

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE LLC, LG ELECTRONICS INC., and
LG ELECTRONICS U.S.A., INC.,
Petitioner,

v.

BOCCONE, LLC,
Patent Owner.

Case IPR2020-00850
Patent 10,027,726 B1

Before KEVIN F. TURNER, JEFFREY S. SMITH, and
DAVID C. McKONE, *Administrative Patent Judges*.

SMITH, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314; 37 C.F.R. § 42.4

I. INTRODUCTION

A. Background

Petitioner filed a Petition requesting *inter partes* review of claims 1–30, which are all claims, of U.S. Patent No. 10,027,726 B1 (Ex. 1001, the “’726 patent”). Paper 2 (“Pet.”). Patent Owner did not file a Preliminary Response. We may institute an *inter partes* review if the information presented in the Petition shows that “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314; *see also* 37 C.F.R § 42.4(a) (“The Board institutes the trial on behalf of the Director.”).

For the reasons that follow, we institute *inter partes* review of the challenged claims of the ’726 patent.

B. Related Proceedings

The parties identify the following district court proceedings concerning the ’726 patent: *Boccone, LLC v. Samsung Electronics Co., Ltd. et al.*, Civil Action No. 4:19-cv-00243 (E.D. Tex.); *Boccone, LLC v. LG Electronics, Inc. et al.*, Civil Action No. 4:19-cv-00244 (E.D. Tex.). Pet. 4; Paper 4, 1.

C. Real Party-in-Interest

The Petition identifies Google LLC, LG Electronics Inc., and LG Electronics U.S.A., Inc. (collectively, “Petitioner”) as Real Parties-in-Interest. Pet. 2. The Petition also identifies Samsung Electronics Co., Ltd., and Samsung Electronics America, Inc., as Real Parties-in-Interest. Pet. 2. Patent Owner identifies itself as the real party-in-interest. Paper 3, 2.

D. The '726 Patent

The '726 patent discloses a “device, apparatus, and method for facial recognition.” Ex. 1001, 1:1-2. The device provides an option for sharing images, performed using face recognition information. *Id.* at [57]. Figure 31A shows a user interface for sharing metadata associated with media objects, *id.* at 3:65–67, and is reproduced below.

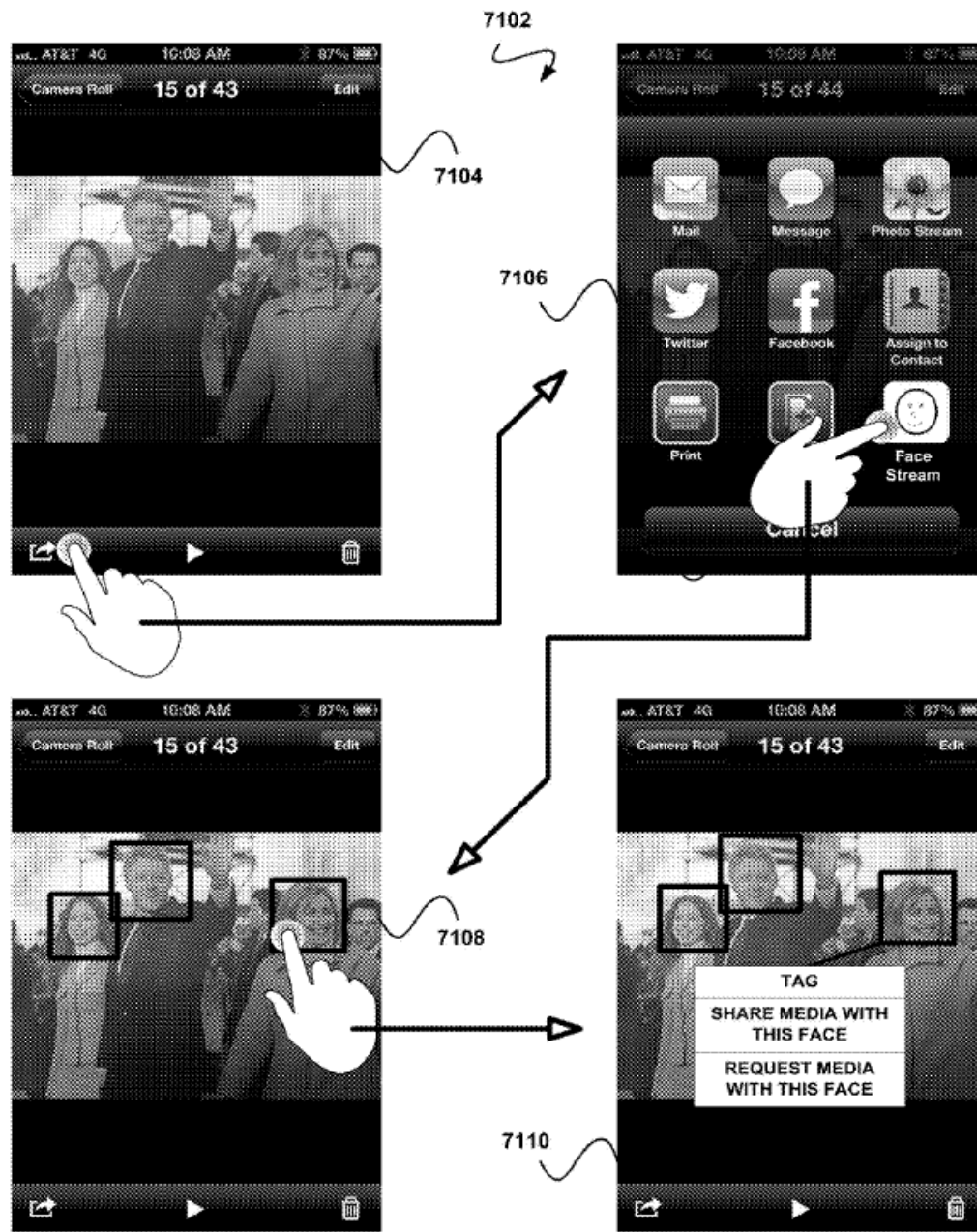


FIGURE 31A

Figure 31A above shows user interface 7102 for sharing metadata associated with media objects. *Id.* at 39:48–49. Photo interface 7104 displays a photo, which may be from a photo gallery or an application. *Id.* at 39:57–60. The photo interface may also display multiple thumbnail images of photos. *Id.* at 39:61–63. A user may select to share a photo, and sharing interface 7106 may be displayed. *Id.* at 40:15–16. The sharing interface may include the ability to mail, message, or share the photo in another manner. *Id.* at 40:17–25. As shown in Figure 31A, the user selects to face stream the photo, and face stream interface 7108 is displayed. *Id.* at 40:36–37. One or more faces are detected based on facial recognition training data. *Id.* at 40:38–39. A face may be selected, and options 7110 relating to the selected face are displayed. *Id.* at 41:14–16. The options include tag, share media with the selected face, and request media with the selected face. *Id.* at 41:17–20.

E. Illustrative Claim

The '726 patent has 30 claims, all of which are challenged in the Petition. Device claim 1, apparatus claim 23, and method claim 27 are the independent claims. Claim 1 is illustrative:

1. A device, comprising:

a screen;

an input mechanism;

at least one non-transitory memory storing instructions;

and

one or more processors in communication with the screen, the input mechanism, and the at least one non-transitory memory, wherein the one or more processors execute the instructions to cause the device to:

display, utilizing the screen of the device, a plurality of indicia each including at least a portion of an image including a face;

receive, utilizing the input mechanism of the device, a user input in connection with at least one of the indicia including at least a portion of a first image including a first face;

after receiving the user input in connection with the at least one indicia, display, utilizing the screen of the device, a first set of images including the first face that has been recognized in at least one of a plurality of images accessible via the device;

display, utilizing the screen of the device, at least one option for sharing images, where the sharing is performed utilizing face recognition information that is based on third party input of a third party that is provided by the third party into at least one other device in association with at least one face, the face recognition information being utilized in connection with the at least one option for sharing images based on a relation between a user of the device and the third party associated with the third party input, such that the face recognition information is only utilized in connection with the at least one option for sharing images if the relation exists between the user of the device and the third party associated with the third party input;

in connection with the at least one option for sharing images, display, utilizing the screen of the device, a second set of images each including the at least one face that has been recognized in at least one of the plurality of images accessible via the device utilizing the face recognition information that is based on the third party input of the third party that is provided by the third party into the at least one other device in association with the at least one face;

receive, utilizing the input mechanism of the device, a user input in connection with at least one of the second set of images; and

after receiving the user input in connection with at least one of the second set of images, cause one or more of the second set of images to be shared.

F. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability (Pet. 5):

References	Basis	Claims
Krupka ¹ (Ex. 1005)	§ 103	1–30
Perlmutter ² (Ex. 1006), Krupka	§ 103	1–30

II. ANALYSIS

A. Krupka (Ex. 1005)

Krupka discloses a method for finding and sharing digital images of a user that are located in collections of digital images belonging to others. Ex. 1005 at [57]. The method builds a face model of a first user on the first user’s computer. *Id.* A second computer uses the face model to find images of the first user stored on the second computer. *Id.* The first user computer can then access the digital images found on the second computer. *Id.*

B. Alleged Obviousness over Krupka

Petitioner, relying on the testimony of Dr. Matthew A. Turk, contends that claims 1–30 would have been obvious over Krupka. Pet. 8–65; Ex. 1003. At this stage of the proceeding, Patent Owner does not challenge Petitioner’s contentions.

Claim 1 recites a “device, comprising: a screen; an input mechanism; at least one non-transitory memory storing instructions; and one or more processors in communication with the screen, the input mechanism, and the at least one non-transitory memory, wherein the one or more processors execute the instructions.” Petitioner contends Figure 14 of Krupka shows

¹ U.S. Patent Appl. Publ. No. US2011/0148857 A1, published June 23, 2011.

² U.S. Patent No. 7,783,085 B2, issued Aug. 24, 2010.

these limitations. Pet. 9–13 (citing Ex. 1005, Fig. 14; *see id.* at ¶¶ 40, 93–97, 99–101, Fig. 2; Ex. 1003 ¶¶ 120–129). On this record, we are persuaded that Krupka describes these limitations.

Claim 1 recites “display, utilizing the screen of the device, a plurality of indicia each including at least a portion of an image including a face.” Petitioner contends Krupka discloses this limitation in describing a graphical user interface of a face model building module that displays human faces appearing in portions of digital images. Pet. 12–14 (citing Ex. 1005 ¶¶ 40–41; Ex. 1003 ¶¶ 130–136). On this record, we are persuaded that Krupka describes this limitation.

Claim 1 recites “receive, utilizing the input mechanism of the device, a user input in connection with at least one of the indicia including at least a portion of a first image including a first face.” Petitioner contends Krupka discloses this limitation in describing that the graphical user interface presents portions of digital images that represent human faces to a user, and the user then utilizes an input device to select those portions that represent his or her face. Pet. 14–15 (citing Ex. 1005 ¶¶ 40–41; Ex. 1003 ¶¶ 137–138). On this record, we are persuaded that Krupka describes this limitation.

Claim 1 recites “after receiving the user input in connection with the at least one indicia, display, utilizing the screen of the device, a first set of images each including the first face that has been recognized in at least one of a plurality of images accessible via the device.” Petitioner contends that Krupka discloses “a first set of images each including the first face that has been recognized in at least one of a plurality of images accessible to the device” in describing that once a user’s face model has been built, the face model can be used to find digital images of the user that are stored on the first user’s computer. Pet. 15–16 (citing Ex. 1005 ¶ 50; Ex. 1003 ¶ 139).

Petitioner contends that although Krupka does not explicitly describe that the photos found with the user's face model are then displayed on the user's device, a person of ordinary skill in the art would have reasonably inferred that such photos would be displayed, given that Krupka discloses a system designed to find, display, and share photos. Pet. 16 (citing Ex. 1005 ¶ 2 (“A user is often interested in seeing digital photos of himself/herself. To find such photos among the user's own albums can be a daunting task.”); Ex. 1003 ¶ 140).

Petitioner also contends that Krupka discloses displaying photos found with a shared face model in a “Pictures Found” window. Pet. 16–17 (citing Ex. 1005, Fig. 13, ¶¶ 80–81, 88–91; Ex. 1003 ¶¶ 141–142). Petitioner contends that a person of ordinary skill in the art would have used the “Pictures Found” window to also display photos found with the user's face model, for the predictable benefits of allowing the user to see and interact with the search results, to select photos to share with others, and to identify erroneous photos as taught by Krupka. *Id.* On this record, we are persuaded that Krupka teaches this limitation.

Claim 1 recites “display, utilizing the screen of the device, at least one option for sharing images.” Petitioner contends Krupka discloses this limitation in displaying images on a screen of a device and providing options for sharing the images, such as a share button. Pet. 18–19 (citing Ex. 1005 Fig. 13, ¶¶ 51–65, 83–91; Ex. 1003 ¶¶ 148–150). On this record, we are persuaded that Krupka teaches this limitation.

Claim 1 recites “where the sharing is performed utilizing face recognition information that is based on third party input of a third party that is provided by the third party into at least one other device in association with at least one face.” Petitioner contends Krupka discloses this limitation

in describing a second user's computer utilizing a face model built and shared by a first user to find images of the first user on the second user's computer, and to share the images with the first user. Pet. 19–22 (citing Ex. 1005 Fig. 3, ¶¶ 39–49, 51–54, 76–82, 88–91; Ex. 1003 ¶¶ 151–156). On this record, we are persuaded that Krupka teaches this limitation.

Claim 1 recites

the face recognition information being utilized in connection with the at least one option for sharing images based on a relation between a user of the device and the third party associated with the third party input, such that the face recognition information is only utilized in connection with the at least one option for sharing images if the relation exists between the user of the device and the third party associated with the third party input.

Petitioner contends that Krupka discloses this limitation in describing a first user sending an email invitation to a second user to exchange photos using Krupka's software, and the second user accepting the invitation by installing the software, where the second user is a contact of the first user. Pet. 22–23 (citing Ex. 1005 Figs. 11–12, ¶¶ 83–85; Ex. 1003 ¶¶ 158–159, 163–167).

On this record, we are persuaded that Krupka teaches this limitation.

Claim 1 recites “in connection with the at least one option for sharing images, display, utilizing the screen of the device, a second set of images each including the at least one face that has been recognized in at least one of the plurality of images accessible via the device utilizing the face recognition information.” Appellant contends Krupka discloses this limitation in describing images 1306 of the first user found on the second user's computer using the face model received from the first user, which are displayed on the “Pictures Found” graphical user interface, along with options for sharing. Pet. 24–25 (citing Ex. 1005 Fig. 13, ¶¶ 54, 88–89; Ex.

1003 ¶¶ 171–172). On this record, we are persuaded that Krupka teaches this limitation.

Claim 1 recites “receive, utilizing the input mechanism of the device, a user input in connection with at least one of the second set of images.” Petitioner contends Krupka discloses this limitation in describing a “Pictures Found” window that displays a checkbox for each found image, so that a user can select which found images to share using the computer’s input device. Pet. 26–27 (citing Ex. 1005 ¶ 90; Ex. 1003 ¶ 174). On this record, we are persuaded that Krupka teaches this limitation.

Claim 1 recites “after receiving the user input in connection with at least one of the second set of images, cause one or more of the second set of images to be shared.” Petitioner contends Krupka discloses this limitation in describing that when the share button is activated by the user of the second computer, the checked images will be shared with the first user. Pet. 27 (citing Ex. 1005 ¶ 91; Ex. 1003 ¶ 175). On this record, we are persuaded that Krupka teaches this limitation.

Based on this preliminary record, Petitioner has demonstrated a reasonable likelihood that it would prevail in showing that the subject matter of claim 1 would have been obvious over Krupka. Petitioner has set forth contentions regarding the remaining claims (Pet. 27–64), where we have analyzed Petitioner’s allegations as to the remaining claims, and we find them sufficient at this stage.

C. Perlmutter (Ex. 1006)

Perlmutter discloses a user interface configured to enable a user to select a face as a query face, and to search for images that include the same face as the query face. Ex. 1006, 30:51–61, Fig. 14. A user interface

displays images from the result of the search, where the images include faces that are the same as the query face. *Id.* at 31:8–15, Fig. 15.

D. Alleged Obviousness over Perlmutter and Krupka

Claim 1 recites a “device, comprising: a screen; an input mechanism; at least one non-transitory memory storing instructions; and one or more processors in communication with the screen, the input mechanism, and the at least one non-transitory memory, wherein the one or more processors execute the instructions.” Petitioner contends that both Perlmutter and Krupka disclose techniques that are implemented in software executing on conventional computer devices. Pet. 69 (citing Ex. 1006, 37:53–38:20; Ex. 1005, ¶¶ 28, 92–101; Ex. 1003 ¶ 336). On this record, we are persuaded that both Perlmutter and Krupka describe these limitations.

Claim 1 recites “display, utilizing the screen of the device, a plurality of indicia each including at least a portion of an image including a face.” Petitioner contends Perlmutter discloses this limitation in describing a graphical user interface that displays thumbnail images, each including at least one face, on a user’s device to allow a user to select a query face from which a face model is created. Pet. 69–70 (citing Ex. 1006 Figs. 12–13, 30:23–50; Ex. 1003 ¶ 337–338). On this record, we are persuaded that Perlmutter describes this limitation.

Claim 1 recites “receive, utilizing the input mechanism of the device, a user input in connection with at least one of the indicia including at least a portion of a first image including a first face.” Petitioner contends Perlmutter discloses this limitation in describing a user selecting a query image, and selecting a face within the query image to serve as a query face. Pet. 70–71 (citing Ex. 1006 30:47–61, 31:1–3; Ex. 1003 ¶¶ 339–340). On this record, we are persuaded that Krupka describes this limitation.

Claim 1 recites “after receiving the user input in connection with the at least one indicia, display, utilizing the screen of the device, a first set of images each including the first face that has been recognized in at least one of a plurality of images accessible via the device.” Petitioner contends that Perlmutter discloses this limitation in describing a query face used to search for other images in the photo album that include a face that is the same as the query face, and a graphical interface that presents the search result images to the user. Pet. 71–72 (citing Ex. 1006, Fig. 15, 31:1–3, 31:8–13; Ex. 1003 ¶¶ 341–342). On this record, we are persuaded that Krupka describes this limitation.

Petitioner relies on Krupka to teach the remaining limitations of claim 1, for the reasons given in Petitioner’s analysis of ground 1. Pet. 72–73 (citing Ex. 1003 ¶¶ 343–344). Petitioner contends that a person of ordinary skill in the art would have been motivated to share Perlmutter’s face models for the benefit of finding and sharing photos from photo collections belonging to others, as taught by Krupka. *Id.*; *see id.* at 66–68 (citing Ex. 1005 ¶¶ 2–7, 71, 72, 74, 50–91; Ex. 1006, Figs. 12–19, 30:23–37:35; Ex. 1003 ¶¶ 331–333). On this record, we are persuaded that sharing a face model as disclosed by Perlmutter with another user as disclosed by Krupka does no more than yield the predictable benefit of finding and sharing photos that include a face that is the same as the face model from a photo collection belonging to the other user as taught by Krupka.

Based on this preliminary record, Petitioner has demonstrated a reasonable likelihood that claim 1 would have been obvious over the combination of Perlmutter and Krupka. Petitioner has set forth contentions regarding the remaining claims (Pet. 73–77), where we have analyzed Petitioner’s allegations as to the remaining claims, and we find them

sufficient at this stage. Also, Patent Owner has not filed a Preliminary Response. Therefore, there are no additional arguments to address at this stage.

IV. CONCLUSION

A decision to institute under 35 U.S.C. § 314 may not institute review on fewer than all claims challenged in a petition. *SAS Inst., Inc. v. Iancu*, 138 S. Ct. 1348, 1355–56 (2018). Moreover, in accordance with USPTO Guidance, “if the PTAB institutes a trial, the PTAB will institute on all challenges raised in the petition.” *See Guidance on the Impact of SAS on AIA Trial Proceedings* (April 26, 2018) (available at <https://www.uspto.gov/patents-application-process/patent-trial-and-appeal-board/trials/guidance-impact-sas-aia-trial>); *see also PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018) (A decision to institute is “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition.”).

We have determined that Petitioner has demonstrated a reasonable likelihood of prevailing with respect to at least one claim of the ’726 patent. Petitioner supports the additional challenges to the claims included in the Petition with prior art, expert testimony, and reasoned analysis that we find sufficiently persuasive at this stage. We therefore institute trial on all challenges included in the Petition.

V. ORDER

Upon consideration of the record before us, it is:

ORDERED that *inter partes* review of claims 1–30 of the ’726 patent is instituted on all grounds in the Petition;

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and

IPR2020-00850

Patent 10,027,726 B1

37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial will commence on the entry date of this decision.

IPR2020-00850
Patent 10,027,726 B1

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