

CERTIFICATE OF ELECTRONIC TRANSMISSION

I hereby certify that this correspondence is being electronically transmitted to United States Patent and Trademark Office.

/Herbert L. Lacey III, Reg. # 72393/

Herbert L. Lacey III, Reg. # 72393

Date: December 9, 2019

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	16/016,324	Confirmation No.:	5645
Applicant:	Tildawatch, Inc.	Filed:	06-22-2018
Art Unit:	2484	Examiner:	Mishawn N. Hunter
Title:	Video Summarization and Collaboration Systems and Methods		

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Reply and Request for Reconsideration, with Amendment, Under 37 C.F.R § 1.111

Commissioner:

In response to the Non-Final Office Action dated 09/13/2019, please enter the following amendments and remarks. This response is being timely filed on December 9, 2019.

Amendments to the Claims begin on page 2.

Remarks begin on page 8

AMENDMENTS TO THE CLAIMS

Please enter the following amendments to the Claims. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Currently amended) : An apparatus, comprising:

a computer-implemented multimedia processing system configured to identify highlight sections of a multimedia stream, comprising:

a processor; and,

a memory that is not a transitory propagating signal, the memory connected to the processor and encoding data and computer readable instructions, including processor executable program instructions, the data and computer readable instructions accessible to the processor, wherein the processor executable instructions, when executed by the processor, cause the processor to perform operations comprising:

receive a multimedia stream;

divide the multimedia stream into sections segmented as a function of a characteristic of the multimedia stream, wherein the segmented sections are divided as a function of matching a chi-square histogram distance peak of the characteristic to a chi-square histogram distance trough of the characteristic; and,

choose from the segmented multimedia stream sections a highlight multimedia segment selected as a function of the segmented multimedia stream section content.

Claim 2 (Original) : The apparatus of claim 1, wherein the multimedia stream further comprises video.

Claim 3 (Original) : The apparatus of claim 1, wherein the multimedia stream further comprises audio.

Claim 4 (Original) : The apparatus of claim 1, wherein the characteristic of the multimedia stream further comprises a temporal characteristic.

Claim 5 (Original) : The apparatus of claim 1, wherein the characteristic of the multimedia stream further comprises a spatial characteristic.

Claim 6 (Original) : The apparatus of claim 1, wherein the operations performed by the processor further comprise evaluating the characteristic of the multimedia stream.

Claim 7 (Original) : The apparatus of claim 1, wherein the operations performed by the processor further comprise: a first evaluation at a first time of the characteristic of the multimedia stream; and, a second evaluation at a second time of the characteristic of the multimedia stream.

Claim 8 (Original) : The apparatus of claim 7, wherein the operations performed by the processor further comprise extracting a segment of the multimedia stream disposed between first and second multimedia stream boundaries determined as a function of: the first evaluation of the multimedia stream characteristic, and the second evaluation of the multimedia stream characteristic.

Claim 9 (Original) : The apparatus of claim 7, wherein the operations performed by the processor further comprise determining if the extracted segment is a highlight segment based on evaluating the extracted multimedia stream segment as a function of: the characteristic of the multimedia stream; and, the multimedia segment content.

Claim 10 (Currently amended) : An apparatus, comprising:

a computer-implemented video processing system configured to identify highlight sections of a video stream, comprising:

a processor; and,

a memory that is not a transitory propagating signal, the memory connected to the processor and encoding data and computer readable instructions, including processor executable program instructions, the data and computer readable instructions accessible to the processor, wherein the processor executable instructions, when executed by the processor, cause the processor to perform operations comprising:

receive a video stream;

divide the video stream into sections segmented based on extracting a segment of the video stream disposed between first and second video stream boundaries determined as a function of: a first evaluation of the video stream characteristic; and, a second evaluation of the video stream characteristic, and wherein the segmented sections are divided as a function of matching a chi-square histogram distance peak of the characteristic to a chi-square histogram distance trough of the characteristic; and,

choose from the segmented video stream sections a highlight video segment selected as a function of the segmented video stream section content.

Claim 11 (Original) : The apparatus of claim **10**, wherein the video further comprises audio.

Claim 12 (Original) : The apparatus of claim **10**, wherein the characteristic of the video stream further comprises a temporal characteristic.

Claim 13 (Original) : The apparatus of claim **10**, wherein the characteristic of the video stream further comprises a spatial characteristic.

Claim 14 (Original) : The apparatus of claim **10**, wherein the operations performed by the processor further comprise: determining if the extracted segment is a highlight segment based on evaluating the extracted video stream segment as a function of: the characteristic of the video stream; and, the video segment content.

Claim 15 (Original) : The apparatus of claim **14**, wherein the operations performed by the processor evaluating the extracted video stream segment content further comprise evaluating a function of multimedia content activity.

Claim 16 (Original) : The apparatus of claim **10**, wherein the video processing system further comprises a touch-enabled user interface adapted to interactively present user-selectable extracted video stream highlight segments in a random-access preview display.

Claim 17 (Currently amended) : An apparatus, comprising:

a computer-implemented video processing system configured to identify highlight sections of a video stream, comprising:

a processor;

a touch-enabled user interface operably and communicatively coupled with the processor; and,

a memory that is not a transitory propagating signal, the memory connected to the processor and encoding data and computer readable instructions, including processor executable program instructions, the data and computer readable instructions accessible to the processor, wherein the processor executable instructions, when executed by the processor, cause the processor to perform operations comprising:

receive a video stream;

divide the video stream into sections segmented based on extracting a segment of the video stream disposed between first and second video stream boundaries determined as a function of: a first evaluation of the video stream characteristic; and, a second evaluation of the video stream characteristic, and wherein the segmented sections are divided as a function of matching a chi-square histogram distance peak of the characteristic to a chi-square histogram distance trough of the characteristic;

choose from the segmented video stream sections highlight video segments selected as a function of the segmented video stream section content; and,

present user-selectable extracted video stream highlight segments in a random-access preview display.

Claim 18 (Original) : The apparatus of claim **17**, wherein the operations performed by the processor further comprise providing collaboration access to a summarized video stream constructed as a function of extracted highlight video segments.

Claim 19 (Original) : The apparatus of claim **18**, wherein the operations performed by the processor providing collaboration access to the summarized video stream further comprise constructing the summarized video stream from extracted video highlights selected by a predictive analytic model adapted to identify user-preferred highlights.

Claim 20 (Original) : The apparatus of claim 17, wherein the operations performed by the processor evaluating the extracted video stream segment content further comprise evaluating text.

REMARKS

Status of the Claims

Before this Amendment, claims 1-20 were present for examination. In this Amendment, claims 1, 10, and 17 are amended; no claims are canceled; and no new claims are added. Therefore, claims 1-20 are present for examination, and claims 1, 10, and 17 are the independent claims. Support for the amendments to the claims may be found throughout the Specification including at least at paragraphs [0059] - [0060] and FIG. 11. No new matter is added.

Summary of Rejections

In the Non-Final Office Action dated 09/13/2019 ("Office Action"), claims 1-15 were rejected under 35 U.S.C. § 102(a)(1) as being anticipated by Vunic et al. (US Pub. No. 2015/0213316), ("Vunic"), and claims 16-20 were rejected under 35 U.S.C. § 103 as being unpatentable over Vunic in view of Voss (WO 2015/038342) ("Voss").

Preliminary Remarks

Drawings

The Examiner is thanked for indicating that the drawings have been accepted.

Information Disclosure Statements

Applicant thanks the Examiner for considering on 9/10/2019 the references in the IDS filed by the Applicant.

Response to rejections under 35 U.S.C. § 102

The Office Action rejected claims 1-15 under 35 U.S.C. § 102 (a)(1) as being anticipated by Vunic. However, Applicant respectfully notes that Vunic cannot be relied upon to teach or suggest video segmentation as recited in claim 1 as presented above.

The Office Action specifically points to paragraphs [0036] and [0057] of Vunic as disclosing this feature. Vunic generally discusses " ... producing video-segments" Vunic, Abstract. Specifically, Vunic states " ... *producing video-segments* ... " (Vunic, Abstract) based on "*Frame by*

frame pattern recognition ... " (Vunic, [0032]) in which a "*... number of instances of pixel color changes ...*" or "*... the distribution of pixel color changes ... is monitored for changes above a predetermined threshold ... within each frame ...*" (Vunic [0033]) or a region of interest ("*strike zone*") (Vunic [0036])" "*... when the rate of change of the pixel-color frequency distribution is the fastest ...*" (Vunic [0057]). That is, Vunic teaches video segmentation based on pixel color changes monitored for changes above a predetermined threshold within a frame. This is distinct from the above cited feature because Applicant's video segmentation design determines a variation peak based on a high percentile threshold and a variation trough based on a low percentile threshold, to "*... divide the multimedia stream into ... segmented sections ... divided as a function of matching a chi-square histogram distance peak of the characteristic to a chi-square histogram distance trough of the characteristic ...*" (Claim 1), as Applicant teaches in at least paragraphs [0059] – [0060] of Applicant's Specification, with reference to FIG. 11 of Applicant's disclosure, and as recited by Applicant's claim 1 as presented above.

Therefore, for at least the reasons stated above, Applicant respectfully submits that claim 1 is allowable over Vunic. Independent claim 10 as presented above includes features similar to those recited in claim 1, whereas dependent claims 2-9 and 11-15 incorporate these or similar features by virtue of depending from claims 1 and 10, respectively. Accordingly, Applicant requests that the rejection of claims 1-15 under 35 U.S.C. § 102 be withdrawn.

Response to rejections under 35 U.S.C. § 103

The Office Action rejected claims 16-20 under 35 U.S.C. § 103 as being unpatentable over Vunic in view of Voss. However, Applicant respectfully notes the combination of Vunic with Voss alleged by the Office Action cannot be relied upon to teach or suggest video segmentation as recited in claims 10 and 17 as presented above.

The Office Action specifically points to paragraphs [0036] and [0057] of Vunic as disclosing this feature. Vunic generally discusses "*... producing video-segments ...*" Vunic, Abstract. Specifically, Vunic states "*... producing video-segments ...*" (Vunic, Abstract) based on "*Frame by frame pattern recognition ...*" (Vunic, [0032]) in which a "*... number of instances of pixel color changes ...*" or "*... the distribution of pixel color changes ... is monitored for changes above a predetermined threshold ... within each frame ...*" (Vunic [0033]) or a region of interest ("*strike zone*")

(Vunic [0036])" "... when the rate of change of the pixel-color frequency distribution is the fastest" (Vunic [0057]). That is, Vunic teaches video segmentation based on pixel color changes monitored for changes above a predetermined threshold within a frame. This is distinct from the above cited feature because Applicant's video segmentation design determines a variation peak based on a high percentile threshold and a variation trough based on a low percentile threshold, to " ... *divide the multimedia stream into ... segmented sections ... divided as a function of matching a chi-square histogram distance peak of the characteristic to a chi-square histogram distance trough of the characteristic ...* " (Claim 17) , as Applicant teaches in at least paragraphs [0059] – [0060] of Applicant's Specification, with reference to FIG. 11 of Applicant's disclosure, and as recited by Applicant's claim 17 as presented above.

Applicant respectfully notes that to establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is non-obvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988). Applicant respectfully notes that, whatever the merits of Voss, the combination of Voss with Vunic alleged by the Office Action adds nothing to Vunic to teach or suggest Applicant's claimed video segmentation, or to remedy the deficiency of Vunic to support a rejection under 35 U.S.C. § 103 of Applicant's claimed video segmentation, as recited by Applicant's claim 17 as presented above.

Therefore, for at least the reasons stated above, Applicant respectfully submits that claim 17 is allowable over Vunic in view of Voss. Independent claim 10 includes features similar to those recited in claim 17, whereas dependent claims 16 and 18 - 20 incorporate these or similar features by virtue of depending from claims 10 and 17, respectively. Accordingly, Applicant requests that the rejection of claims 16-20 under 35 U.S.C. § 103 be withdrawn.

RESERVATION OF RIGHTS

The amendments and remarks made in the present Response are made without prejudice to Applicants' right to pursue broader or different claims in the future. In particular, the amendments and remarks are made to expedite issuance of a patent, and should not be seen as accepting the positions taken in the Office action or relinquishing any right Applicants may have in the future to argue against them.

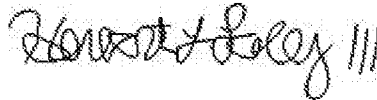
In the interest of clarity and brevity, Applicant may not have equally addressed every assertion made in the Office Action, however, this does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present or canceled claims, including the right to challenge or rebut claim interpretation under 37 C.F.R. § 1.112(f), the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present or any canceled claims, or that any of the cited references or any other references of record constitute prior art. To the extent that any rejection or assertion is based upon personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Office provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all rights to pursue any canceled claims in a subsequent patent application claiming the benefit of priority of at least the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

CONCLUSION

In view of the foregoing, Applicant believes all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is therefore respectfully requested.

The Office is invited to contact Applicant's undersigned representative by either telephone +1 (732) 749-9121 or email HLacey@egsllp.com to resolve any remaining issues in order to expedite examination of the present application.

Respectfully submitted,



/Herbert L. Lacey III, Reg. # 72393/

Herbert L. Lacey III, Reg. # 72393

Applicant's Representative

Ellenoff Grossman & Schole LLP
1345 Avenue of the Americas, 15th Floor
New York, New York 10105
Tel: 212 370 1300
Fax: 212 370 7889