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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte MING ZHAO, YANG SONG, HARTWIG ADAM,
ULLAS GARGI, YUSHI JING, and HENRY A. ROWLEY

Appeal 2016-006498¹
Application 13/098,362
Technology Center 2600

Before LARRY J. HUME, JUSTIN BUSCH, and JOHN D. HAMANN,
Administrative Patent Judges.

HUME, *Administrative Patent Judge.*

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134(a) of the Final Rejection of claims 1 and 38–73, which are all claims pending in the application. Appellants have canceled claims 2–37. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

¹ According to Appellants, the real party in interest is Google Inc. App. Br. 1.

STATEMENT OF THE CASE²

The Invention

Appellants' disclosed embodiments and claimed invention "relate[] to associating still images and videos." Spec. 1, l. 7.

Exemplary Claim

Claim 1, reproduced below, is illustrative of the subject matter on appeal (*emphasis* added to contested limitations):

1. A system, comprising:

one or more computers including one or more storage devices storing instructions that when executed by the one or more computers cause the one or more computers to perform operations comprising:

receiving a digital image and a digital video;

extracting one or more features from the digital image;

identifying one or more representative scenes in the digital video;

selecting, for each representative scene, a representative frame from a portion of the digital video that corresponds to the representative scene;

extracting one or more respective features from each representative frame;

comparing the one or more features extracted from the digital image to the one or more respective features extracted from each representative frame from the portion of the digital video that corresponds to each representative scene; and

² Our decision relies upon Appellants' Appeal Brief ("App. Br.," filed Nov. 20, 2015); Reply Brief ("Reply Br.," filed June 14, 2016); Examiner's Answer ("Ans.," mailed Apr. 21, 2016); Final Office Action ("Final Act.," mailed May 28, 2015); and the original Specification ("Spec.," filed Apr. 29, 2011).

classifying the digital image as related to the digital video based on the comparison of the one or more features extracted from the image to the one or more respective features extracted from each representative frame from the portion of the digital video that corresponds to each representative scene.

Prior Art

The Examiner relies upon the following prior art as evidence in rejecting the claims on appeal:

Chakraborty	US 7,110,454 B1	Sept. 19, 2006
Girgensohn et al. ("Girgensohn")	US 2009/0313267 A1	Dec. 17, 2009
Kanungo et al. ("Kanungo")	US 2011/0258149 A1	Oct. 20, 2011

Rejections on Appeal

R1. Claims 1, 38–41, 44–47, 49–53, 56–59, 61–65, and 68–71 stand rejected under pre-AIA 35 U.S.C. § 102(a) as being anticipated by Girgensohn. Final Act. 3; Ans. 2.

R2. Claims 42, 43, 54, 55, 66, and 67 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over the combination of Girgensohn and Kanungo. Final Act. 9; Ans. 9.

R3. Claims 48, 60, 72 and 73 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over the combination of Girgensohn and Chakraborty. Final Act. 12; Ans. 11.

ISSUES AND ANALYSIS

Based upon our review of the record, we find a preponderance of the evidence supports particular arguments advanced by Appellants with respect to independent claims 1, 49, 61, and 73 and claims depending therefrom for

the specific reasons discussed below. We highlight and address specific findings and arguments regarding claim 1 for emphasis as follows.

1. § 102(a) Rejection R1 of Claims 1, 38–41, 44–47, 49–53, 56–59, 61–65, and 68–71

Issue 1

Appellants argue (App. Br. 5–7; Reply Br. 1–3) the Examiner's rejection of claim 1 under 35 U.S.C. § 102(a) as being anticipated by Girgensohn is in error. These contentions present us with the following issue:

Did the Examiner err in finding the cited prior art discloses a system having one or more computers and storage devices storing instructions which, when executed, perform operations including, *inter alia*, the steps of "comparing the one or more features extracted from the digital image to the one or more respective features extracted from each representative frame from the portion of the digital video that corresponds to each representative scene," as recited in claim 1?³

Analysis

Under § 102, the prior art reference "must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements arranged as in the claim." *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008) (citation and internal quotation marks omitted).

³ Although Appellants make additional arguments regarding the deficiencies of Girgensohn in disclosing other limitations of claim 1 and commensurate limitations in each of independent claims 49, 61, and 73, we find this issue to be dispositive of the Appeal.

Appellants contend:

Girgensohn's comparison is between "the mean (and standard deviation) of each feature for the subset of images in the stack" and "the mean and standard deviation for the photo collection as a whole," which is different than the claimed "comparing the one or more features extracted from the digital image to the one or more respective features extracted from each representative frame from the portion of the digital video that corresponds to each representative scene." Entirely absent from Girgensohn is any description of a comparison between one or more features extracted from a digital image and one or more features extracted from a representative frame of a representative scene of a digital video.

App. Br. 7.

We have reviewed the Girgensohn reference, and find paragraph 91 discloses the use of statistics representing a group of features to make the comparison, rather than comparing an extracted feature from the digital image to one or more extracted features *of each representative frame*.⁴ We find the use of statistical methods in Girgensohn's comparison technique results in the loss of extracted features of each representative frame upon which the claim relies.

⁴ Paragraph 91 discloses:

A more heuristic way to accomplish this is the redefinition of the distance metric of a stack based on the features that are most representative of the elements of that stack. To identify these features, the system compares the mean (and standard deviation) of each feature for the subset of images in the stack and compares these to the mean and standard deviation for the photo collection as a whole. Features whose means are more than one standard deviation above the collection's features have their weights increased in the calculation of desired distance to the stack.

Girgensohn ¶ 91.

Therefore, for essentially one of the reasons argued by Appellants (App. Br. 7), we reverse the Examiner's rejection of independent claim 1, and also the rejection of independent claims 49 and 61, which recite the disputed limitation in commensurate form. For the same reasons, we also reverse the rejections of claims 38–41, 44–47, 50–53, 56–59, 62–65, and 68–71 that were rejected under Rejection R1 and which variously and ultimately depend from these independent claims.

2. Rejection R2 of Claims 42, 43, 54, 55, 66, and 67

In light of our reversal of the rejection of independent claims 1, 49, and 61, *supra*, we also reverse obviousness Rejection R2 under § 103 of claims 42, 43, 54, 55, 66, and 67, which variously and ultimately depend from claims 1, 49, and 61. On this record, the Examiner has not shown how the additionally cited Kanungo reference overcomes the aforementioned deficiencies with Girgensohn, as discussed above regarding claims 1, 49, and 61.⁵

3. § 103 Rejection R3 of Claims 48, 60, 72, and 73

Appellants argue (App. Br. 11–13) the Examiner's rejection of claim 73 under 35 U.S.C. § 103(a) as being obvious over the combination of Girgensohn and Chakraborty is in error. These contentions present us with the following issue:

⁵ Appellants argue, and we agree, "[i]n addition, claims 42, 43, 48, 54, 55, 60, 66, 67, and 72 are rejected under 35 U.S.C. § 103(a) over Girgensohn in view of Kanungo et al. (US 2011/0258149 A1) or Chakraborty (US 7,110,454 B1), but those applied references fail to remedy the deficiencies set forth above." App. Br. 7.

Similar to Rejection R1 of claim 1, did the Examiner err in finding the cited prior art combination teaches or suggests the step of "comparing the one or more features extracted from the digital image to the one or more features extracted from each of the plurality of frames in each of the one or more representative scenes in the digital video," as recited in claim 73?

Analysis

For essentially the same reasons argued by Appellants in connection with Rejection R1 of claim 1, *supra*, and because the Examiner has not shown how the additionally cited Chakraborty reference makes up for the noted deficiencies of Girgensohn, we reverse the Examiner's rejection of independent claim 73.

Additionally, we also reverse Rejection R3 of claims 48, 60, and 72 that depend from claims 1, 49, and 61. Dependent claims stand or fall with the claims from which they depend. *In re King*, 801 F.2d 1324, 1325 (Fed. Cir. 1986).

CONCLUSIONS

(1) The Examiner erred with respect to anticipation Rejection R1 of claims 1, 38–41, 44–47, 49–53, 56–59, 61–65, and 68–71 under 35 U.S.C. § 102(a) over the cited prior art of record, and we do not sustain the rejection.

(2) The Examiner erred with respect to obviousness Rejections R2 and R3 of claims 42, 43, 48, 54, 55, 60, 66, 67, 72, and 73 under 35 U.S.C. § 103(a) over the cited prior art combinations of record, and we do not sustain the rejection.

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Application 13/098,362

DECISION

We reverse the Examiner's decision rejecting claims 1 and 38–73.

REVERSED