being associated with at least one of the image processing

control data and identification data to identify the image processing control data;

an input module configured to input predetermined data from the peripheral device, the predetermined data including the image processing control data to be updated or the identification data; and

an update data transmission module configured to transmit the update data corresponding to the predetermined data to the peripheral device,

wherein the image processing control data is to be used in processing of the image data by an image processing device that receives the image data and the image processing control data that are transferred from the peripheral device.

Ex. 1001, 16:1-19.

Claim 9, the method version of claim 8, recites as follows:

9. A method for transmitting update data for image processing control data, which is used to control image processing of image data, to a peripheral device, the method comprising steps of:

providing the update data associated with at least one of the image processing control data and identification data to identify the image processing control data; inputting predetermined data from the peripheral device, the predetermined data including the image processing control data to be updated or the identification data corresponding to the image processing control data to be updated; and transmitting the update data corresponding to the predetermined data to the peripheral device.

Ex. 1001, 16:20-32.

Claim 10 of the '082 patent recites how to achieve the described improvements by providing a new storage structure that separates the image processing control data from the image data, distributes control data updates to a storage module, and relates the image data to the image processing control data in a separate image file generator or “relating module.” Claim 10 recites:

10. A digital camera for generating an image file including image data and image processing control data, the image processing control data being used for

controlling image processing of the image data, the digital camera comprising:

- an image data generating module configured to generate image data of an image captured by the digital camera;
- a display device;
- a control data storage for storing in advance image processing control data to control image processing of the image data; and
- an image file generating module configured to generate an image file that includes the image data and the image processing control data; and
- a memory management module configured to acquire additional image processing control data from an external memory device separate from the digital camera, and to store the additional image processing control data into the control data storage,

wherein the image file generating module displays a user interface screen including a plurality of processing modes on the display device to enable a user to select one of the plurality of processing modes, and generates the image

file using specific image processing control data associated with the selected processing mode, and when the additional image processing control data has been stored in the control data storage, the image file generating module displays on the display device a plurality of processing modes which includes an additional processing mode related to the additional image processing control data.

Ex. 1001, 16:33-61.

III. CLAIM CONSTRUCTION

No claim term requires express construction for the Board to conclude that Petitioner has failed to meet its burden to show any claim is unpatentable. For purposes of this Response, the claim terms should receive their ordinary and customary meaning in light of the specification and prosecution history, as understood by a person of ordinary skill in the art. 37 C.F.R. § 100(b); *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005).

IV. LEGAL STANDARD

“In an inter partes review instituted under this chapter, the petitioner shall have the burden of proving a proposition of unpatentability by a preponderance of the evidence.” 35 U.S.C. § 316(e).

A. Standard for Anticipation

Anticipation requires that a single reference “describe the claimed invention with sufficient precision and detail to establish that the subject matter existed in the prior art.” *Verve, LLC v. Crane Cams, Inc.*, 311 F.3d 1116, 1120 (Fed. Cir. 2002) (emphasis added). For this reason, it has long been understood that ambiguous references do not, as a matter of law, anticipate a claim. *See, e.g., W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1554 (Fed. Cir. 1983) (refusing to find claims anticipated when the prior art references were “unacceptably vague”); *see also Wasica Fin. GmbH v. Cont’l Auto. Sys., Inc.*, 853 F.3d 1272, 1284 (Fed. Cir. 2017) (refusing to find claims as anticipated where the prior art reference was “ambiguous as to whether it discloses the pertinent features” of the challenged claim).

B. Standard for Obviousness

A claimed invention is obvious “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person of ordinary skill in the art.” 35 U.S.C. § 103(a). As set out by the Supreme Court, the framework for an obviousness inquiry requires determining “the scope and content of the prior art,” the “differences between the prior art and the claims at issue,” and “the level of skill in the pertinent art.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398,

406 (2007) (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17-18 (1966)). “[O]bviousness requires a suggestion of all limitations in a claim.” *CFMT, Inc. v. Yieldup Int’l Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003) (citing *In re Royka*, 490 F.2d 981, 985 (CCPA 1974)). Further, obviousness determinations must be made without “any hint of hindsight.” *Star Sci., Inc. v. R.J. Reynolds Tobacco Co.*, 655 F.3d 1364, 1375 (Fed. Cir. 2011). The patent-in-suit may not be used “as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit.” *In re NTP, Inc.*, 654 F. 3d 1279, 1299 (Fed. Cir. 2011).

It is Petitioner’s “burden to demonstrate both that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1381 (Fed. Cir. 2016) (internal citation and quotation omitted); *see also KSR*, 550 U.S. at 418. Petitioners cannot satisfy their burden through “mere conclusory statements,” but “must instead articulate specific reasoning, based on evidence of record” that supports an obviousness determination. *In re Magnum Oil Tools*, 829 F.3d at 1380; *see also KSR*, 550 U.S. at 418 (“[T]here must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.”).

Moreover, Petitioner cannot satisfy its burden with unsupported and conclusory expert testimony. *See* 37 C.F.R. § 42.65(a) (“[e]xpert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight”).

V. LEVEL OF ORDINARY SKILL IN THE ART

For purposes of this Response, Patent Owner does not dispute the level of skill for a person of ordinary skill in the art (“POSITA”), set forth in the Petition. Pet., 5. Patent Owner does not waive, however, any argument regarding the proper level of skill and reserves the right to later advance additional arguments.

Petitioner adopts the following definition for a POSITA: “at least a bachelor’s degree in electrical engineering, computer science, or related engineering disciplines, and two years of experience in digital image processing. Relevant work experience can substitute for formal education and additional education could substitute for work experience.” Pet., 5. Petitioner’s expert agrees with this definition. Ex. 1003, ¶ 60.

**VI. THE PETITION DOES NOT ESTABLISH UNPATENTABILITY BY
A PREPONDERANCE OF THE EVIDENCE.**

**A. Kuwata in view of Fisher does not render obvious claims 1-3, 5-6,
or 10 (Ground 1).**

1. Kuwata: Overview

U.S. Pat. Appl. No. 2002/0030833 to Kuwata (“Kuwata”) is directed to processing image data to obtain an optimal output in view of a chosen output device, such as a printer. Ex. 1005, ¶ [0014]. Kuwata teaches an image file (“GF”) that contains image data (“GD”) and output control information (“CI”). *Id.*, ¶ [0066]. According to Kuwata, the output control information “specifies the image output conditions and image output status for an output device so as to be able to obtain the optimal image output results,” e.g., for a selected camera and printer. *Id.*, ¶ [0067].

Although the user sets the output conditions on the camera, Kuwata explains that “DSC manufacturers are best suited to identify the optimal processing settings by observing the results of the DSC when used with a particular printer.” *Id.*, ¶ [0075]. According to Kuwata, “[t]his identification of what combination of DSC parameters and printer parameters is largely found through a trial and error process” performed by the DSC manufacturer. *Id.* In particular, a described advantage of providing output device-specific control information in the image file on the DSC is that “the DSC manufacturer goes through the laborious process of

identifying the optimum combination of operational characteristics of a DSC-printer pair, and memorizes the characteristics in memory, for later retrieval when the photographer identifies the target printer to be used for printing.” *Id.*, ¶ [0077]. Kuwata further explains that “the DSC vendor does the matching once, so thousands of DSC photographers never have to do it, yet the photographers can be guaranteed that the results will be optimal for the DSC-printer pair.” *Id.*

Unlike the ’082 patent, therefore, Kuwata discloses a self-contained camera system that does not connect to the Internet or download information from any kind of central server. Neither “server” nor “Internet” appears anywhere in Kuwata’s disclosure. To the contrary, Kuwata describes a self-contained system in which a camera is optimally paired with multiple output devices based on the camera manufacturer’s trial-and-error testing. Kuwata does not disclose updating image processing control information at all, let alone doing so based on specification data.

2. Fisher: Overview

U.S. Pat. Appl. No. 2001/0025303 to Fisher (“Fisher”) is directed to storing and using so-called “ancillary” data files for an electronic camera device to implement more efficient methods for accessing and utilizing information. Ex. 1006, ¶ [0008]. According to Fisher, managing information on electronic devices may “create substantial challenges for system designers,” as “demands for

increased device functionality and performance may require more system processing power and require additional hardware resources.” *Id.*, ¶ [0005]. Fisher notes that digital imaging devices in particular “may benefit from an efficient implementation because of the large amount and complexity of the digital data involved.” *Id.*, ¶ [0006].

To address these memory and scalability limits, Fisher teaches downloading ancillary data files from the Internet or other data source, and those files are stored in a memory area on the camera following download. Ex. 1006, ¶ [0031]. According to Fisher, these ancillary data files may contain “any appropriate information, data, or instructions to facilitate successful operation of camera device,” and in particular may include “various types of information for combining with image data that is captured by camera device 110 to thereby produce composite images.” *Id.*, ¶ [0034]. Fisher does not describe any specific means by which a user would identify ancillary data files for download.

Unlike the ’082 patent, therefore, which is directed to particular structures on both the DSC side and server side that improve on prior systems that required control data to be attached to image data, Fisher describes a general client/server relationship in which generic “ancillary data files” are stored at a server and downloaded by a camera or similar device only as needed, so as to reduce memory requirements and improve scalability.

3. **Petitioner fails to show that Kuwata and Fisher render obvious all limitations of any challenged claim (Ground 1).**
 - a. **Claim 1: Petitioner fails to show that Kuwata in view of Fisher renders obvious claim element [1d]: “a storage manager configured to update at least a part of the image processing control data stored in the control data storage, based on specification data, which specifies the image processing control data to be updated.”**

In its Decision Granting Institution, the Board faulted Patent Owner for allegedly inviting the Board to “look[] at Fisher individually” in Patent Owner’s Preliminary Response, noting that the question on obviousness is “whether it would have been obvious to a [POSITA] to combine the relevant disclosures of the two references, not whether each individual reference discloses all of the necessary elements.” Decision at 24. Patent Owner respectfully submits that, regardless of whether it would have been obvious to combine Kuwata with Fisher, doing so would not result in the challenged claim because at least one key limitation is missing from *both* references. In particular, both Kuwata and Fisher fail to teach the limitation of claim 1 “configured to update at least a part of the image processing control data . . . *based on specification data*.” The Board cannot make an obviousness determination in the absence of evidence that a prior art combination would have taught *all* elements of the claims. *See Motorola, Inc. v. Interdigital Tech. Corp.*, 121 F.3d 1461, 1473 (Fed. Cir. 1997) (“[B]ecause no

combination of prior art references for obviousness describes [all elements] recited in the claim, the jury's obviousness verdict must also fall."). Therefore, the combination of Kuwata and Fisher cannot render claim 1 invalid on obviousness grounds. All the same, as discussed further below, Petitioner fails to meet its burden to show that a POSITA would have been motivated to combine Kuwata with Fisher or could have done so with a reasonably expectation of success.

i. Petitioner fails to show that Kuwata and Fisher together teach all elements of claim 1

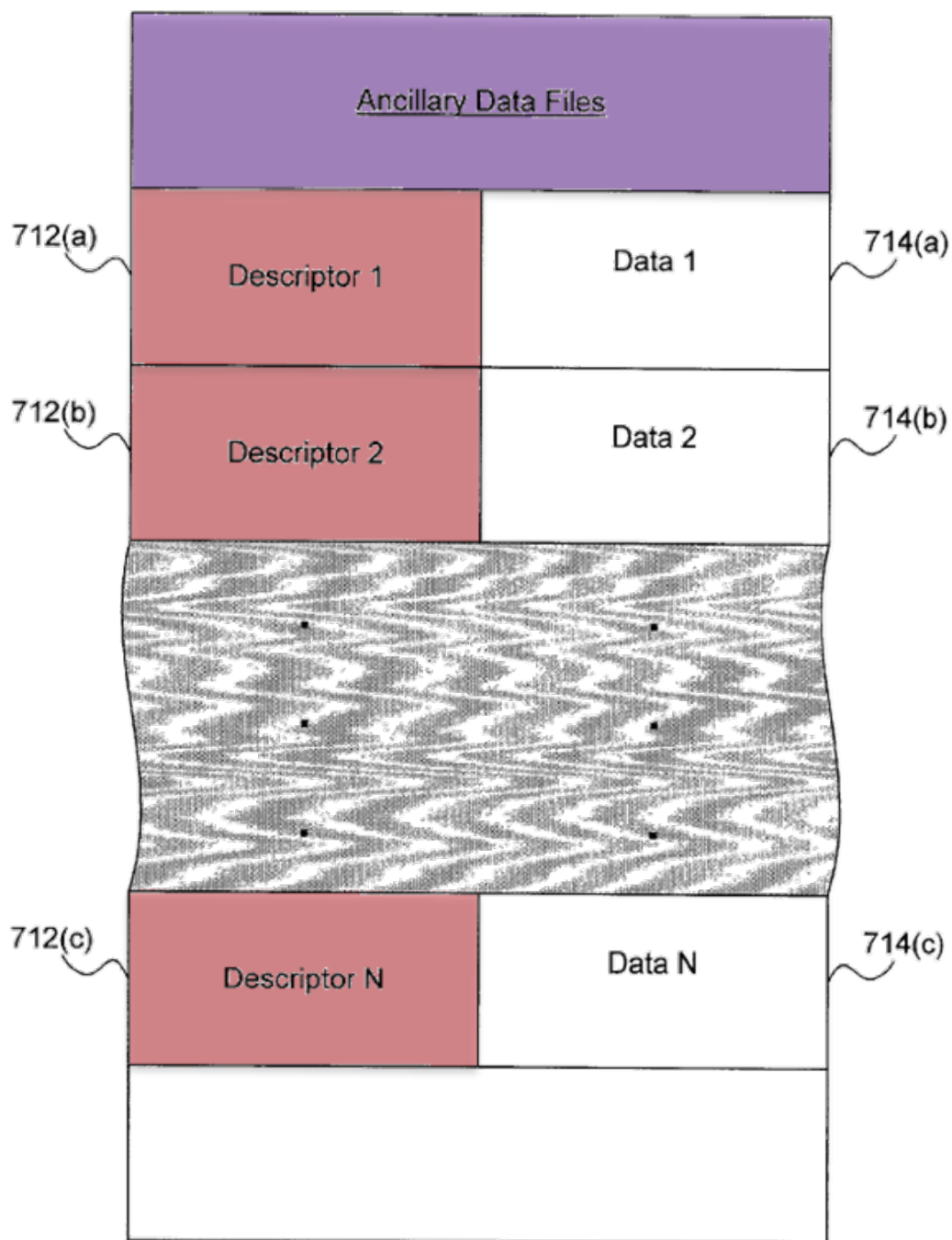
Specifically here, Petitioner alleges that Fisher's ancillary data module downloads ancillary data files from the Internet based on specification data and identifies Fisher's "descriptors" as that specification data. Pet., 23. According to Fisher, these descriptors "identify relevant information regarding the downloaded ancillary data files." Ex. 1006, ¶ [0012].

But the '082 claim element ascribes a particular purpose to the "specification data," which is not just generic data associated with image processing control data. The claimed specification data "specifies the image processing control data to be updated." Ex. 1001, 1:55-56. Fisher's "descriptors," by contrast, do not specify "data to be updated." Nowhere in the four paragraphs that the Petition cites for support (¶¶ [0010], [0023], [0049], and [0053]) does Fisher disclose using descriptors to specify data for updating or otherwise retrieving, and a POSITA

would not have understood Fisher to teach as much. Papanikolopoulos Decl., Ex. 2001, ¶¶ 56-57.

Instead, Fisher explains that its “descriptors” are stored in the ancillary data files themselves and merely describe properties of the ancillary data therein. Ex. 2001, ¶ 57. Fisher states at ¶ [0049] that “ancillary data files 418 may preferably include a descriptor 1 (712(a)) through a descriptor N ((712(c)).” Fisher further explains at ¶ [0053] that the descriptors may “describe the nature of the associated data,” such as “a data format or a data type”; may describe “how the associated data 714 is organized,” including “a data structure or a data size,” or may be used to “update camera menus 424” or “otherwise provide current information to a system user for effectively utilizing the ancillary data files 418.” Fisher provides a specific example of descriptor use at ¶ [0059], explaining how they “identify relevant information regarding the downloaded ancillary data files” and allow the ancillary data module to “assign each downloaded ancillary data file 418 to an appropriate file category, such as a template category, an overlay category, a background category, an Internet web page category, or an instructions category.” But nowhere in these disclosures does Fisher teach or even suggest using descriptors to download new ancillary data files from a server. Ex. 2001, ¶ 57.

Fisher's Figure 7 also illustrates how the **descriptors** are stored in the ancillary data files:



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Ex. 1006, Fig. 4 (annotations added). Fisher’s descriptors, therefore, are part of the ancillary data files to be downloaded. They “describe” their associated ancillary data, as the name “descriptor” suggests, and provide guidance on how to use that downloaded ancillary data. But Fisher nowhere discloses using the descriptors to determine what ancillary data should be *updated*, as required by the claim.

Ex. 2001, ¶ 58.

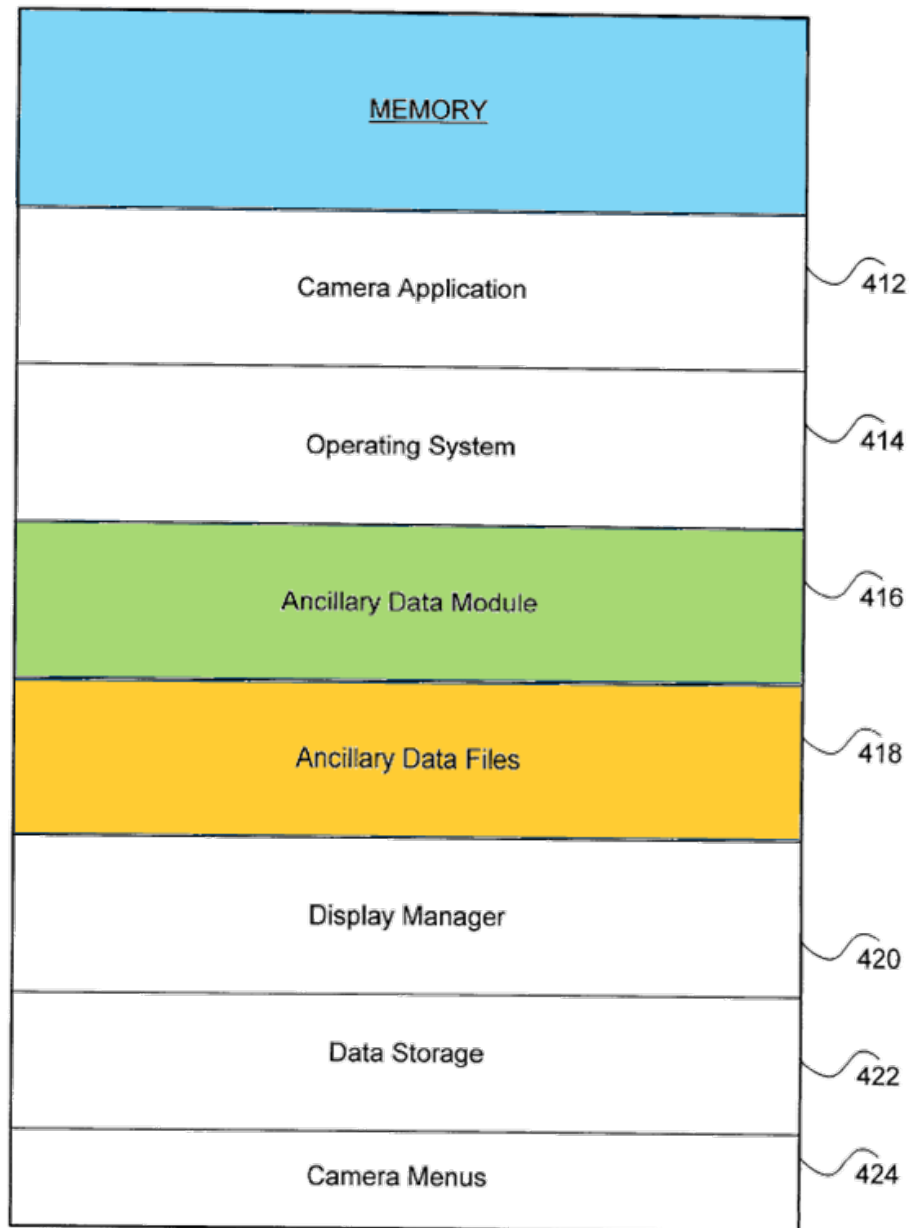
According to Fisher, retrieval of ancillary data files from an external data source is managed not according to descriptors, but by a “Download Manager,” which is part of a larger “Ancillary Data Module.” *E.g.*, Ex. 1006, Fig. 5. Fisher explains that the download manager

preferably may coordinate the accessing, selecting, downloading, analyzing, and storing of various types of ancillary data files **418** from any appropriate data source. For example, download manager **416** may access various ancillary data files **418** from a location or service on a distributed computer network such as the Internet. Download manager **512** may then responsively identify and store the downloaded ancillary data files **418** into memory **116** of camera device **110**.

Ex. 1006, ¶ [0037].

Notably, Fisher’s ancillary data module—and therefore the download manager, which it includes—is stored in memory *separate from* the ancillary data files themselves, which (optionally) include the descriptors. Ex. 2001, ¶ 58. That separation is evident in Figure 4 below, which shows distinct **Memory** blocks for

the **Ancillary Data Module** (including download manager) and the **Ancillary Data Files** (including descriptors).



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Fig. 4

Ex. 1006, Fig. 4 (annotations added); Ex. 2001, ¶ 58. Not only does Fisher fail to disclose any connection between the descriptors and retrieving new ancillary data files, but it expressly teaches storing them separate and independent of each other in the camera memory, with no teaching or suggestion of any overlap or cross-purpose between the descriptors and the downloading of ancillary data files.

Ex. 2001, ¶¶ 58-59.

Neither Petitioner nor its expert points to any disclosure in Fisher of a descriptor that specifies “data to be updated,” as recited by the claim. Petitioner states, without further explanation, that “[a]ncillary data module 416 downloads an ancillary data file from the Internet server based on specification data, such as a ‘descriptor’ associated with a ‘respective set of data,’ that corresponds to the user’s selection,” citing Fisher ¶¶ [0010], [0023], [0049], and [0053] for support. Pet., 23. As previously discussed, none of these paragraphs in Fisher describe using descriptors to download ancillary data files. Ex. 2001, ¶ 56. Paragraphs [0049] and [0053] describe descriptors only as “preferably associated” with the data in the ancillary data files themselves and as including “appropriate information” related to the data. Ex. 2001, ¶ 56. The term “descriptor” does not appear in paragraphs [0010] or [0023] at all; those paragraphs describe accessing ancillary data files generally. Ex. 2001, ¶ 56. Petitioner provides no explanation for how or why a POSITA would understand Fisher to teach using descriptors—which are stored

separately from Fisher’s “download manager”—to identify and download additional ancillary data files.

Petitioner’s expert, Dr. Stevenson, likewise fails to provide any support for these missing teachings in his declaration. He alleges, for instance, that “[a]ncillary data module 416 downloads an ancillary data file from the Internet server based on specification data, such as a ‘descriptor’ that is associated with a ‘respective set of data,’ that corresponds to the user’s selection,” also citing Fisher, ¶¶ [0010], [0023], [0049], and [0053]. Ex. 1003, ¶ 104. Yet nothing in these cited paragraphs of Fisher describes downloading an ancillary data file based on a descriptor. Ex. 2001, ¶¶ 56-57.

Petitioner therefore fails to identify “a storage manager configured to update at least a part of the image processing control data . . . ***based on specification data, which specifies the image processing control data to be updated,***” as recited by ’082 claim 1, in ***both*** Kuwata and Fisher. Petitioner therefore fails to identify a combination of references in this Ground that teaches all elements of the challenged claim, which by itself is sufficient to show that Petitioner has not met its burden to establish the unpatentability of claim 1 of the ’082 patent.

ii. Petitioner further fails to show that a POSITA would have been motivated to combine Kuwata with Fisher and would have had a reasonable expectation of success in the combination

Further, Petitioner fails to establish substantial evidence that a POSITA would have been motivated to combine Kuwata with Fisher to arrive at the claimed invention. First, Petitioner alleges that a POSITA would have found it obvious to implement “Fisher’s ancillary data module that updates ancillary data files in the camera’s memory based on specification data that specifies new or updated ancillary data files to download in Kuwata’s camera.” Pet., 24. But Fisher does not teach updating ancillary data files in the camera’s memory *based on specification data that specifies new or updated ancillary data files to download*, for the reasons described at § VI.A.3.a.i. Fisher therefore cannot suggest modifying Kuwata as Petitioner proposes. Ex. 2001, ¶ 60.

Petitioner similarly fails to establish substantial evidence to show a motivation to combine Kuwata and Fisher. Neither Petitioner nor Dr. Stevenson points to any suggestion in Kuwata to look off-camera for preset conditions corresponding to new DSC/printer pairs. Referring back to analysis from the claim 1 preamble, Petitioner argues that a POSITA would have been motivated to incorporate Fisher’s ancillary data module to update and manage preset conditions “to account for printers not stored in camera memory” or “to update the

manufacturer-identified preset conditions for printing.” Pet., 25. But Kuwata *teaches away* from accessing an external server, as Kuwata stresses advantages of a *self-contained* camera that would not need to access an external server. Ex. 2001, ¶¶ 62-64.

Specifically, one of the purported advantages of Kuwata’s camera is that “[t]he DSC manufacturer goes through the laborious process of identifying the optimum combination of operational characteristics of a DSC-printer pair, and memorizes the characteristics in memory, for later retrieval when the photographer identifies the target printer to be used for printing.” Ex. 1005, ¶ [0077]. Kuwata continues, “[b]y following this approach, the DSC Vendor does the matching once, so thousands of DSC photographers never have to do it, yet the photographers can be guaranteed that the results will be optimal for the DSC-printer pair.” *Id.* Kuwata therefore touts the advantages of having the DSC vendor perform DSC-printer matching and store all the results on the camera. Ex. 2001, ¶ 62. Kuwata is directed to enabling standalone printing via direct uploads *without* external dependencies. *Id.*, ¶ 62. Kuwata nowhere mentions an external server, Internet connectivity, or external data for image processing. Between its touting of a self-contained camera and its failure to mention external data, Kuwata’s teachings would have *discouraged* a POSITA from adding Fisher’s connectivity to an external server,

especially where Fisher's teachings regarding scalability are antithetical to Kuwata's. Ex. 2001, ¶¶ 63-64.

Finally, Petitioner fails to establish that a POSITA, even had they tried to combine Kuwata and Fisher, could have done so with a reasonable expectation of success. Petitioner fails to address well-known challenges as of the '082 patent priority date relating to printer drivers needed to match DSCs with particular printers. Printer drivers were complex and not always updated to handle newer camera formats or shooting modes, resulting in challenges in how a POSITA would have translated an image printing task with particular DSC settings into reality. Ex. 2001, ¶¶ 65-66. Universal printer drivers were one solution intended to address this problem, but they presented challenges of their own, including the handling of Page Description Languages (PDLs) like PostScript and PCL6 along with printer capabilities in a single driver module. Ex. 2001, ¶ 67. Indeed, Kuwata expressly teaches one printer driver, already on Kuwata's self-contained camera, and a CPU that "sets the printing condition for the printer driver" based on the output control information "so it is not necessary for the user who is executing the printing to set these conditions in the printer driver setting screen." Ex. 1005, ¶ [0111]; Ex. 2001, ¶ 66. And Kuwata specifically refers to this DSC/printer matching process as "laborious" and one that "DSC manufacturers are best suited"

to perform “through a trial and error process,” given the complexities. Ex. 1005, ¶¶ [0075], [0077].

Because Petitioner fails to show that Fisher teaches at least one missing element of Kuwata—updating at least a part of the image processing control data in the control data storage “based on specification data”—and likewise fails to show that a POSITA would have been motivated to combine Kuwata with Fisher to obtain particular specification data (data that identifies a DSC/printer pair) with a reasonable expectation of success, Petitioner has failed to meet its burden to show that claim 1 is unpatentable in view of Kuwata combined with Fisher.

b. Claim 10: Petitioner fails to show that Kuwata in view of Fisher renders obvious claim element [10e]: “a memory management module configured to acquire additional image processing control data from an external memory device separate from the digital camera, and to store the additional image processing control data into the control data storage.”

Regarding claim 10, Petitioner fails to show that Kuwata in view of Fisher teaches “a memory management module configured to acquire additional image processing control data from an external memory device separate from the digital camera, and to store the additional image processing control data into the control data storage,” for the same reasons described at § VI.A.3 regarding claim element [1d]. While noting that [10e] uses different terminology from [1d], including recitation of “an external memory device separate from the digital camera,”

Petitioner describes claim elements [1d] and [10e] as reciting “substantially similar limitations” and cites back to [1d] in alleging that a POSITA would have found this claim element obvious in view of Kuwata and Fisher. Pet., 46.

As discussed at § VI.A.3.a.i, however, Fisher fails to cure the deficiencies of Kuwata with regard to claim element [1d], and therefore fails to cure the deficiencies of Kuwata with regard to this claim element as well. Petitioner alleges, for example, that a POSITA would have found it obvious based on Kuwata and Fisher “to include functionality to acquire additional preset conditions corresponding to DSC-printer pairs or new modes (additional image processing control data) from an external memory device separate from the digital camera, such as a server, and to store the additional output conditions in Kuwata’s camera memory (control data storage).” Pet., 46. But, as discussed at § VI.A.3.a.i, Fisher does not teach how to modify Kuwata to acquire these additional preset conditions, and neither Kuwata nor Fisher contains any suggestion that would motivate a POSITA to make that modification. Further, as discussed at § VI.A.3.a.ii, Kuwata’s teachings regarding the benefits of a *self-contained* camera system would discourage a POSITA from looking to Fisher, which does not instruct on adding new print capabilities anyway. Ex. 2001, ¶ 70. Petitioner therefore fails to show that Kuwata in view of Fisher renders obvious this claim element.

c. Petitioner fails to demonstrate that dependent claims 2 and 3 are unpatentable.

Dependent claims 2 and 3 both depend from claim 1. Therefore, claims 2 and 3 include all limitations of claim 1. Accordingly, Petitioner fails to show by a preponderance of the evidence that claims 2 and 3 are unpatentable for the same reasons as claim 1.

d. Petitioner fails to demonstrate that dependent claim 5 is unpatentable.

Dependent claim 5 depends from claim 1. Therefore, claim 5 includes all of the limitations of claim 1. Accordingly, Petitioner fails to show by a preponderance of the evidence that claim 5 is unpatentable for the same reasons as claim 1.

In particular, with regard to claim limitation [5b], “wherein the specification data is the identification data,” Petitioner alleges that “[b]ecause the combined Kuwata-Fisher camera already uses the DSC-printer pair identifier (specification data) to download the corresponding preset conditions, a POSITA would have found it obvious . . . storing the DSC-printer pair identifier (identification data) in memory to make later retrieval of the corresponding preset conditions more efficient,” citing back to analysis for element [5a]. Pet., 41. As explained in § VI.A.3.a.i for claim limitation [1d], however, Petitioner fails to establish that “the combined Kuwata-Fisher” camera uses “the DSC-printer pair identifier (specification data) to download the corresponding preset conditions,” at least

because Fisher does not teach specification data that specifies the image processing control data to be updated. Ex. 2001, ¶ 72. As described at § VI.A.3.a.ii, even the combined disclosures of Kuwata and Fisher would not have motivated a POSITA to download preset conditions corresponding to DSC-printer pairs.

e. Petitioner fails to demonstrate that dependent claim 6 is unpatentable.

Dependent claim 6 depends from claim 1. Therefore, claim 6 includes all of the limitations of claim 1. Accordingly, Petitioner fails to show by a preponderance of the evidence that claim 6 is unpatentable for the same reasons as claim 1.

In particular, with regard to claim limitation [6b], “the storage manager sends specification data which specifies the image processing control data to be updated, to the server and receives update data from the server,” Petitioner alleges that “Fisher’s ancillary data module (storage manager) renders obvious sending specification data corresponding to a DSC-printer pair that specifies the preset conditions (image processing control data) to be updated to the server and receives back the corresponding preset conditions (update data).” Pet., 41-42. But as explained at § VI.A.3.a.i, Petitioner fails to show that Fisher teaches the claimed specification data that “specifies image processing control data to be updated.” A POSITA therefore would not understand the Kuwata/Fisher combination to teach “specification data corresponding to a DSC-printer pair” at all.

Further, Fisher nowhere discloses sending any alleged “specification data” from the camera to any data source. Ex. 2001, ¶ 73. Petitioner alleges Fisher’s “descriptors” are the claimed “specification data” (an erroneous mapping for the reasons discussed at § VI.A.3.a.i). But Fisher nowhere teaches *sending* or *uploading* descriptors. Ex. 2001, ¶ 73. Indeed, Petitioner’s expert conceded during his deposition that he was unaware of any disclosure in Fisher of uploading ancillary data files—and therefore the included descriptors—from Fisher’s camera to another device on the network such as a server. Stevenson Dep. Tr., Ex. 200_, 76:5-77:3. For this additional reason, Petitioner fails to meet its burden to show that claim 6 is unpatentable.

B. The combination of Kuwata, Fisher, and Ohga does not render obvious claims 1-6 or 10 (Ground 2).

1. Ohga: Overview

U.S. Patent No. 6,788,305 to Ohga (“Ohga”) is concerned with color matching between an image and a display monitor in a network environment. Ex. 1007, 1:43-45. In particular, Ohga describes client PCs connected to a network that includes a web server storing an HTML document. The HTML document contains a link to both image data and an input profile. *Id.*, 3:36-46. According to Ohga, the format of that profile “matches or complies with that specified by International Color Consortium (ICC).” *Id.*, 3:44-46. The HTML document may

also contain a link to a color matching module (CMM) program for matching colors between the image data and a desired output source such as a particular monitor connected to the computer. *Id.*, 3:22-28.

According to Ohga, the user manually selects an output profile for the monitor; Ohga describes various methods by which the monitor profile may be obtained by the PC user. *Id.*, 3:51-4:2. Once the monitor profile is obtained, both the input and output profiles are passed to the CMM program, which executes color matching for the image data based on the profiles. *Id.*, 3:48-4:5.

Unlike the '082 patent, therefore, Ohga's system requires the user to manually obtain a monitor output profile prior to processing of the image data by the CMM. Further, Ohga's CMM must take as inputs both the input profile and the output profile before it can process the image data, and the output profile must be selected and passed in manually by the user prior to image processing.

2. Petitioner fails to show that Kuwata, Fisher, and Ohga render obvious all limitations of any challenged claim (Ground 2).

- a. Claim 1: Petitioner fails to show that Kuwata in view of Fisher and Ohga renders obvious claim element [1d] “a storage manager configured to update at least a part of the image processing control data stored in the control data storage, based on specification data, which specifies the image processing control data to be updated.”**

Petitioner fails to show that Kuwata in view of Fisher and Ohga discloses “a storage manager configured to update at least a part of the image processing control data stored in the control data storage, based on specification data, which specifies the image processing control data to be updated.”

In its Decision Granting Institution, the Board faulted Patent Owner for allegedly inviting the Board to “look[] at Ohga individually and separately from Kuwata and Fisher” in Patent Owner’s Preliminary Response. Decision at 32. Patent Owner respectfully submits that, regardless of whether it would have been obvious to combine Kuwata with Fisher and Ohga, doing so would not result in the challenged claim because at least one key limitation is missing from *all* references. In particular, none of Kuwata, Fisher, or Ohga teaches the limitation of claim 1 “configured to update at least a part of the image processing control data . . . *based on specification data, which specifies the image processing control data to be updated.*” The Board cannot make an obviousness determination in the absence of

evidence that a prior art combination would have taught *all* elements of the claims. *See Motorola*, 121 F.3d at 1473 (Fed. Cir. 1997). Therefore, the combination of Kuwata, Fisher, and Ohga cannot render claim 1 invalid on obviousness grounds.

i. Petitioner fails to show that Ohga teaches “specification data, which specifies the image processing control data to be updated,” as claimed

As addressed at § VI.A.3.a above, Petitioner fails to show that Kuwata in view of Fisher discloses “a storage manager configured to update at least a part of the image processing control data stored in the control data storage *based on specification data, which specifies the image processing control data to be updated.*” And Petitioner fails to use Ohga to fill the gaps in the Kuwata/Fisher combination. Indeed, Petitioner relies on Ohga in the Kuwata/Fisher/Ohga combination *only* for its alleged disclosure of updating “based on specification data, which specifies the image processing control data to be updated.” Pet., 56. But Ohga does not teach specification data that “specifies the image processing control data to be updated.” Ex. 2001, ¶ 83. Because Petitioner fails to show that Ohga supplies the teaching that is missing from the combination of Kuwata and Fisher, the Petition fails to show that Kuwata in view of Fisher and Ohga discloses this limitation.

Petitioner points to two separate data structures in Ohga as alleged “specification data.” Petitioner first points to a “designation” of an input profile as “specification data for [the] input profile.” Pet., 56. Petitioner then points to a “given profile name” of an output profile as “specification data for [the] output profile.” *Id.* According to Petitioner, then, Ohga’s alleged “specification data” specifies input or output profiles. *Id.*

But Petitioner overlooks the complete claim term, which requires not just “specification data” but “specification data, *which specifies the image processing control data to be updated.*” Ex. 1001, 15:18-19. Specification data must specify *image processing control data*. And image processing control data is data used “to control image processing of the image data.” *Id.*, 15:12-13. It follows that the claimed “specification data” must specify not just any data, but data *used to control processing of the image data*. And Ohga does not teach said specification data.

Ohga’s purported “specification data,” as mapped by Petitioner, specifies input and output profiles, but neither Petitioner nor its expert explains how or why these “profiles” disclose image processing control data as claimed. Petitioner explains only that “A PC acquires input profile P1 ‘from the downloaded image data’ or downloads it separately based on a ‘designation’ (specification data for input profile) and downloads output profile P2 based on a user selecting a ‘given

profile name’ (specification data for output profile) from a list,” citing Ohga at 3:16-19, 3:37-58, and 4:30-37. Pet., 56. Petitioner thereby implicitly equates “image processing control data” with Ohga’s “input profile” and “output profile,” as the claim recites specification data that “specifies the image processing control data to be updated.” Petitioner’s expert, Dr. Stevenson, expressly identifies “input profile P1” and “output profile P2” as “image processing control data.” Ex. 1003, ¶ 168. But neither Petitioner nor Dr. Stevenson provides any further explanation as to how or why Ohga’s input and profiles are “used to control processing of the image data,” as the claim requires. Ex. 2001, ¶ 84. Nor could they, because—as discussed further below—those profiles are not use to control processing of the image data.

Ohga itself does not provide any evidence to suggest to a POSITA that the input or output profiles are image processing control data. Ohga explains only that the input profile “is passed as a parameter to the CMM program,” that the obtained output profile is also “passed to the CMM program,” and that the CMM program “executes color matching for the image data J1 on the basis of the input profile P1 and monitor profile.” Ex. 1007, 3:38-41, 3:48-50, 4:3-5. According to Ohga, then, it is the CMM that contains instructions to actually carry out the mapping from one device’s color space to the other device’s color space. Ex. 2001, ¶ 86. The input and output profiles are parameters passed *into* the CMM program, but Ohga

provides no further information about what kinds of data the profiles contain or how that data is used as part of the CMM program. Ex. 2001, ¶ 86.

ii. A POSITA reading Ohga would have understood that the ICC input and output profiles cannot be “specification data, which specifies the image processing control data to be updated,” as claimed

Indeed, a POSITA reading Ohga would have understood that ICC profiles could not be the claimed “specification data,” because they do not themselves control processing of image data as required. Ex. 2001, ¶ 86. As described by the ICC in a 2004 white paper¹ titled “The Role of ICC Profiles in a Colour Reproduction System,” “[e]ach ICC input (or source) profile provides a number of colour transformations (in the form of look-up tables, matrices, and/or parametric curves) that define the colour expected from the encoded data of the digital image, in an open format.” Ex. 2004 at 003 (available at https://www.color.org/icc_white_paper_7_role_of_icc_profiles.PDF). More particularly, “the profile defines the colour to be expected with any set of image values – which are often device values, but may be in some standard colour image encoding (such as sRGB).” *Id.* But an ICC profile does not contain any instructions

¹ Although the 2004 publication date is later than the priority date of the ’082 patent, a POSITA would have understood the teachings described herein to be accurate as of that priority date as well. Ex. 2001, ¶ 87.

or other information needed to actually control image processing.² Ex. 2001, ¶ 88. As the ICC explains, “[t]he basic way in which ICC profiles are typically used to achieve colour reproduction is by combining a source profile with a destination profile to enable input device data to be transformed to that required to give the required colour on output.” *Id.* at 3. An input profile on its own does not perform any data transformation or other processing. Actual processing—or control of the underlying image data—requires not only a second profile (an output profile, e.g.) but the instructions for performing the image processing, which are part of the CMM:

Selection of the appropriate transforms, by selection of the rendering intent, enables the desired reproduction to be achieved. The combining of the profiles is performed by a CMM, which can be provided at various places in the workflow (such as the image editing software, raster image processor or printer driver, among others).

Ex. 2004 at 003.

These properties of ICC profiles contrast with the properties of PIMs, which are the “image processing control data” in the preferred embodiment disclosed in the ’082 patent. While Patent Owner does not contend here that “image processing

² While not critical to this proceeding, Patent Owner notes that the term “control,” as understood in the computer arts in 2002, indicated processing of instructions. The 1999 edition of the Microsoft Computer Dictionary, for example, defines “control” “[i]n reference to software” as referring “to program instructions that manage data-handling tasks.” Ex. 2005 at 004.

control data” should be *limited* to PIM in the ’082 patent, PIM does include data that “controls processing of the image data,” and therefore provides a useful contrast with ICC profiles.

Unlike the ICC profiles, for instance, PIMs include software instructions for execution by a printer or other output device that actually control processing of the accompanying image data. As described in the ’082 patent, PIMs include software instructions that are executed by the output device (a printer, e.g.). For example, the ’082 patent explains that a printer can receive from a DSC an image file containing both image data and a PIM, extract the image data and PIM from the file, and then “execute[] the image processing of the image data according to the PIM.” Ex. 1001 at 6:14-18.

ICC profiles, unlike PIMs or “image processing control data” more broadly, are specific to individual input and output devices. Ex. 2001, ¶ 88. Dr. Stevenson similarly testified in his deposition that ICC profiles described the properties of the specific devices with which they were associated. Ex. 2003, 85:25-87:18. Dr. Stevenson also described his own experience “downloading monitor profiles regularly,” and testified that the profiles were sometimes “shipped on CDs that came with the monitors.” *Id.*, 87:20-88:13. A POSITA would therefore have understood ICC profiles to describe the color transformation properties of their respective devices, without regard for the instructions that must be executed to

properly display image data from an input device on a separate output device.

Ex. 2001, ¶¶ 87-88.

Indeed, ICC device profiles are “determined independently of any images.” Ex. 2004 at 004. Ohga itself makes this much clear in describing “input profile P1 *of the device* that inputs the image data J1” (Ex. 1007, 3:12-13) and “a profile *of, e.g., a monitor* connected to the client computer” (*id.*, 3:47-48, emphasis added): the ICC profiles, as taught by Ohga, are specific to their respective devices. Ex. 2001, ¶ 88. An ICC profile for an input device, for instance, has no awareness of or connection to the output device or its associated profile. Stevenson Dep. Tr., Ex. 2003, 93:3-14, 93:22-94:11 (testifying that output profile could be selected independently of input profile and vice versa). As such, a POSITA would have understood that the profile cannot be “image processing control data,” because the information in the profile is independent of other devices and does not in any way specify how to process the image data for rendering on another device. Ex. 2001, ¶ 88.

To summarize, then, Petitioner cites no evidence suggesting that the profiles themselves constitute image processing control data, and Ohga itself does not describe the profiles as such. Further, a POSITA reading Ohga would have understood that the ICC profiles could not be the alleged image processing control data because they are not used to control processing of any image data.

Petitioner therefore fails to identify “a storage manager configured to update at least a part of the image processing control data . . . ***based on specification data, which specifies the image processing control data to be updated,***” as recited by ’082 claim 1, in both Kuwata and Fisher (for the reasons explained for Ground 1) ***and*** in Ohga. Petitioner therefore fails to identify a combination of references for Ground 2 that teaches all elements of the challenged claim, which by itself is sufficient to show that Petitioner has not met its burden to establish the unpatentability of claim 1 of the ’082 patent.

iii. Petitioner further fails to show that a POSITA would have been motivated to combine Kuwata with Fisher and Ohga

Petitioner also fails to establish substantial evidence that a POSITA would have been motivated to combine Kuwata and Fisher with Ohga to arrive at the claimed invention. As already discussed at § VI.A.3.a.ii, Kuwata touts the advantages of a self-contained camera system and therefore teaches away from modifying its system with external connectivity. And Ohga does not teach updating ancillary data files in the camera’s memory ***based on specification data that specifies new or updated ancillary data files to download,*** for the reasons described in § VI.B.2.a.i. Ohga therefore cannot suggest further modifying the Kuwata/Fisher combination as Petitioner proposes.

Further, even had a POSITA wanted to further modify the Kuwata/Fisher combination, Ohga would not have provided the needed teachings, in view of incompatibilities between Kuwata's self-contained camera and Ohga's reliance on rigid, ICC-standardized color management. As noted above, Ohga teaches retrieving an input profile with a format that "matches or complies with that specified by International Color Consortium (ICC)." Ex. 1007, 3:44-46. Ohga likewise teaches using CMMs, which also fall under the purview of ICC standardization. As described in the accompanying declaration of Dr. Papanikolopoulos, a POSITA in 2002 would have recognized these terms and would have understood that the ICC profiles and CMMs form the backbone of color management systems. Ex. 2001, ¶ 75. The ICC profiles contain detailed color characterization data that describe how a specific device reproduces or captures color relative to a device-independent color space, as discussed above. As further discussed above, CMMs are the software components that perform the color transformations based on ICC profiles. When color data (e.g., images) moves between devices (from a camera to a monitor to a printer, e.g.), the CMM uses the source and destination ICC profiles to calculate the necessary color transformations. Ex. 2001, ¶ 75; Ex. 2004 at 003.

This ICC-specified architecture is specifically optimized for color transformations, however, and does not easily extend to other visual attributes like

material properties, transparency, or dynamic lighting effects. Ex. 2001, ¶¶ 76-77. This inflexibility limits adaptability to more general needs in image processing, including material appearance properties, spectral information, or dynamic metadata. *Id.*, ¶ 78. Any workflow that requires the representation of imaging features beyond color necessitates complex approaches that are outside the ICC effort and therefore beyond anything taught by Ohga. *Id.*, ¶ 78.

Kuwata's and Ohga's respective disclosures also reflect contradictory intents, such that a POSITA would not have been motivated to combine the two references. Ex. 2001, ¶¶ 90-93. While Ohga is directed to managing server load and color consistency via client-side CMM downloads, Kuwata focuses on reliability for DSC-printer pairs via a self-contained, upload-only design. Ex. 2001, ¶ 93. A POSITA would have recognized that Ohga's ICC-based color-matching method uses a client-side CMM to reduce server load but risks inconsistent results across clients. *Id.*, ¶ 91. Kuwata, by contrast, is concerned with direct uploads to printers, ***without*** involving servers or client-side processing. *Id.*, ¶ 91. A POSITA would have understood that merging Kuwata's workflow with Ohga's would introduce unnecessary complexity (e.g., managing CMM compatibility) into a system designed to be self-contained. *Id.*, ¶ 91. And introducing Ohga's device-specific ICC profiles and client-dependent CMM would risk reintroducing the

same inconsistencies (e.g., varying color results) that Kuwata’s approach avoids.
Id., ¶ 92.

Because Petitioner fails to show that Ohga teaches at least one missing element of the Kuwata/Fisher combination—updating at least a part of the image processing control data in the control data storage “based on specification data”—and likewise fails to show that a POSITA would have been motivated to combine Kuwata and Fisher with Ohga, Petitioner has failed to meet its burden to show that claim 1 is unpatentable in view of Kuwata and Fisher and further in view of Ohga.

- b. Claim 10: Petitioner fails to show that Kuwata in view of Fisher and Ohga renders obvious claim element [10e]: “a memory management module configured to acquire additional image processing control data from an external memory device separate from the digital camera, and to store the additional image processing control data into the control data storage.”**

The Petition fails to show that Kuwata in view of Fisher and Ohga discloses “a memory management module configured to acquire additional image processing control data from an external memory device separate from the digital camera, and to store the additional image processing control data into the control data storage,” for the reasons discussed at §§ VI.A.3.a and VI.B.2.a above.

Petitioner does not provide substantive analysis for this claim limitation, instead merely stating that “Kuwata, Fisher, and Ohga render obvious [10e] for the reasons explained” for Ground 2, [1d]. Pet., 63. But Kuwata, Fisher, and Ohga fail

to render [1d] obvious, as described at § VI.B.2.a. Petitioner then alleges that a POSITA would have found it obvious to combine the references to acquire “additional preset conditions for a DSC-printer pair” from “a server.” Pet., 64. But Petitioner provides no further explanation for this conclusory statement, instead simply citing back to its discussion of [10e] for Ground 1 and [1d] for Ground 2. Pet., 63. Petitioner failed to carry its burden on those limitations, for the reasons described at §§ VI.A.3.b. and VI.B.2.a. As discussed therein, neither Fisher nor Ohga provides any express teaching of how to modify Kuwata to acquire additional preset conditions, and none of Kuwata, Fisher, or Ohga contain any suggestion that would motivate a POSITA to make that modification. Ex. 2001, ¶ 95. As Petitioner does not point to any further justification for combining the references, it therefore fails to show by a preponderance of the evidence that this claim is obvious in view of Kuwata, Fisher, and Ohga.

c. Petitioner fails to demonstrate that dependent claims 2 and 3 are unpatentable.

Dependent claims 2 and 3 each depend from claim 1. Therefore, claims 2 and 3 include the limitations of claim 1. Accordingly, Petitioner fails to show by a preponderance of the evidence that claims 2 and 3 are unpatentable, for the same reasons as claim 1.

Further, Petitioner does not rely on Ohga for claims 2 and 3 in Ground 2, instead relying only on Kuwata or Kuwata combined with Fisher and citing to the explanations in Ground 1. Pet., 58. Petitioner therefore does not raise any additional arguments requiring response here.

d. Petitioner fails to demonstrate that dependent claim 4 is unpatentable.

Dependent claim 4 depends from claim 1. Therefore, claim 4 includes the limitations of claim 1. Accordingly, Petitioner fails to show by a preponderance of the evidence that claim 4 is unpatentable, for the same reasons as claim 1.

Further, Petitioner and its expert again fail to identify “image processing control data” in Ohga, which is fatal to Petitioner’s argument on this claim. Petitioner points to profile names associated with input and output profiles as the image processing control data. Pet., 59. As discussed for claim 1 at § VI.B.2.a above, however, Ohga’s input and output profiles are not “image processing control data” as claimed because they are not used to control processing of image data. For that additional reason, Petitioner fails to demonstrate that dependent claim 4 is unpatentable.

e. Petitioner fails to demonstrate that dependent claim 5 is unpatentable.

Dependent claim 5 depends from claim 1. Therefore, claim 5 includes the limitations of claim 1. Accordingly, Petitioner fails to show by a preponderance of the evidence that claim 5 is unpatentable, for the same reasons as claim 1.

Further, for claim limitation [5b], Petitioner relies on its arguments from claim limitation [1d] in Ground 1 without describing specifically how claim limitation [1d] relates to claim 5 and without describing whether or how the addition of Ohga changes the analysis. Pet., 62-63. As described above at § VI.A.3.a, however, Kuwata in view of Fisher fails to teach the claimed specification data. For that additional reason, Petitioner fails to demonstrate that dependent claim 5 is unpatentable.

f. Petitioner fails to demonstrate that dependent claim 6 is unpatentable.

Dependent claim 6 depends from claim 1. Therefore, claim 6 includes the limitations of claim 1. Accordingly, Petitioner fails to show by a preponderance of the evidence that claim 6 is unpatentable, for the same reasons as claim 1.

Further, for claim limitation [6b], Petitioner relies on its arguments from claim limitation [1d] in Ground 1 without describing specifically how claim limitation [1d] relates to claim 6 and without describing whether or how the addition of Ohga changes the analysis. Pet., 63. As described above at § VI.A.3.e,

however, Kuwata in view of Fisher fails to teach sending specification data that identifies image processing control data. For that additional reason, Petitioner fails to demonstrate that dependent claim 6 is unpatentable.

C. Kuwata in view of Ohga does not render obvious claim 7 (Ground 3)

- 1. Claim 7: The Petition does not show that Kuwata in view of Ohga renders obvious claim element [7b]: “an update data acquiring module configured to acquire update data of the image processing control data based on the attribute data from the server.”**

In its Decision Granting Institution, the Board faulted Patent Owner for allegedly inviting the Board to “look[] at Ohga individually and separately from Kuwata” in Patent Owner’s Preliminary Response. Decision at 39. Patent Owner respectfully submits that, regardless of whether it would have been obvious to combine Kuwata with Ohga, doing so would not result in the challenged claim because at least one key limitation is missing from *both* references. In particular, both Kuwata and Ohga fail to teach the limitation of claim 7 “configured to acquire update data *of the image processing control data based on the attribute data from the server.*” The Board cannot make an obviousness determination in the absence of evidence that a prior art combination would have taught *all* elements of the claims. *See Motorola*, 121 F.3d at 1473. Therefore, the combination of Kuwata and Ohga cannot render claim 1 invalid on obviousness grounds.

Specifically here, Petitioner identifies “a profile for the input and output devices” as “update data of the image processing control data.” Pet., 71. As discussed at § VI.B.2.a.i, however, Petitioner fails to show that Ohga’s input and output profiles are “image processing control data.” And as further described at § VI.B.2.a.ii, a POSITA would have understood that Ohga’s input and output profiles cannot be “image processing control data” as claimed, because the profiles are not used to control processing of the image data. The Petition therefore likewise fails to show that Ohga’s input and output profiles are the claimed “update data” of “image processing control data,” as the “update data” must be updated *image processing control data*. Ex. 2001, ¶ 99.

Petitioner also identifies “the devices’ names” as the claimed “attribute data,” but this mapping is likewise unsupported. Petitioner improperly reads “attribute data” in isolation, untethered to the rest of the claim. As recited at claim element [7b], the claimed “attribute data” is “attribute data related to the image data, the attribute data including at least one of image processing control data to control image processing of the image data and identification data to identify the image processing control data.” Ex. 1001, 15:49-54; Ex. 2001, ¶ 100. Any “attribute data” must therefore include “at least one of image processing control data to control image processing of the image data and identification data to identify the image processing control data.” Ex. 2001, ¶ 100.

But Petitioner does not explain why the “devices’ names” (which Petitioner identifies as “attribute data”) are “image processing control data” or “identification data to identify the image processing control data.” Petitioner fails to explain how the names themselves would be image processing control data and—as discussed at § VI.B.2.a—fails to show that the profiles described by those names disclose image processing control data. Indeed, the “devices’ names” **cannot** be “image processing control data” because the names themselves are not used to control processing of the image data. And the “devices’ names” cannot be “identification data to identify the image processing control data” either, because the names—at best—are used by Ohga to identify device profiles, which are not “image processing control data” either for the reasons discussed at § VI.B.2.a.ii. Ex. 2001, ¶ 101.

Petitioner therefore fails to identify “an update data acquiring module configured to acquire update data ***of the image processing control data based on the attribute data from the server***,” as recited by ’082 claim 7, in ***both*** Kuwata and Ohga. Petitioner therefore fails to identify a combination of references in this Ground that teaches all elements of the challenged claim, which by itself is sufficient to show that Petitioner has not met its burden to establish the unpatentability of claim 7 of the ’082 patent. All the same, Patent Owner further

notes that a POSITA would not have been motivated to combine Kuwata with Ohga for reasons discussed at § VI.B.2.a.iii for claim 1.

D. Ohga in view of Kuwata does not render obvious claim 8 (Ground 4).

- 1. Petitioner fails to show that Ohga in view of Kuwata renders obvious claim element [8a]: “an update data storage module for storing in advance update data for image processing control data to control image processing of image data, the update data being associated with at least one of the image processing control data and identification data to identify the image processing control data.”**

Petitioner fails to show that Ohga in view of Kuwata discloses “an update data storage module for storing in advance update data for image processing control data to control image processing of image data, the update data being associated with at least one of the image processing control data and identification data to identify the image processing control data.” In particular, Petitioner fails to show that Ohga discloses either “update data” or “identification data.”

Petitioner first identifies “profiles P1, P2 associated with input and output devices, respectively” as “update data for image processing control data.” Pet., 74. For the same reasons as discussed at § VI.B.2.a, however, Petitioner fails to show that Ohga’s input and output profiles are update data for “image processing control data,” as the claim requires. Indeed, for the same reasons discussed at § VI.B.2.a.ii, a POSITA would have understood that Ohga’s input and output profiles *cannot* be

image processing control data as claimed because the profiles are not used to control processing of the image data. Ex. 2001, ¶ 104.

Petitioner's mapping of "identification data" is likewise unsupported. Petitioner points to the "names of the devices" in Ohga as teaching this claim limitation. Pet., 74. But Petitioner improperly reads "identification data" in isolation, untethered to the rest of the claim. "Identification data," as claimed, must "identify the image processing control data." For the same reasons described at § VI.C.1 for "attribute data," Petitioner fails to explain how the names of the devices identify *image processing control data*. Indeed, a POSITA would have understood that the names of the devices *cannot* be the claimed "identification data" because they do not identify any image processing control data. At best, the device names are associated only with the device profiles, which are not image processing control data, for the reasons described at § VI.B.2.a. Ex. 2001, ¶ 105.

Notably, Petitioner itself points not to the device profiles but to the "color-matching-module program M1" as "execut[ing] color matching for the image data J1," which Petitioner describes as "control image processing of image data." Pet., 74. But the device names, as taught by Ohga, are not used to identify the "color-matching-module program M1" either. Ohga teaches downloading the CMM via a link in HTML document H1, which itself is downloaded from "WWW server S1." Ex. 1007, 3:22-28. Ohga teaches only that the HTML document is "designated by

the user.” *Id.*, 3:22-24. Ohga neither teaches nor suggests downloading the HTML document—and thus the CMM—based on device names, which are Petitioner’s alleged “identification data.” Ex. 2001, ¶ 104. Petitioner therefore fails to provide any evidence showing that the device names are the claimed “identification data,” and a POSITA would not have understood them to be such. Ex. 2001, ¶ 106.

Thus, Petitioner fails to show that Ohga in view of Kuwata teaches either the claimed “update data” or the claimed “identification data.”

2. Petitioner fails to show that Ohga in view of Kuwata renders obvious claim element [8b]: “an input module configured to input predetermined data from the peripheral device, the predetermined data including the image processing control data to be updated or the identification data.”

Petitioner also fails to show that Ohga in view of Kuwata renders obvious “an input module configured to input predetermined data from the peripheral device, the predetermined data including the image processing control data to be updated or the identification data.” First, Petitioner does not point to any disclosure in Ohga as teaching “the predetermined data including the image processing control data to be updated.” Instead, Petitioner focuses on the alternative scenario in the claim, in which “predetermined data” includes “the identification data.” Pet., 75. More specifically, Petitioner points to “data identifying the output profile” as “identification data.” *Id.* But Petitioner fails to show that “data identifying the

output profile” is “identification data” as claimed, for the same reasons discussed at § VI.D.1: the output profile is not image processing control data. Ex. 2001, ¶ 107.

Because Petitioner does not allege that Ohga teaches “the predetermined data including the image processing control data to be updated,” and because Petitioner fails to show that Ohga teaches “identification data” as claimed, Petitioner fails to show that Ohga in view of Kuwata teaches this claim element.

3. Petitioner fails to show that Ohga in view of Kuwata renders obvious claim element [8c]: “an update data transmission module configured to transmit the update data corresponding to the predetermined data to the peripheral device.”

Petitioner likewise fails to show that Ohga in view of Kuwata renders obvious “an update data transmission module configured to transmit the update data corresponding to the predetermined data to the peripheral device.” The claimed “update data” must be “update data of the image processing control data,” as recited in claim element [8a]. Petitioner points to “profiles P1, P2 associated with input and output devices” as the “update data of the image processing control data.” Pet., 76. For the same reasons discussed at §§ VI.C.1 and VI.D.1, however, Petitioner fails to show that Ohga’s input and output profiles are update data for “image processing control data,” as the claim requires. Ex. 2001, ¶ 109. Because Petitioner fails to show that Ohga teaches “update data of the image processing

control data,” it likewise fails to show that Ohga teaches “an update data transmission module configured to transmit the update data.” Petitioner therefore fails to show that Ohga in view of Kuwata teaches this claim element.

4. Petitioner fails to show that Ohga in view of Kuwata renders obvious claim element [8d]: “wherein the image processing control data is to be used in processing of the image data by an image processing device that receives the image data and the image processing control data that are transferred from the peripheral device.”

Finally, Petitioner fails to show that Ohga in view of Kuwata discloses “wherein the image processing control data is to be used in processing of the image data by an image processing device that receives the image data and the image processing control data that are transferred from the peripheral device,” at least because Petitioner fails to show that Ohga’s “input and output profiles”—which Petitioner identifies as “image processing control data” (Pet., 77)—disclose image processing control data as claimed, for the reasons discussed at § VI.B.2.a.

Ex. 2001, ¶ 110. Petitioner therefore fails to show that Ohga teaches this claim element. As Petitioner fails to show that Ohga discloses claim elements [8a], [8b], [8c], and [8d], and fails to show how Kuwata cures these deficiencies, Petitioner fails to meet its burden to establish that claim 8 is unpatentable in view of Ohga combined with Kuwata.

E. Ohga does not anticipate (Ground 5) or render obvious (Ground 6) claim 9.

- 1. Petitioner fails to show that Ohga teaches or suggests claim element [9a]: “providing the update data associated with at least one of the image processing control data and identification data to identify the image processing control data.”**

Petitioner also fails to show that Ohga teaches or suggests “providing the update data associated with at least one of the image processing control data and identification data to identify the image processing control data,” for the same reasons discussed at § VI.D.1 above. In particular, Petitioner fails to show that Ohga teaches the claimed “update data” or “identification data,” as described at § VI.D.1. Ex. 2001, ¶ 113.

- 2. Petitioner fails to show that Ohga teaches or suggests claim element [9b]: “inputting predetermined data from the peripheral device, the predetermined data including the image processing control data to be updated or the identification data corresponding to the image processing control data to be updated.”**

Petitioner also fails to show that Ohga teaches or suggests “inputting predetermined data from the peripheral device, the predetermined data including the image processing control data to be updated or the identification data corresponding to the image processing control data to be updated,” for the same reasons discussed at § VI.D.2 above. In particular, Petitioner fails to show that

Ohga teaches the claimed “identification data,” as described at § VI.D.2. Ex. 2001, ¶ 114.

3. Petitioner fails to show that Ohga teaches or suggests claim element [9c]: “transmitting the update data corresponding to the predetermined data to the peripheral device.”

Petitioner fails to show that Ohga teaches or suggests “providing the update data associated with at least one of the image processing control data and identification data to identify the image processing control data,” for the same reasons discussed at § VI.D.3 above. In particular, Petitioner fails to show that Ohga teaches the claimed “update data,” as described at § VI.D.3. Ex. 2001, ¶ 115.

As Petitioner fails to show that Ohga teaches any of claim elements [9a], [9b], and [9c], Petitioner fails to show by a preponderance of the evidence that Ohga anticipates or renders obvious claim 9.

VII. CONCLUSION

Based on the deficiencies identified above, Petitioner has not and cannot meet its burden of proving that any of the Challenged Claims are unpatentable as anticipated or obvious. On the contrary, the evidence confirms the patentability of the Challenged Claims. Thus, Patent Owner respectfully submits that the Board should confirm the patentability of claims 1-10 of the '082 patent.

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Respectfully submitted,

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CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATION

I certify that this Patent Owner's Preliminary Response complies with the word count limit and contains 12,319 words in 14-point Times New Roman font as calculated by the word count feature of Microsoft Office, in compliance with 37 C.F.R. § 42.24(a)(1)(i). This word count is inclusive of all text and footnotes but does not include the table of contents, table of authorities, certificate of service or word count, or appendix of exhibits or claim listing.

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CERTIFICATE OF SERVICE

I certify that on April 29, 2025, a copy of Patent Owner's Preliminary Response, including exhibits, was served in its entirety by electronic mail to Petitioner's counsel at the following addresses indicated in Petitioner's Mandatory Notices:

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