

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION**

PLOTAGRAPH, INC., a Delaware
Corporation, Plaintiff

and

TROY PLOTA, an individual, Plaintiff

and

SASCHA CONNELLY, an individual,
Plaintiff

V.

LIGHTRICKS, LTD., an Israeli
Corporation, Defendant

$\S$

Civil Action No. 4:21-CV-03873

JURY TRIAL DEMANDED

PLAINTIFFS' OPPOSED MOTION FOR LEAVE TO SERVE SECOND SUPPLEMENTAL DISCLOSURES PURSUANT TO P.R. 3-1 and P.R. 3-2

Plaintiffs Plotagraph, Inc. (“Plotagraph”), Troy Plota (“Plota”), and Sacha Connelly (“Connelly”), (collectively “Plaintiffs”) by and through their undersigned counsel hereby seek leave to file and serve their second supplemental disclosures to comply with P.R. 3-1 and P.R. 3-2 to make disclosure of asserted claims, preliminary infringement contentions and make document production.¹

I. Background

Plaintiffs filed this suit on November 24, 2021 alleging infringement (direct and indirect) by Lightricks of three of the Patents-in-Suit (U.S. Patent No. 10,346,017 (“the ‘017 Patent), U.S. Patent No. 10,558,342 (“the ‘342 Patent), and U.S. Patent No. 10,621,469 (“the ‘469 Patent”).

On March 15, 2022, this Honorable Court issued its Docket Control Order wherein the deadline to make disclosure of asserted claims and preliminary infringement contentions & make document production pursuant to P.R. 3-1 and P.R. 3-2 was April 21, 2022. (Dkt. # 29).

On April 20, 2022, Plaintiffs timely filed its First Amended Complaint alleging infringement of two additional Patents-in-Suit (U.S. Patent No. 11,182,641 (“the ‘641 Patent”), and U.S. Patent No. 11,301,119 (“the ‘119 Patent”)).² (Dkt. # 31)

On May 5, 2022, Plaintiffs filed their Unopposed Motion for Leave to File the required information in P.R. 3-1 and P.R. 3-2 because compliance was beyond the April 21, 2022 deadline.

While Plaintiffs timely identified the two additional Patents-in-Suit (U.S. Patent No. 11,182,641 (“the ‘641 Patent”), and U.S. Patent No. 11,301,119 (“the ‘119 Patent) in their Amended Complaint (filed April 20, 2022), Plaintiffs did not identify in the May 5, 2022,

¹ Plaintiffs’ attach the responsive documents hereto as Exhibit 1 (Supplemental Disclosure of Asserted Claims and Claims Contentions) and Exhibit 2 (Claim Charts).

² Patent ‘119 issued on April 12, 2022.

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Motion for Leave and attached information in support the P.R. 3-1 and 3-2 disclosure of the two additional patents nor provide the documents in support of those additional patents.

Resultantly, Plaintiffs seek leave to add the omitted two additional patents and documents in support pursuant to this Court's Scheduling Order relating to P.R. 3-1 and P.R. 3-2 disclosure of asserted claims, preliminary infringement contentions and make document production.

II. Motion for Leave

Rule 6(b)(1)(B) provides that for any act that must be done by a party to a federal court proceeding within a specified time frame, the court may "for good cause, extend the time...after the time has expired if the party failed to act because of excusable neglect." Fed. R. Civ. P. 6(b)(1)(B).

Here, Plaintiffs timely filed an Amended Complaint identifying the additional patents-in-suit. However, Plaintiffs omitted the two additional patents and the documents in support in their May 5, 2022.

Further, this Honorable Court's Docket Control Order (Dkt. # 29) made clear that to Comply with P.R. 3-1 and P.R. 3-2 and to add new patents and/or claims for patents-in-suit before April 21, 2022, it is not necessary to file a motion for leave. Plaintiff filed its Amended Complaint on April 20, 2022 including the additional patents-in-suit.

The Court's Order further states relating to P.R. 3-1 and P.R. 3-2 that after April 21, 2022 it is necessary to obtain leave of court to add patents or claims. Resultantly, this relief is sought pursuant to this Court's Order.

The Defendant is not prejudiced by the disclosure of the later propounded P.R. 3-1 and P.R. 3-2 asserted claims, preliminary contentions and document production since Plaintiffs timely disclosed the two additional patents-in-suit in their April 20, 2022 Amended Complaint, in detail.

Moreover, initial discovery is just beginning and while Defendant produced approximately 1,200 pages of documents responsive to Plaintiff's initial written discovery request, Plaintiff notified Defendant that in excess of 14,000 pages will be produced containing 61,843 images on or before Monday, May 23, 2022. The gravity and volume of the initial production makes clear that relief sought in this request for leave to make a supplemental disclosure will not impact the Defendant's ability to continue the defense of this matter.

Lastly, the deadline to file (pre-claim construction) amended pleadings is September 1, 2022 and the deadline for discovery of claim construction issues is September 22, 2022.

Resultantly, the relief requested herein is substantially before this Honorable Court's applicable deadlines that are impacted by this supplemental disclosure.

WHEREFORE, Plaintiffs respectfully request leave to serve their second supplemental required disclosures in P.R. 3-1 and P.R. 3-2 relating to the timely amended two additional patents-in-suit and for all other relief to which they may show themselves entitled.

Respectfully Submitted,

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**ATTORNEY-IN-CHARGE FOR
PLAINTIFF Sascha Connelly**

CERTIFICATE OF SERVICE

I hereby certify, in accordance with Federal Rule 5, that on May 21, 2022, a copy of Plaintiffs' Motion for Leave was duly served upon Defendant Lightricks, Ltd.'s attorney of record by email and/or the ECF system.

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/s/ Marcellous S. McZeal
Marcellous S. McZeal

CERTIFICATE OF CONFERENCE

The undersigned certifies that Plaintiff's counsel, Mr. McZeal conferred with Defendant's counsel, Mr. Greeson on Thursday, May 19, 2022 regarding the substance of this Motion and requested relief and Defendant's counsel indicated that the Defendant is opposed.

/s/ Marcellous S. McZeal

Marcellous S. McZeal

**IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION**

PLOTAGRAPH, INC., a Delaware	§	
Corporation, Plaintiff	§	
	§	
and	§	
	§	
TROY PLOTA, an individual, Plaintiff	§	
	§	
and	§	Civil Action No. 4:21-cv-03873
	§	
SASCHA CONNELLY, an individual,	§	
Plaintiff	§	
	§	
v.	§	
	§	
LIGHTRICKS, LTD., an Israeli	§	
Corporation, Defendant	§	
	§	

**PLAINTIFFS’ SECOND SUPPLEMENTAL DISCLOSURE OF ASSERTED CLAIMS
AND PRELIMINARY INFRINGEMENT CONTENTIONS**

Pursuant to Patent Local Rule P.R. 3-1, Plaintiffs Plotagraph, Inc. (“Plotagraph”) and Troy Plota (“Plota”) by and through their undersigned counsel, and Sacha Connelly (“Connelly”), (collectively “Plaintiffs”) submit the following Second Supplemental Disclosure of Asserted Claims and Preliminary Infringement Contentions relevant to U.S. Patent No. 10,346,017 (“the ‘017 patent”), U.S. Patent No. 10,558,342 (“the ‘342 patent”), U.S. Patent No. 10,621,469 (“the ‘469 patent”), U.S. Patent No. 11,182,641 (“the ‘641 patent”), and U.S. Patent No. 11,301,119 (“the ‘119 patent”)(collectively, the “Patents-in-Suit”).

RESERVATION OF RIGHTS

This disclosure is based upon public information reasonably available to Plaintiffs as of the date of this disclosure, and Plaintiffs reserve the right to amend this disclosure to the extent consistent with the Court’s Rules and Orders and based upon relevant discovery obtained during this litigation. Plaintiffs expect to obtain discovery from Defendant Lightricks, Ltd. (“Lightricks”) and others including, for example, copies of software (source code, executable code) and other documents relating to Lightricks’ products and services which will further evidence infringement by the Accused Instrumentalities discussed below.

(a). ASSERTED CLAIMS

Plaintiffs assert that Defendant Lightricks infringe the following Asserted Claims directly, contributorily, and/or by inducement by, at least, actively encouraging and its customers to download, purchase and/or use the Accused Instrumentalities, as discussed below:

Patent	Asserted Claims
‘017 Patent	1-5, 7-18 (Motionleap); 1-5, 7-18 (Pixaloop)
‘342 Patent	1-5, 7-19 (Motionleap); 1-5, 7-19 (Pixaloop)
‘469 Patent	1-2, 6-9, 11-14, 18 (Motionleap)
‘641 Patent	1-4, 8-10, 12-15, 19-20 (Motionleap)
‘119 Patent	1-6, 8-13, 15-20 (Motionleap)

(b).ACCUSED INSTRUMENTALITIES

The Accused Instrumentalities are Defendant's program or application originally sold as Pixaloop and now titled Motionleap. The Asserted Claims include "computer system" claims which are directly infringed when a user downloads Defendant's Pixaloop or Motionleap program to their phone, tablet or similar device. Defendant Lightricks induces infringement by offering the Pixaloop/Motionleap program for download.

The Asserted Claims include method claims and "computer-implemented method" claims which are directed to methods for shifting pixels within a digital image or a video file. These claims are infringed when a user operates the Pixaloop/Motionleap program to perform the steps of the method claims. Defendant Lightricks induces infringement via, by way of example, and without limitation, in-app instructions for users as well as published tutorials which instruct users as to how to use the Pixaloop/Motionleap program to perform the step of the method claims. These tutorials include: "How to Make Photos Move with Pixaloop!" published September 25, 2018 by Motionleap by Lightricks found at [How to Make Photos Move with Pixaloop! - YouTube](#); "How to Bring Your Selfie to Life With Pixaloop!" published December 6, 2018 by Motionleap by Lightricks found at [How to Bring Your Selfie to Life With Pixaloop! - YouTube](#); and "How to upgrade your travel photos with Pixaloop!" published November 8, 2018 by Motionleap by Lightricks found at [How to upgrade your travel photos with Pixaloop! - YouTube](#).

The Asserted Claims also include claims to "computer-readable media" and a "computer program product." These claims read upon the Motionleap program and are infringed when Defendant sells and offers to sell Motionleap.

These identifications are based on a preliminary understanding of information currently available to Plaintiffs, and Plaintiffs reserve the right to supplement these identifications as discovery proceeds.

(c). CLAIM CHARTS

The attached Exhibits A-G are charts identifying where each element of the Asserted Claims of the Patents-in-suit, respectively, are found in the Accused Instrumentalities. Exhibit A:

Claim chart for '017 patent – Pixaloop

Exhibit B: Claim chart for '017 patent – Motionleap

Exhibit C: Claim chart for '342 patent – Pixaloop

Exhibit D: Claim chart for '342 patent – Motionleap

Exhibit E: Claim chart for '469 patent - Motionleap

Exhibit F: Claim chart for '641 patent – Motionleap

Exhibit G: Claim chart for '119 patent - Motionleap

(d). LITERAL INFRINGEMENT/INFRINGEMENT UNDER THE DOCTRINE OF EQUIVALENCE

On information and belief, each element of each Asserted Claim is literally present in the Accused Instrumentalities rather than present under the doctrine of equivalence. The attached Exhibits A-G are charts identifying where/how each element of the Asserted Claims of the Patents-in-Suit is literally present in the Accused Instrumentalities. However, Plaintiffs reserve the right to amend, supplement, or otherwise revise the claim charts, and its conclusion with regard to literal infringement subject to discovery provided by Defendant and others as well as claim constructions adopted by the Court.

(e). PRIORITY DATES

Plaintiffs contend that the Asserted Claims of the '017 Patent are entitled the priority dates of U.S. Patent App. Serial No. 15/660,677, filed July 26, 2017 (as a continuation application). Additionally, the Asserted Claims are entitled to priority to U.S. Provisional application 62/514,703, filed June 2, 2017 and U.S. Provisional application 62/368,017, filed July 28, 2016.

The Asserted Claims of the '342 Patent are entitled the priority dates of U.S. Provisional application 62/514,703, filed June 2, 2017 and U.S. Provisional application 62/368,017, filed July 28, 2016.

The Asserted Claims of the '469 Patent are entitled to the filing date of October 16, 2018. For commonly-disclosed subject matter, the Asserted Claims are entitled (as a continuation-in-part application) to the priority date for U.S. Pat. App. Serial No. 15/660,677, filed July 26, 2017. Additionally, the Asserted Claims of the '469 Patent are entitled to the priority dates of U.S. Provisional application 62/574,055, filed October 18, 2017, U.S. Provisional application 62/514,703, filed June 2, 2017 and U.S. Provisional application 62/368,017, filed July 28, 2016.

The Asserted Claims of the '641 Patent are entitled to the filing date of February 26, 2020. For commonly-disclosed subject matter, the Asserted Claims are entitled (as a continuation/continuation-in-part application) to the priority date for U.S. Pat. App. Serial No. 15/660,677, filed July 26, 2017. Additionally, the Asserted Claims of the '641 Patent are entitled to the priority dates of U.S. Provisional application 62/574,055, filed October 18, 2017, U.S. Provisional application 62/514,703, filed June 2, 2017 and U.S. Provisional application 62/368,017, filed July 28, 2016.

The Asserted Claims of the '119 Patent are entitled to the filing date of January 6, 2020. For commonly-disclosed subject matter, the Asserted Claims are entitled (as a

continuation/continuation-in-part application) to the priority date for U.S. Pat. App. Serial No. 15/660,677, filed July 26, 2017. Additionally, the Asserted Claims of the ‘119 Patent are entitled to the priority dates of U.S. Provisional application 62/574,055, filed October 18, 2017, U.S. Provisional application 62/514,703, filed June 2, 2017 and U.S. Provisional application 62/368,017, filed July 28, 2016.

(f). PLAINTIFF’S OWN INSTRUMENTALITIES THAT INCORPORATE/REFLECT THE CLAIMED INVENTION

Plaintiffs identify Plotagraph and Plotagraph Pro as instrumentalities which, as offered for download and sale, embody the “one or more computer-readable media” elements of the computer system claims of the ‘017 and ‘342 patents. Plotagraph and Plotagraph Pro also are covered by the “computer-readable media” claims of the ‘119 patent as well as the “computer program product” claims of the ‘641 patent.

Dated: May 21, 2022

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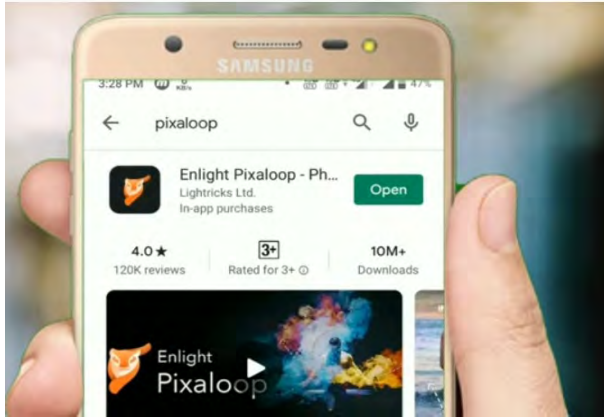
CERTIFICATE OF SERVICE

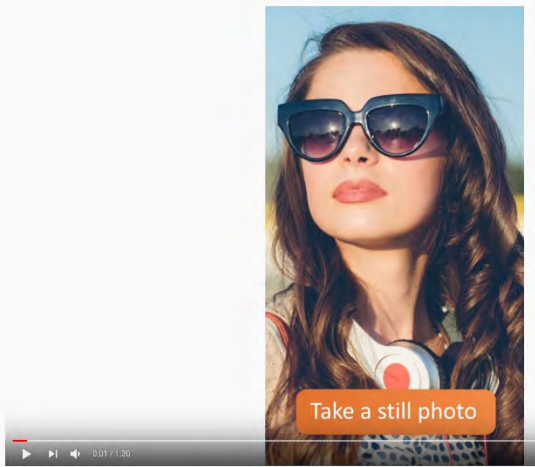
The undersigned hereby certifies that a true and correct copy of Plaintiffs' Disclosure of Asserted Claims and Preliminary Infringement Contentions has been served upon all counsel of record via the ECF system.

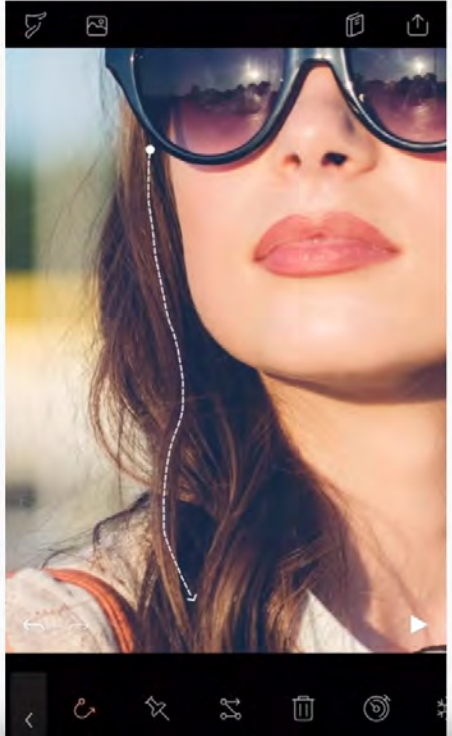
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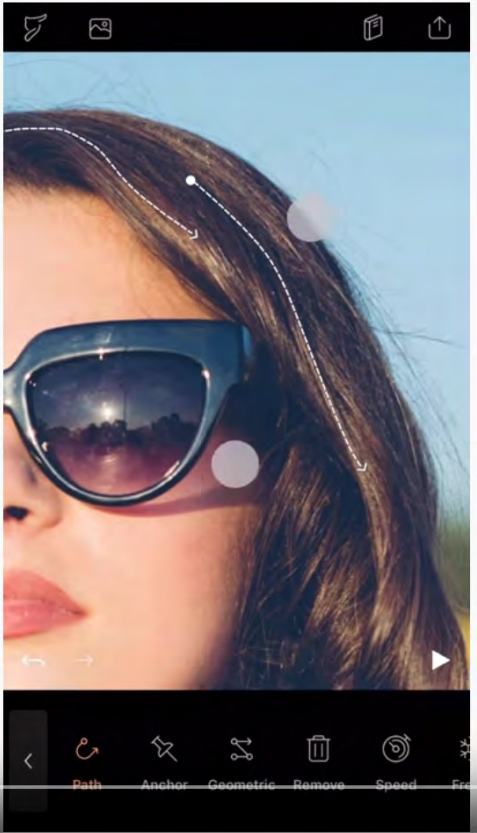
**Infringement Claim Chart for Infringement of
U.S. Patent No. 10,346,017 [the “’017 patent”]**

Claim Elements	Evidence of Presence in Pixaloop program	Notes
1. A computer system for automating the shifting of pixels within a digital image, comprising:	Pixaloop has been downloaded from the Google Play store more than 10 million times as of 2020.  This still is taken at 0:20 in at https://www.youtube.com/watch?v=wjJAp_XtZYY&t=182s Entitled Enlight Pixaloop uploaded May 2, 2020.	Claim 1 is infringed when the claimed invention is made, used or sold. The claimed computer system is made when a user downloads the Pixaloop app or program to his/her smartphone, tablet or computer.
one or more processors ; and;	The processor(s) is the processor within a user's smartphone, tablet or computer.	
one or more computer-readable media having stored thereon executable instructions that when executed by	The computer-readable media is the Pixaloop app's program which contains executable instructions for the processor to operate.	

the one or more processors configure the computer system to perform at least the following:		
access, from memory, a digital image file, wherein the digital image file comprises information that corresponds to individual pixels within the digital image;	This step is performed when a user selects a digital photo within the Pixaloop app from his/her photo collection.  #Pixaloop How to Bring Your Selfie to Life With Pixaloop!	Screenshot from 0:01 sec of YouTube video entitled “How to Bring your Selfie to Life with Pixaloop!” uploaded December 6, 2018 by Motionleap by Lightricks https://www.youtube.com/watch?v=aPYxF8cuF7E [hereinafter: the “Lightricks Tutorial”]
receive a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of the digital image;	This step is performed when a user starts to draw a path on the screen. In this still below, the first starting point is the round dot at the top of white dashed line that has been drawn.	Screenshot from 0:08 sec of Lightricks Tutorial

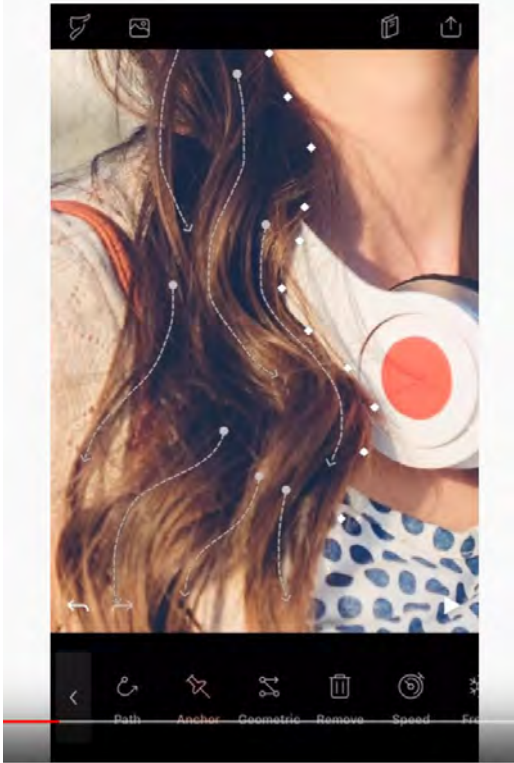
		
render a first visual indication of the first starting point on the user interface;	The first visual indication is the white dot at the upper end of the arrow in the above still.	
receive a first ending point through the user interface, wherein the first ending point is received through a user selection of a first ending portion of the digital image;	The first ending point is the arrowhead at the bottom end of the dashed white line in the above still. The user establishes the first ending point by ending the path he/she is drawing.	

render a second visual indication of the first ending point on the user interface;	The second visual indication is the display of the arrowhead on the user interface.	
render, on the user interface, a first rendered link between the first starting point and the first ending point, wherein the first rendered link comprises:	The first rendered link is the dashed line displayed on the user interface which extends between the white dot and the arrowhead.	
a first direction extending from the first starting point to the first ending point;	The first direction is the generally downward direction of the dashed line extending from the white dot to the arrowhead.	
a first length between the first starting point and the first ending point;	The first length is the length of the dashed line extending between the white dot and the arrowhead.	
identify a first set of pixels that are:	The Pixaloop programming identifies a first set of pixels	
parallel to the first rendered link,	which are parallel to the first rendered link,	
within a user-defined threshold distance from the first rendered link, and	and within a user-defined threshold distance from the first rendered link, and	
extending from the first starting point to the first ending point;	extend between the white dot and the arrowhead	
automatically shift the first set of pixels in the first direction, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the	Automatic shifting of the first set of pixels is visible beginning at about 0:50 sec in the Lightricks Tutorial video.	See 0:50-0:55 sec of Lightricks Tutorial.

first set of pixels being shifted;		
receive a second starting point through the user interface, wherein the second starting point is received through a user selection of a second starting portion of the digital image, the second starting portion being different than both the first starting portion and the first ending portion;	At about 0:15 sec in the Lightricks Tutorial, a second pathway is drawn. The second starting point is the round dot indicating the beginning of the second pathway. 	
render a third visual indication of the second starting point on the user interface;	The third visual indication is the round dot beginning the second pathway displayed on the user interface.	

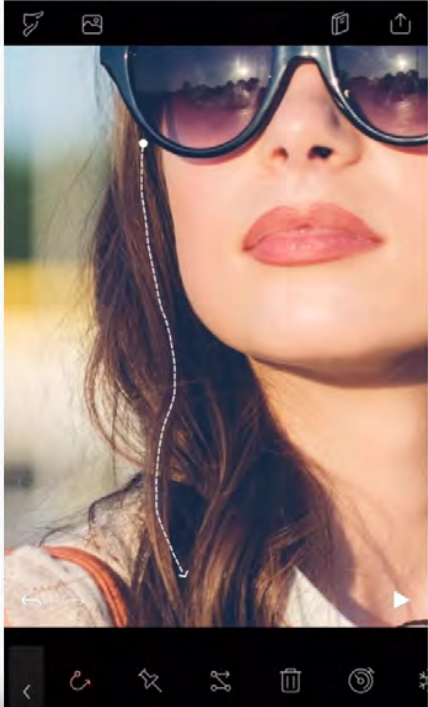
receive, through the user interface, a second ending point associated with the second starting point, wherein the second ending point is received through a user selection of a second ending portion of the digital image, the second ending portion being different than both the first starting portion and the first ending portion;	The second ending point is the arrowhead of the second pathway shown above. The second ending point is different than both the first starting portion and the first ending portion.	
render a fourth visual indication of the second end point on the user interface;	The fourth visual indication is the display of the second arrowhead on the user interface.	
render, on the user interface, a second link between the second starting point and the second ending point;	The second link is the dashed line or pathway which extends from the round dot to the arrowhead.	
identify a second set of pixels that are:	The Pixaloop programming identifies a second set of pixels that are	
parallel to the second rendered link,	parallel to the second rendered link	
within the user-defined threshold distance from the first rendered link, and	within the user-defined threshold distance from the first rendered link, and	
extending from the second starting point to	extend from the second starting point to the second ending point	

the second ending point; and		
automatically shift the second set of pixels between the second starting point and the second ending point, wherein shifting the second set of pixels comprises rendering in a loop the second set of pixels being shifted.	Automatic shifting of the second set of pixels is visible beginning at about 0:50 sec in the Lightricks Tutorial video.	See 0:50-0:55 sec of Lightricks Tutorial.
2. The computer system of claim 1, wherein the executable instructions include instructions that are executable to configure the computer system to identify a particular portion of the digital image to mask, wherein the mask prevents pixels covered by the mask from being shifted.	The “Anchor” tool of Pixaloop is used to identify a particular portion of the digital image to mask. The white diamonds on the still image are indicating a particular portion of the image to mask.	From about 0:28-0:48 in the Lightricks Tutorial, the user uses the “Anchor” tool to create a mask over the photo subject’s face and surroundings.

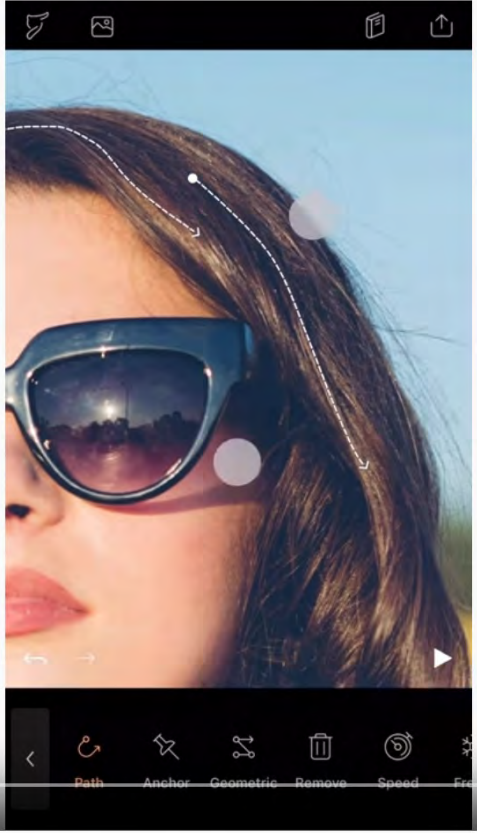
		
3. The computer system of claim 2, wherein receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	The white diamonds in the still image above indicate selection of a particular pixel within the digital image.	

4. The computer system of claim 2, wherein the executable instructions include instructions that are executable to configure the computer system to generate the mask by:		
identifying one or more edges that form a boundary around the particular pixel; and	The Pixaloop "Anchor" tool is used to identify an edge (made up of the white diamonds) that form a boundary around a particular pixel (i.e., the face/neck area)	
generating the mask to cover area within the boundary.	The Pixaloop programming generates a mask to cover the face/neck area within the boundary of the white diamonds.	
5. The computer system of claim 1, wherein the first direction is different from the second direction.	The first direction is generally straight down (from first dot to first arrowhead) while the second direction is down and to the right (from second dot to second arrowhead).	
6. The computer system of claim 1, wherein the magnitude of the shifting of the first set of pixels is proportionally related to the first length and the magnitude of the shifting of the second set of pixels is proportionally related to the second length.	It is not apparent from the Lightricks Tutorial meets the requirements of this claim. This will probably be ascertained from examination of the source code.	

7. The computer system of claim 1, wherein:		
the first set of pixels comprise pixels that intersect the first rendered link; and	The first set of pixels intersect the first rendered link.	
the first rendered link comprises a non-linear pathway extending between the first starting point and the first ending point.	The first rendered link is a non-linear pathway because it is curved.	
8. A method for automating the shifting of pixels within a digital image, comprising:		
receiving a first indication of a first starting point through a user interface, wherein the first starting point is received through a user selection of a first starting portion of the digital image;	This step is performed when a user starts to draw a path on the screen. In this still below, the first starting point is the round dot at the top of white dashed line that has been drawn.	Screenshot from 0:08 sec of the "Lightricks Tutorial"

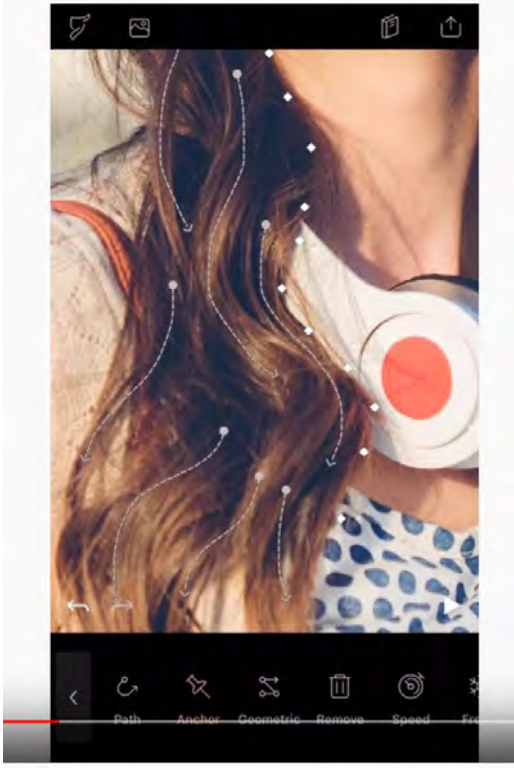
		
render a first visual indication of the first starting point on the user interface;	The Pixaloop programming displays a round white dot at the location where a user begins drawing the white dashed line.	
receiving, through the user interface, a first ending point associated with the first starting point, wherein the first ending point is received through a user selection of a first ending portion of the digital image;	The first ending point is the arrowhead at the bottom end of the dashed white line in the above still. The user establishes the first ending point by ending the path he/she is drawing.	

render a second visual indication of the first ending point on the user interface;	The Pixaloop programming renders an arrowhead on the user interface as the second visual indication of the first ending point.	
render, on the user interface, a first rendered link between the first starting point and the first ending point;	The Pixaloop programming displays a dashed white line on the user interface between the dot and arrowhead as the first rendered link.	
selecting a first set of pixels that intersect with the first rendered link;	The Pixaloop programming selects a first set of pixels that intersect with the first rendered link.	
automatically shifting the first set of pixels along the first rendered link between the first starting point and the first ending point, wherein shifting the first set of pixels comprises rendering in a loop the first set of pixels being shifted;	The Pixaloop programming automatically shifts the first set of pixels along the first rendered link between the first starting point and the first ending point by rendering them in a loop. Shifting of the first set of pixels is visible beginning at about 0:50 sec in the Lightricks Tutorial video.	See 0:50-0:55 sec of the Lightricks Tutorial video
receiving a second indication of a second starting point through the user interface, wherein the second starting point is received through a user selection of a second starting portion of the digital image, the second starting portion being different that both the first	At about 0:15 sec in the Lightricks Tutorial video a second pathway is drawn (still below). The second starting point is the round dot indicating the beginning of the second pathway. The second starting portion is different from the first starting portion and first ending portion.	

starting portion and the first ending portion;		
render a third visual indication of the second starting point on the user interface;	The third visual indication is the round dot in the still above.	
receiving, through the user interface, a second ending point associated with the second starting point, wherein the second ending point is received	The second ending point is visible as the arrowhead at the lower end of the white dashed line in the still above. The Pixaloop programming receives, through the user interface (screen), the user selection of a second ending point when the user stops drawing the dashed white line.	

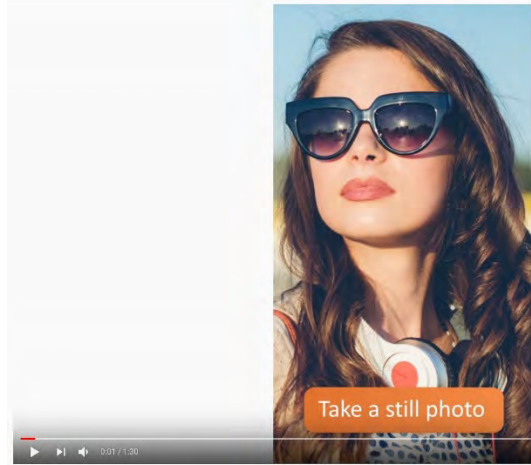
through a user selection of a second ending portion of the digital image, the second ending portion being different than both the first starting portion and the first ending portion;		
render a fourth visual indication of the second end point on the user interface;	The fourth visual indication is the arrowhead on the still above which is rendered on the user interface (screen) by the Pixaloop programming.	
render, on the user interface, a second rendered link between the second starting point and the second ending point;	The second rendered link is rendered on the user interface (screen) as a dashed white line.	
selecting a second set of pixels that intersect with the second rendered link;	The Pixaloop programming selects a second set of pixels that intersect with the second rendered link.	
automatically shifting the second set of pixels along the second rendered link between the second starting point and the second ending point, wherein shifting the second set of pixels comprises rendering in a loop the second set of pixels being shifted.	The Pixaloop programming automatically shifts the second set of pixels along the second rendered link between the second starting point and the second ending point, rendering the pixels in a loop. Shifting of the second set of pixels is visible beginning at about 0:50 sec on the Lightricks Tutorial video.	

9. The method as recited in claim 8, further comprising when a pixel selected from the first set of pixels reaches the ending point, rendering and re-rendering in the loop the pixel being shifted from the first starting point to the ending point.	The Pixaloop programming appears to render and re-render in a loop such that a pixel is shifted from the first starting point to the (first) ending point. This rendering and re-rendering is visible in the beginning at about 0:50 sec in the Lightricks Tutorial video.	
10. The method as recited in claim 8, further comprising receiving an indication to generate a mask over a portion of the digital image, wherein pixels under the mask are prevented from shifting.	From about 0:28-0:48 in the Lightricks Tutorial, the user uses the "Anchor" tool to create a mask over the photo subject's face and surroundings.	
11. The method as recited in claim 10, further comprising through a user interface a selection of a particular pixel within the digital image from which the mask should be generated.	The white diamonds in this still at 0:35 sec of the Lightricks Tutorial show selection by a user of particular pixels within the digital image to create a mask.	

		
12. The method of claim 11, further comprising:		
identifying one or more edges that form a boundary around the particular pixel; and	The white diamonds in the above still create an edge that forms a boundary around the face/neck area.	
generating the mask to cover area within the boundary.	The Pixaloop programming generates a mask to cover the face/neck area bounded by the white diamonds.	

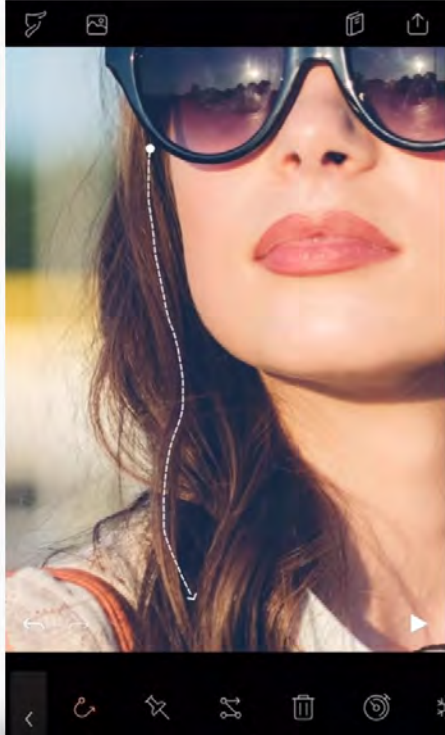
13. The method of claim 8, wherein:		
the first set of pixels further comprise:	The first set of pixels identified by the Pixaloop programming are	
pixels that are parallel to the first rendered link,	parallel to the first rendered link	
within a user-defined threshold distance from the first rendered link, and	within a user-defined threshold distance from the first rendered link, and	
that extend from the first starting point to the first ending point; and	extend from the first starting point to the first ending point	
the first rendered link comprises a non-linear pathway extending between the first starting point and the first ending point.	The first rendered link is non-linear because it is curved.	
14. A method for automating the shifting of pixels within a digital image, comprising:		

accessing, from memory, a digital image file, wherein the digital image file comprises information that corresponds to individual pixels within the digital image;

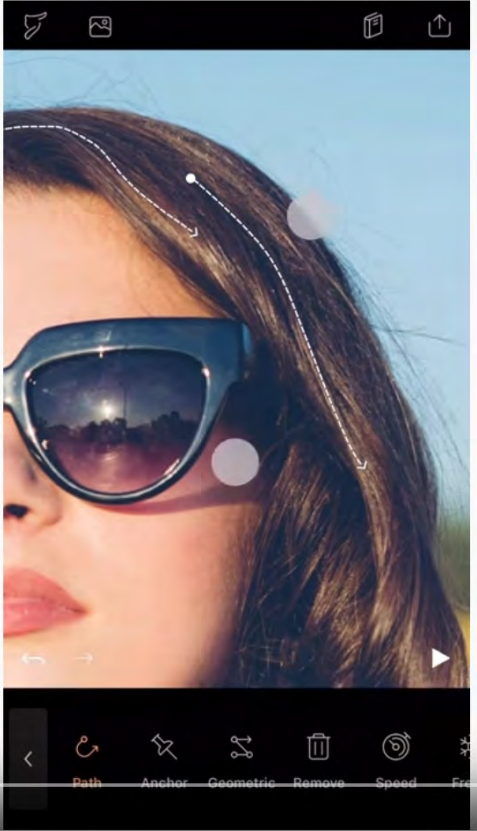


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How to Bring Your Selfie to Life With Pixaloo!

This step is performed when a user selects a digital photo within the Pixaloo app from his/her photo collection.

rendering a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of the digital image;	This step is performed when a user starts to draw a path on the screen (user interface). 	Screenshot from 0:08 sec of Lightricks Tutorial
rendering a first visual indication of the first starting point on the user interface;	The Pixaloop programming renders the first starting point is a round dot (at the top of the white dashed line in the still above).	
receiving a first ending point through the user interface, wherein the first ending point is received through a user selection of a first ending portion of the digital image;	The Pixaloop programming receives a first ending point through the user interface (screen) when the user stops drawing a path on the screen. This ending point is the arrowhead at the lower end of the path in the still above.	

rendering, on the user interface, a first rendered link between the first starting point and the first ending point, wherein the first link comprises:	The Pixaloop programming renders on the user interface (screen) a dashed line between the round dot and the arrowhead.	
a non-linear pathway extending between the first starting point and the first ending point; and	The first rendered link is a non-linear pathway because it is curved. The non-linear pathway extends between the first starting point and the first ending point.	
a first length extending along the non-linear pathway;	The first length is the length of the dashed line that extends from the first starting point to the first ending point.	
identifying a first set of pixels that lie along the first rendered link;	The Pixaloop programming identifies a first set of pixels that lie along the first rendered link.	
automatically shifting the first set of pixels along the non-linear pathway, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the first set of pixels being shifted	The Pixaloop programming automatically shifts the first set of pixels along the non-linear pathway rendering and re-rendering the first set of pixels in a loop. Shifting of the first set of pixels is visialbe beginning at abvout 0:50 sec in the Lightricks Tutorial video.	See 0:50-0:55 sec of Lightricks Tutorial.
receiving a second starting point through the user interface, wherein the second starting point is received through a user selection of a second starting portion of the digital image, the second	At about 0:15 sec in the Lightricks Tutorial, a second pathway is drawn (see still below). The second starting point is the round dot indicating the beginning of the second pathway. The second starting portion is different than both the first starting portion and the first ending portion.	

starting portion being different than both the first starting portion and the first ending portion;		
rendering a third visual indication of the second starting point on the user interface;	The round dot, representing the second starting point, is rendered on the user interface (screen) by the Pixaloop programming.	
receiving, through the user interface, a second ending point associated with the second starting point, wherein the second ending point is received	The Pixaloop programming receives a user selection of a second ending portion of the digital image when the user stops drawing the second pathway on the user interface (screen). The second ending portion is different than both the first starting portion and the first ending portion.	

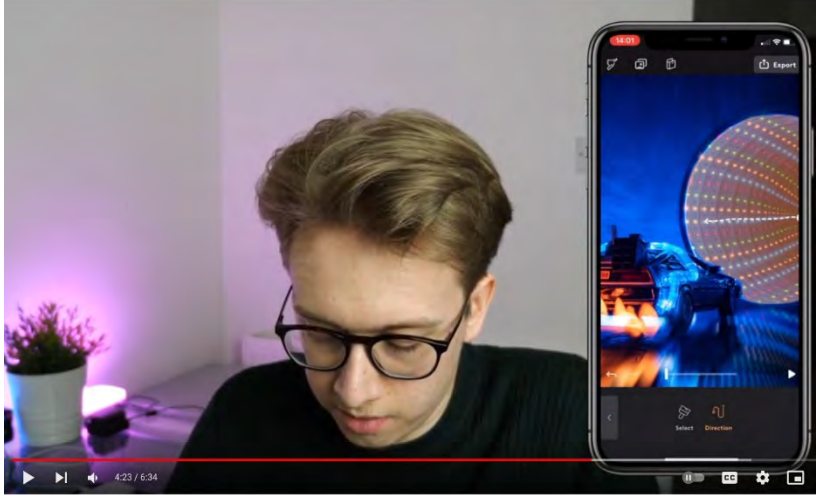
through a user selection of a second ending portion of the digital image, the second ending portion being different than both the first starting portion and the first ending portion;		
rendering a fourth visual indication of the second end point on the user interface;	The fourth visual indication of the second end point is rendered on the user interface (screen) as the arrowhead at the lower end of the pathway.	
rendering, on the user interface, a second link between the second starting point and the second ending point;	The second link is rendered on the user interface (screen) as a dashed white line which extends between the second starting point and the second ending point. This can be seen in the still photo above.	
selecting a second set of pixels along the second [second] link; and	The Pixaloop programming selects a second set of pixels along the second link.	
automatically shifting the second set of pixels between the second starting point and the second ending point, wherein shifting the second set of pixels comprises rendering in a loop the second set of pixels being shifted.	The Pixaloop programming automatically shifts the second set of pixels in this manner as can be seen from 0:50-0:55 sec of Lightricks Tutorial video.	

15. The method of claim 14, further comprising identifying a particular portion of the digital image to mask, wherein the mask prevents pixels covered by the mask from being shifted.	From about 0:28-0:48 in the Lightricks Tutorial, the user uses the “Anchor” tool to create a mask over the photo subject’s face and surroundings.	
16. The method of claim 15, wherein receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	The white diamonds in this still at 0:35 sec of the Lightricks Tutorial show selection of particular pixels within the digital image to create a mask.	

17. The method of claim 15, further comprising:		
generating the mask, wherein generating the mask comprises:		
identifying one or more edges that form a boundary around the particular pixel; and	The white diamonds for a boundary around the face/neck area and create an edge that forms a boundary.	
generating the mask to cover area within the boundary.	The Pixaloop programming generates a mask to cover the face/neck area within the boundary.	
18. The method of claim 15, wherein:		
the first set of pixels further comprise:		
pixels that are parallel to the first rendered link,	The first set of pixels are pixels that are parallel to the first rendered link	
within a user-defined threshold distance from the first rendered link, and		
that extend from the first starting point to the first ending point.	The first set of pixels extend from the first starting point to the second ending point.	

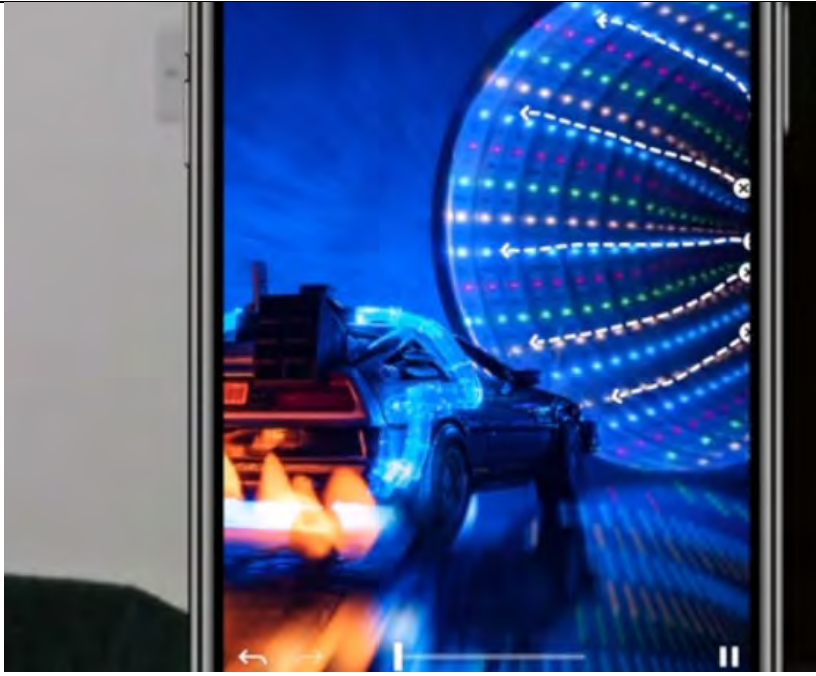
**Infringement Claim Chart for Infringement of
U.S. Patent No. 10,346,017 [the “’017 patent”]**

Claim Elements	Evidence of Presence in Motionleap program	Notes
1. A computer system for automating the shifting of pixels within a digital image, comprising:		Claim 1 is infringed when the claimed invention is made, used or sold. The claimed computer system is made when a user downloads the Motionleap app or program to his/her smartphone, tablet or computer.
one or more processors ; and;	The processor(s) is the processor within a user's smartphone, tablet or computer.	
one or more computer-readable media having stored thereon executable instructions that when executed by the one or more processors configure the computer system to perform at least the following:	The computer-readable media is the Motionleap app's program which contains executable instructions for the processor to operate.	
access, from memory, a digital image file, wherein the digital image file comprises information that corresponds to	This step is performed when a user selects a digital photo within the Motionleap app from his/her photo collection.	

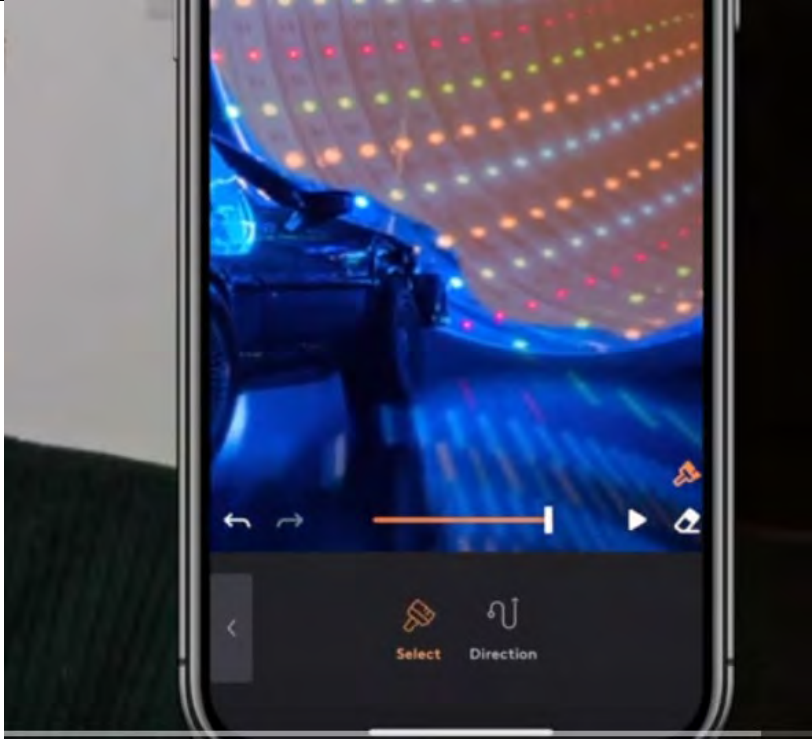
individual pixels within the digital image;		
receive a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of the digital image;	 At about 4:23 in the Motionleap Video, the user draws a path from right to left in the colored lights in the tunnel using the Direction tool in Motionleap. The indication of the first starting point is received when the user starts drawing a path on the user interface (phone screen).	Screenshot from 4:23 of YouTube video entitled “How to Add Live Motion to Your Photography Motion Leap App” uploaded March 21, 2021 and found at https://www.youtube.com/watch?v=ip27b0BAHQw [hereinafter the “Motionleap Video”].
render a first visual indication of the first starting point on the user interface;	The first starting point is rendered on the user interface as a round dot.	

		
receive a first ending point through the user interface, wherein the first ending point is received through a user selection of a first ending portion of the digital image;	The user establishes the first ending point by ending the pathway he/she is drawing.	
render a second visual indication of the first ending point on the user interface;	The first ending point is displayed as the arrowhead at the left end of the pathway.	
render, on the user interface, a first rendered link between the first starting point and the first ending point, wherein the first rendered link comprises:	The first rendered link is the dashed line displayed on the user interface which extends between the white dot and the arrowhead.	
a first direction extending from the first starting	The first direction is the generally left direction of the pathway from the round dot to the arrowhead.	

point to the first ending point;		
a first length between the first starting point and the first ending point;	The first length is the length of the dashed line extending between the round dot and the arrowhead.	
identify a first set of pixels that are:	The Motionleap programming identifies a first set of pixels	
parallel to the first rendered link,	which are parallel to the first rendered link,	
within a user-defined threshold distance from the first rendered link, and	and within a user-defined threshold distance from the first rendered link, and	
extending from the first starting point to the first ending point;	extend between the round dot and the arrowhead	
automatically shift the first set of pixels in the first direction, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the first set of pixels being shifted;	Automatic shifting in the first direction is visible starting at around 4:38 of the Motionleap Video.	
receive a second starting point through the user interface, wherein the second starting point is received through a user selection of a second starting portion of the digital image, the second	The Motionleap Programming receives a second indication of a second starting point when a user draws a second pathway using the Direction tool. The second starting point is also displayed as a round dot. In the screen shot below, second and subsequent pathways are drawn.	

starting portion being different than both the first starting portion and the first ending portion;		
render a third visual indication of the second starting point on the user interface;	The third visual indication is the round dot beginning the second pathway displayed on the user interface.	
receive, through the user interface, a second ending point associated with the second starting point, wherein the second ending point is received through a user selection of a second ending portion of the digital image, the second	The second ending point is the arrowhead of the second pathway shown above. The second ending point is different than both the first starting portion and the first ending portion.	

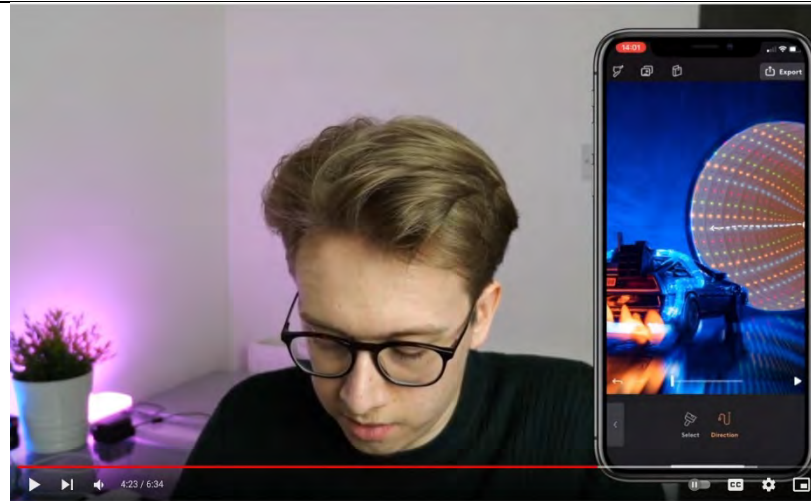
ending portion being different than both the first starting portion and the first ending portion;		
render a fourth visual indication of the second end point on the user interface;	The fourth visual indication is the display of the second arrowhead on the user interface.	
render, on the user interface, a second link between the second starting point and the second ending point;	The second link is the dashed line or pathway which extends from the round dot to the arrowhead.	
identify a second set of pixels that are:	The Motionleap programming identifies a second set of pixels that are	
parallel to the second rendered link,	parallel to the second rendered link,	
within the user-defined threshold distance from the first rendered link, and	within the user-defined threshold distance from the first rendered link, and	
extending from the second starting point to the second ending point; and	extend from the second starting point to the second ending point	
automatically shift the second set of pixels between the second starting point and the second ending point, wherein shifting the second set of pixels comprises rendering in a	The Motionleap programming automatically shifts the second set of pixels between the second starting point and the second ending point by rendering the second set of pixels in a loop. Shifting is visible starting at around 4:38 of the Motionleap Video.	

loop the second set of pixels being shifted.		
2. The computer system of claim 1, wherein the executable instructions include instructions that are executable to configure the computer system to identify a particular portion of the digital image to mask, wherein the mask prevents pixels covered by the mask from being shifted.	 Beginning at around 3:23 of the MotionLeap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting.	
3. The computer system of claim 2, wherein receiving an indication of a particular portion of the	The user selects one or more particular pixels to mask using the “Erase” tool.	

digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.		
4. The computer system of claim 2, wherein the executable instructions include instructions that are executable to configure the computer system to generate the mask by:		
identifying one or more edges that form a boundary around the particular pixel; and	The user identifies one or more edges that form a boundary around the car in the photo using the “Erase” tool.	
generating the mask to cover area within the boundary.	The Motionleap programming generates a mask covering areas which have been erased.	
5. The computer system of claim 1, wherein the first direction is different from the second direction.	The first direction is generally horizontally right to left. The second direction is different as it is not horizontal.	
6. The computer system of claim 1, wherein the magnitude of the shifting of the first set of pixels is	It is not apparent from observation whether the requirements of this claim are met with Motionleap. This will probably be ascertained from examination of the source code.	

proportionally related to the first length and the magnitude of the shifting of the second set of pixels is proportionally related to the second length.		
7. The computer system of claim 1, wherein:		
the first set of pixels comprise pixels that intersect the first rendered link; and	The first set of pixels intersect the first rendered link.	
the first rendered link comprises a non-linear pathway extending between the first starting point and the first ending point.	The first rendered link is a non-linear pathway because it has curves.	
8. A method for automating the shifting of pixels within a digital image, comprising:		

receiving a first indication of a **first starting point** through a user interface, wherein the first starting point is received through a user selection of a first starting portion of the digital image;



#mobilephotography #motionleap #photographyapps
How To Add Live Motion to Your Photography | Motion Leap App
3,937 views · Mar 31, 2021

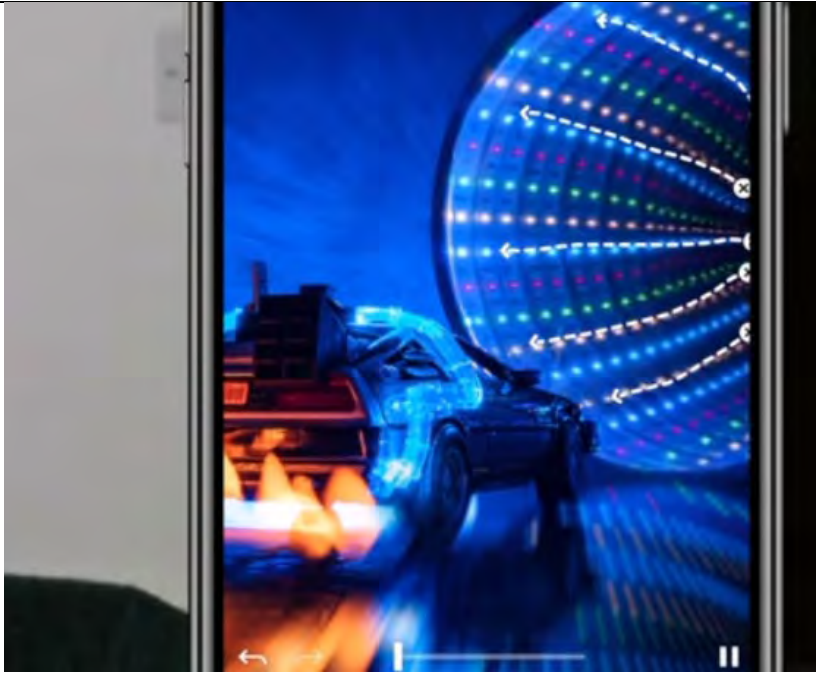
Oliver Howells
1.1K subscribers

At about 4:23 in the Motionleap Video, the user draws a path from right to left in the colored lights in the tunnel using the Direction tool in Motionleap. The indication of the **first starting point** is received when the user starts drawing a path on the user interface (phone screen).

Screenshot from 4:23 of the Motionleap Video.

render a first visual indication of the first starting point on the user interface;	 The Motionleap programming renders an indication of the first starting point on the user interface (phone screen) as a dot.	
receiving, through the user interface, a first ending point associated with the first starting point, wherein the first ending point is received through a user selection of a first ending portion of the digital image;	The Motionleap programming receives an indication of a first ending point when the user stops drawing a path on the screen.	
render a second visual indication of the first ending point on the user interface;	The second visual indication is displayed on the phone screen (user interface) as an arrowhead.	
render, on the user interface, a first rendered link between the first	The first rendered link is the white dashed line which extends between the dot and the arrowhead.	

starting point and the first ending point;		
selecting a first set of pixels that intersect with the first rendered link;	The Motionleap programming selects a first set of pixels that intersect with the first rendered link.	
automatically shifting the first set of pixels along the first rendered link between the first starting point and the first ending point, wherein shifting the first set of pixels comprises rendering in a loop the first set of pixels being shifted;	The Motionleap programming automatically shifts the first set of pixels along the first rendered link between the first starting point and the first ending point by rendering them in a loop.	Shifting of the first set of pixels is visible starting at around 4:38 of the Motionleap Video.
receiving a second indication of a second starting point through the user interface, wherein the second starting point is received through a user selection of a second starting portion of the digital image, the second starting portion being different that both the first starting portion and the first ending portion;	The Motionleap Programming receives a second indication of a second starting point when a user draws a second pathway using the Direction tool. The second starting point is also displayed as a round dot. In the screen shot below, second and subsequent pathways are drawn.	Screenshot taken at about 4:48 of the Motionleap Video.

		
render a third visual indication of the second starting point on the user interface;	The Motionleap programming renders a third visual indication of the second starting point on the user interface as a round dot.	
receiving, through the user interface, a second ending point associated with the second starting point, wherein the second ending point is received through a user selection of a second ending portion of the digital image, the second	The Motionleap programming receives an indication of the second ending point when the user stops drawing the second pathway on the user interface (phone screen).	

ending portion being different than both the first starting portion and the first ending portion;		
render a fourth visual indication of the second end point on the user interface;	The Motionleap programming renders a fourth visual indication of the second end point on the user interface (phone screen) as a second arrowhead.	
render, on the user interface, a second rendered link between the second starting point and the second ending point;	The Motionleap programming renders a second rendered link on the user interface (phone screen) as a white dashed line between the second starting point and the second end point.	
selecting a second set of pixels that intersect with the second rendered link;	The Motionleap programming selects a second set of pixels that intersect with the second rendered link.	
automatically shifting the second set of pixels along the second rendered link between the second starting point and the second ending point, wherein shifting the second set of pixels comprises rendering in a loop the second set of pixels being shifted.	The Motionleap programming automatically shifts the second set of pixels along the second rendered link between the second starting point and the second ending point by rendering the second set of pixels in a loop. Shifting is visible starting at around 4:38 of the Motionleap Video.	
9. The method as recited in claim 8, further comprising when a pixel selected from the first set	The Motionleap programming performs this step during shifting.	

of pixels reaches the ending point, rendering and re-rendering in the loop the pixel being shifted from the first starting point to the ending point.		
10. The method as recited in claim 8, further comprising receiving an indication to generate a mask over a portion of the digital image, wherein pixels under the mask are prevented from shifting.	Beginning at around 3:23 of the MotionLeap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting. 	

11. The method as recited in claim 10, further comprising through a user interface a selection of a particular pixel within the digital image from which the mask should be generated.	A user selects a particular pixel or pixels to create a mask for using the Erase tool.	
12. The method of claim 11, further comprising:		
identifying one or more edges that form a boundary around the particular pixel; and	The Erase tool of the Motionleap program can be used to form a boundary around the particular pixel (i.e., the car and areas proximate the car in the photo).	
generating the mask to cover area within the boundary.	The Motionleap programming generates a mask to cover the area selected with the Erase too.	
13. The method of claim 8, wherein:		
the first set of pixels further comprise:	The first set of pixels identified by the Motionleap programming are	
pixels that are parallel to the first rendered link,	parallel to the first rendered link	
within a user-defined threshold distance from the first rendered link, and	within a user-defined threshold distance from the first rendered link, and	
that extend from the first starting point to the first ending point; and	extend from the first starting point to the first ending point	

the first rendered link comprises a non-linear pathway extending between the first starting point and the first ending point.	The first rendered link is non-linear because it has curves.	
14. A method for automating the shifting of pixels within a digital image, comprising:		
accessing, from memory, a digital image file, wherein the digital image file comprises information that corresponds to individual pixels within the digital image;	This step is performed when a user selects a digital photo within the Motionleap app from his/her photo collection. Starting at 2:43 in the Motionleap video, the user selects a digital photo from a collection stored in memory. 	

rendering a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of the digital image;

This step is performed when a user starts to draw a path on the screen using the Direction tool of Motionleap. In this still below, the first starting point is the round dot at the far right side of the screen.

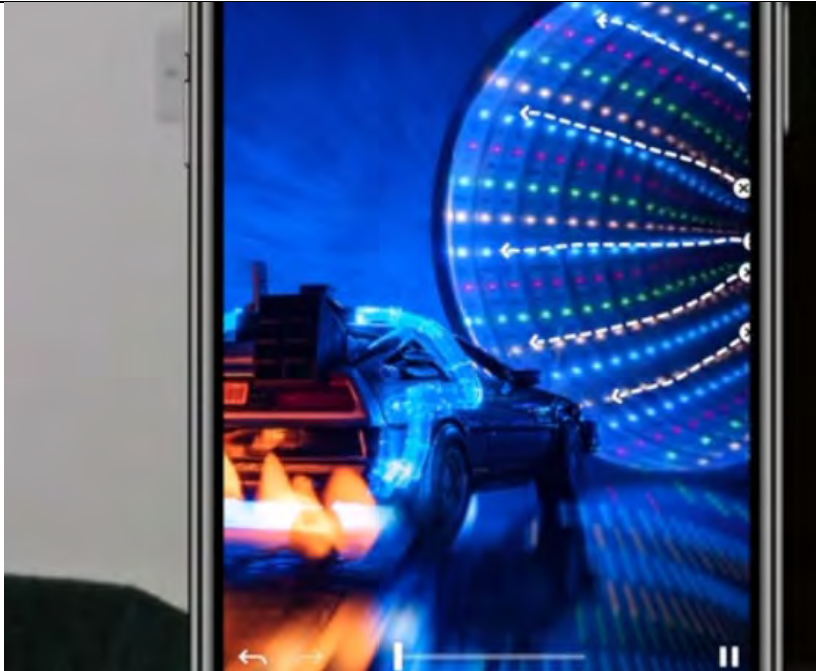


rendering a first visual indication of the first starting point on the user interface;

The Motionleap programming renders a round dot as a first visual indication of the first starting point on the screen (user interface).

		
receiving a first ending point through the user interface, wherein the first ending point is received through a user selection of a first ending portion of the digital image;	The Motionleap programming receives a user selection of a first ending portion of the digital image when a user stops drawing a pathway on the user interface (phone screen).	
rendering, on the user interface, a first rendered link between the first starting point and the first ending point, wherein the first link comprises:	The Motionleap programming renders a dashed white line between the first starting point and first ending point on the user interface (phone screen).	
a non-linear pathway extending between the first starting point and the first ending point; and	The first rendered pathway is a non-linear pathway since it includes curves and bends.	
a first length extending along the non-linear pathway;	The non-linear pathway has a first length.	

identifying a first set of pixels that lie along the first rendered link;	The Motionleap programming identifies a first set of pixels that lie along the first rendered link.	
automatically shifting the first set of pixels along the non-linear pathway, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the first set of pixels being shifted	The Motionleap programming automatically shifts the first set of pixels along the non-linear pathway, rendering and re-rendering them in a loop. Shifting of the first set of pixels is visible beginning around 4:48 of the Motionleap Video.	
receiving a second starting point through the user interface, wherein the second starting point is received through a user selection of a second starting portion of the digital image, the second starting portion being different than both the first starting portion and the first ending portion;	The Motionleap programming receives a second starting point through the user interface when a user starts to draw a second pathway using the user interfaced (phone screen). At 4:24-4:30 in the Motionleap Video, a second pathway is drawn as well as other pathways.	Screenshot taken at 4:33 in the Motionleap Video.

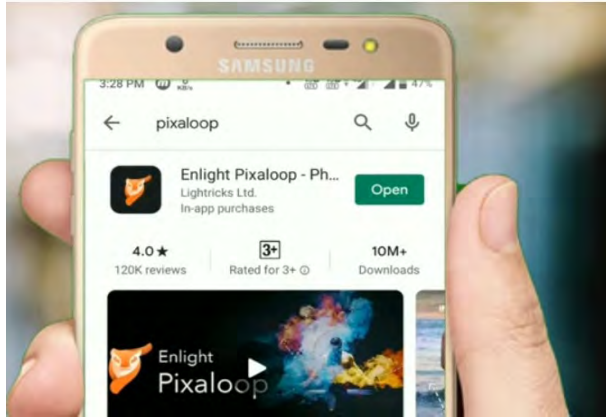
		
rendering a third visual indication of the second starting point on the user interface;	The Motionleap programming renders a visual indication of the second starting point on the user interface as a round dot.	
receiving, through the user interface, a second ending point associated with the second starting point, wherein the second ending point is received through a user selection of a second ending portion of the digital image, the second ending portion being	The Motionleap programming receives a user selection of a second ending portion of the digital image when the user stops drawing a second pathway on the user interface (phone screen).	

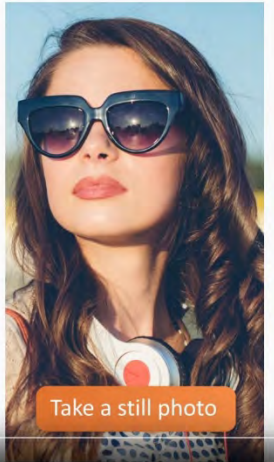
different than both the first starting portion and the first ending portion;		
rendering a fourth visual indication of the second end point on the user interface;	The Motionleap programming renders a visual indication of the second ending point on the user interface as an arrowhead.	
rendering, on the user interface, a second link between the second starting point and the second ending point;	The Motionleap programming renders the second link on the user interface as a dashed white line.	
selecting a second set of pixels along the send [second] link; and	The Motionleap programming selects a second set of pixels along the second link.	
automatically shifting the second set of pixels between the second starting point and the second ending point, wherein shifting the second set of pixels comprises rendering in a loop the second set of pixels being shifted.	The Motionleap programming automatically shifts the second set of pixels between the second starting point and second ending point, rendering them in a loop. Shifting of the second set of pixels is visible beginning around 4:48 of the Motionleap Video.	
15. The method of claim 14, further comprising identifying a particular portion of the digital image to mask, wherein the mask prevents pixels	Beginning at around 3:23 of the MotionLeap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting.	

covered by the mask from being shifted.		
16. The method of claim 15, wherein receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	A user selects a particular pixel or pixels to create a mask for using the Erase tool.	

17. The method of claim 15, further comprising:		
generating the mask, wherein generating the mask comprises:		
identifying one or more edges that form a boundary around the particular pixel; and	The Erase tool of the Motionleap program can be used to form a boundary around the particular pixel (i.e., the car and areas proximate the car in the photo).	
generating the mask to cover area within the boundary.	The Motionleap programming generates a mask to cover the area within the boundary.	
18. The method of claim 15, wherein:		
the first set of pixels further comprise:		
pixels that are parallel to the first rendered link,	The first set of pixels are pixels that are parallel to the first rendered link	
within a user-defined threshold distance from the first rendered link, and		
that extend from the first starting point to the first ending point.	The first set of pixels extend from the first starting point to the second ending point.	

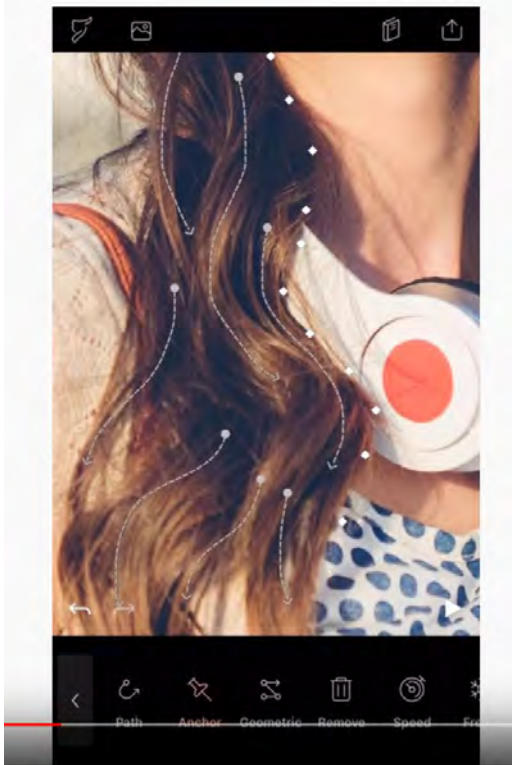
**Infringement Claim Chart for Infringement of
U.S. Patent No. 10,558,342 [the “342 patent”] by Pixaloop**

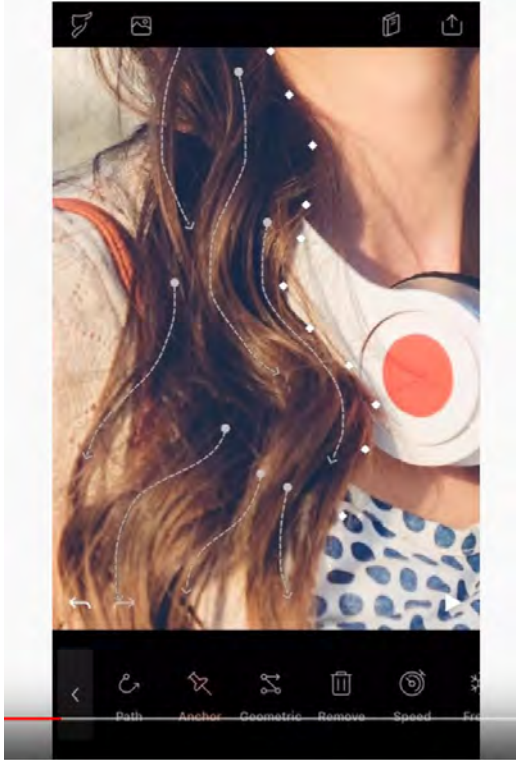
Claim Elements	Evidence of Presence in Pixaloop program	Notes
1. A computer system for automating a shifting of pixels within a digital image, comprising:	Pixaloop has been downloaded from the Google Play store more than 10 million times as of 2020.  This still is taken at 0:20 in at https://www.youtube.com/watch?v=wjJAp_XtZYY&t=182s Entitled Enlight Pixaloop uploaded May 2, 2020.	Claim 1 is infringed when the claimed invention is made, used or sold. The claimed computer system is made when a user downloads the Pixaloop app or program to his/her smartphone, tablet or computer. The claimed computer system is sold when a user pays Lightricks for the app or program as a subscription or purchase.
one or more processors ; and	The processor(s) is the processor within a user's smartphone, tablet or computer.	
one or more computer-readable media having stored thereon executable instructions that when executed by the one or more processors configure	The computer-readable media is the Pixaloop app's program which contains executable instructions for the processor to operate.	

the computer system to perform at least the following:		
access, from memory, a digital image file, wherein the digital image file comprises information that corresponds to individual pixels within the digital image;	This step is performed when a user selects a digital photo within the Pixaloop app from his/her photo collection.  Take a still photo How to Bring Your Selfie to Life With Pixaloop!	Screenshot from 0:01 sec of YouTube video entitled "How to Bring your Selfie to Life with Pixaloop!" uploaded December 6, 2018 by Motionleap by Lightricks https://www.youtube.com/watch?v=apYxF8cuF7E [hereinafter: the "Lightricks Tutorial"]
receive a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of the digital image;	This step is performed when a user starts to draw a path on the screen. In this still below, the first starting point is the round dot at the top of white dashed line that has been drawn.	Screenshot from 0:08 sec of Lightricks Tutorial

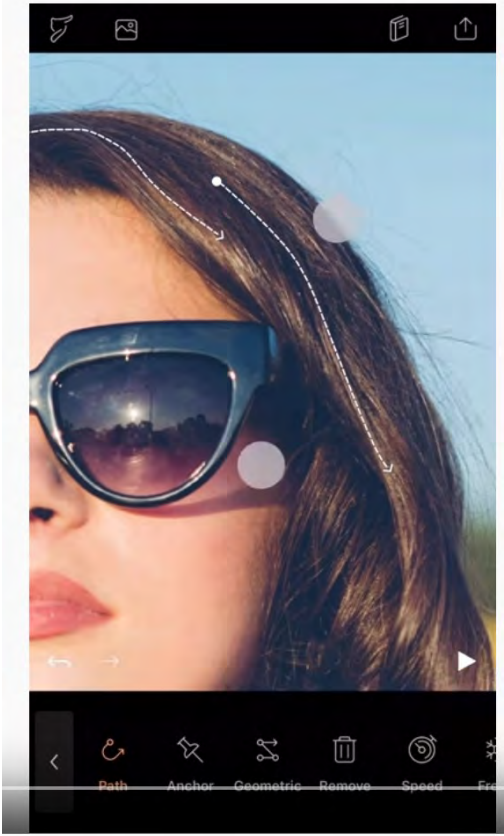
		
receive a first ending point through the user interface, wherein the first ending point is received through a user selection of a first ending portion of the user interface;	The first ending point is the arrowhead at the bottom end of the dashed white line in the above still. The user establishes the first ending point by ending the path he/she is drawing.	
create a first link between the first starting point and the first ending point,	The first link is the dashed white line between the dot and the arrowhead.	

wherein the first link comprises: a non-linear pathway extending between the first starting point and the first ending point; and	The first link is a non-linear pathway because it is curved. The first link extends between the first starting point and the first ending point.	
a first length extending along the non-linear pathway between the first starting point and the first ending point;	The first length is the length of the dashed line that extends from the first starting point to the first ending point.	
identify a first set of pixels that lie along the first link between the first starting point and the first ending point; and	The Pixaloop programming identifies a set of pixels that lie along the first link between the first starting point and first ending point.	
shift the first set of pixels along the first length of the non-linear pathway, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the first set of pixels being shifted.	Shifting of the first set of pixels is visible beginning at about 0:50 sec in the Lightricks Tutorial video.	See 0:50-0:55 sec of Lightricks Tutorial.
2. The computer system of claim 1, wherein the executable instructions include instructions that are executable to configure	From about 0:28-0:48 in the Lightricks Tutorial, the user uses the "Anchor" tool to create a mask over the photo subject's face and surroundings.	

the computer system to identify a particular portion of the digital image to mask, wherein:		
a mask prevents pixels covered by the mask from being shifted, and	The mask is created to prevent the pixels making up the face and surroundings from being shifted.	
receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	The white diamonds in this still at 0:35 sec of the Lightricks Tutorial show mask selection of particular pixels within the digital image to create a mask. 	

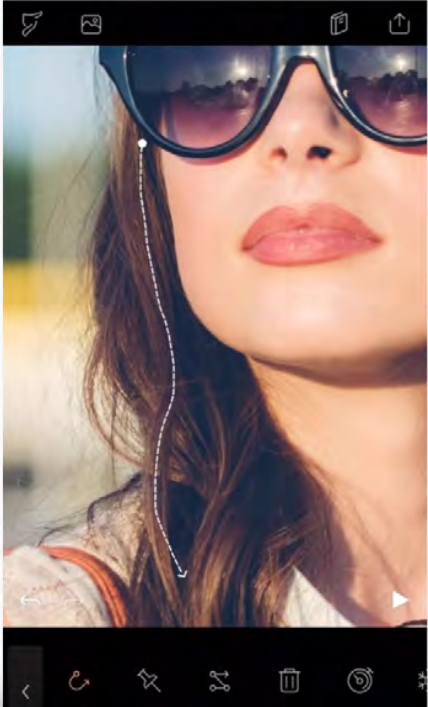
3. The computer system of claim 2, wherein the executable instructions include instructions that are executable to configure the computer system to generate the mask by:		
identifying one or more edges that form a boundary around the particular pixel; and	 The white diamonds form a boundary around the face area and create an edge.	

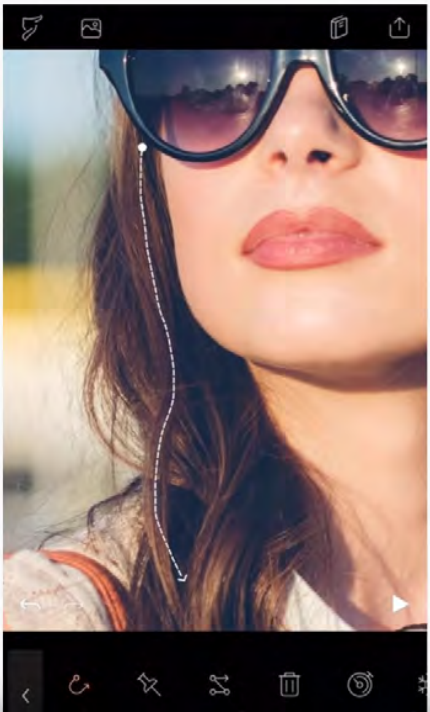
generating the mask to cover area within the boundary.	A mask is formed to cover the face/neck area by the Pixeloop programming.	
4. The computer system of claim 1, wherein the executable instructions include instructions that are executable to configure the computer system to:		
receive a second starting point through the user interface, wherein the second starting point is received through a user selection of a second beginning portion of the digital image	At about 0:15 sec in the Lightricks Tutorial, a second pathway is drawn. The second starting point is the round dot indicating the beginning of the second pathway.	

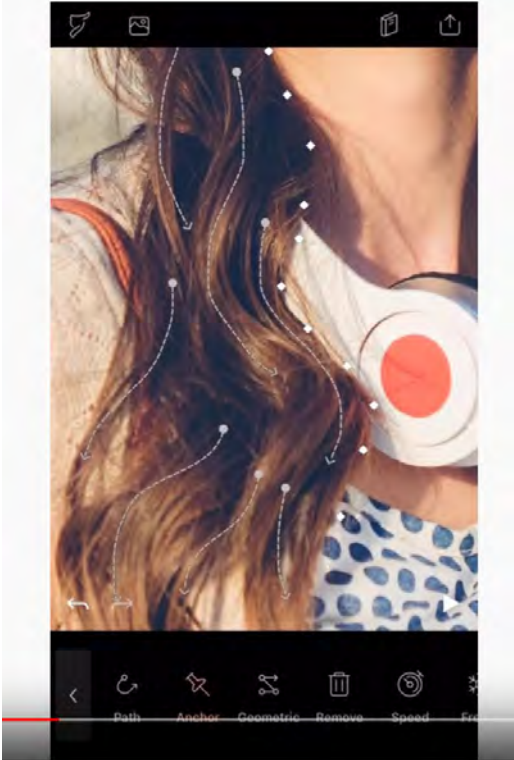
		
and the second beginning portion of the digital image is different than the first beginning portion of the digital image;	The second beginning portion for the second starting point is different from the first beginning portion, which is represented by the first beginning point.	
receive a second ending point through the user interface, wherein the second ending point is	The second ending point is the arrowhead of the second pathway shown above.	

received through a user selection of second ending portion of the user interface and		
the second ending portion of the digital image is different than the first ending portion of the digital image;	The second ending portion of the digital image is different than the first ending portion of the digital image.	
create a second link between the second starting point and the second ending point,	The second link in the above still photo is the dashed white line	
wherein the second link comprises: a second direction extending from the second starting point to the second ending point; and	The second link extends in a second direction from the second starting point to the second ending point.	
a second length between the second starting point and the second ending point;	The second link has a second length between the second starting point and the second ending point.	
identify a second set of pixels that lie between the second starting point and the second ending point; and	The Pixaloop programming identifies a second set of pixels that lie between the second starting point and the second ending point.	
shift the second set of pixels in the second direction, wherein shifting the second set of pixels comprises	Shifting of the second set of pixels is visible beginning at about 0:50 sec in the Lightricks Tutorial video.	See 0:50-0:55 sec of Lightricks Tutorial.

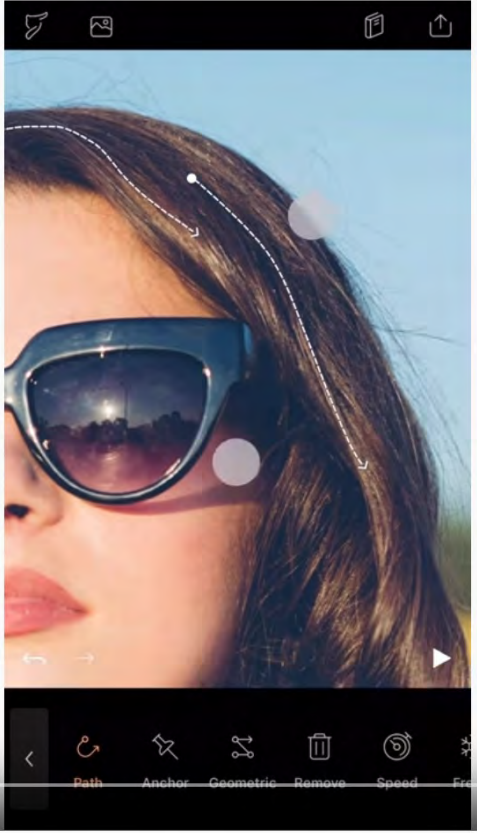
rendering and re-rendering in a loop the second set of pixels being shifted.		
5. The computer system of claim 4, wherein the non-linear pathway is different from the second direction.	The non-linear pathway (basically vertical curved line) is different from the second direction (generally a 45 degree angle to the vertical)	
6. The computer system of claim 4, wherein the first ending portion of the user interface is outside the edges of the digital image.	This is not demonstrated in the Lightricks Tutorial	
7. A method for automating a shifting of pixels within a digital image, comprising:		Claim 7 is infringed when a user uses the Pixaloop programming in a manner that the programming performs the steps of the claim.
receiving a first indication of a first starting point through a user interface, wherein the first starting point is received through a user selection of a portion of the digital image;	This step is performed when a user starts to draw a path on the screen. In this still below, the first starting point is the round dot at the top of white dashed line that has been drawn.	

		
receiving, through the user interface, an indication of a non-linear pathway extending away from the first starting point;	The non-linear pathway is the dashed line in the still photo above.	
selecting a first set of pixels extending along a length of the non-linear pathway and away from the first starting point; and	The Pixaloop programming selects the first set of pixels extending along a length of the non-linear pathway and away from the first starting point.	

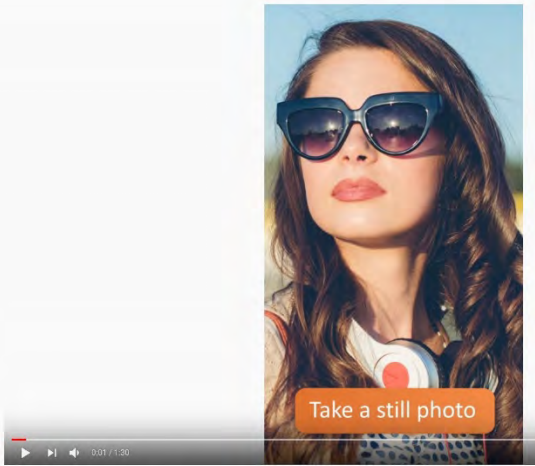
shifting the first set of pixels along the non-linear pathway, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the first set of pixels being shifted.	The Pixaloop programming shifts the first set of pixels. This step is visible in the beginning at about 0:50 sec in the Lightricks tutorial video.	
8. The method as recited in claim 7, further comprising receiving an indication of an ending point through a user interface, wherein the ending point is received through a user selection of a different portion of the digital image.	The ending point is the arrowhead of the white dashed arrow in the photo below. The user selection is done when the user stops drawing the pathway. 	

9. The method as recited in claim 8, further comprising when a pixel selected from the first set of pixels reaches the ending point, rendering and re-rendering in the loop the pixel being shifted from the first starting point to the ending point.	The Pixaloop programming appears to shift the first set of pixels by rendering and re-rendering them in a loop. This rendering and re-rendering is visible in the beginning at about 0:50 sec in the Lightricks Tutorial video.	
10. The method as recited in claim 7, further comprising receiving an indication to generate a mask over a portion of the digital image, wherein pixels under the mask are prevented from shifting.		

	The white diamonds in the above still from 0:35 sec of the Lightricks Tutorial show selection of particular pixels within the digital image to create a mask wherein pixels under the mask are prevented from moving.	
11. The method as recited in claim 10, further comprising receiving through a user interface a selection of a particular pixel within the digital image from which the mask should be generated.	The white diamonds indicate that a user interface has been used for selection of particular pixels within the digital image from which the mask should be generated.	
12. The method of claim 11, further comprising:		
identifying one or more edges that form a boundary around the particular pixel; and	The white diamonds create an edge that forms a boundary around the faced/neck portions of the photo.	
generating the mask to cover area within the boundary.	The Pixaloop programming generates the mask within the boundary.	
13. The method as recited in claim 7, further comprising:		
receiving a second indication of a second starting point through a user interface, wherein the second starting point	At about 0:15 in the Lightricks Tutorial, a second pathway is drawn. The second starting point is the round dot indicating the beginning of the second pathway.	

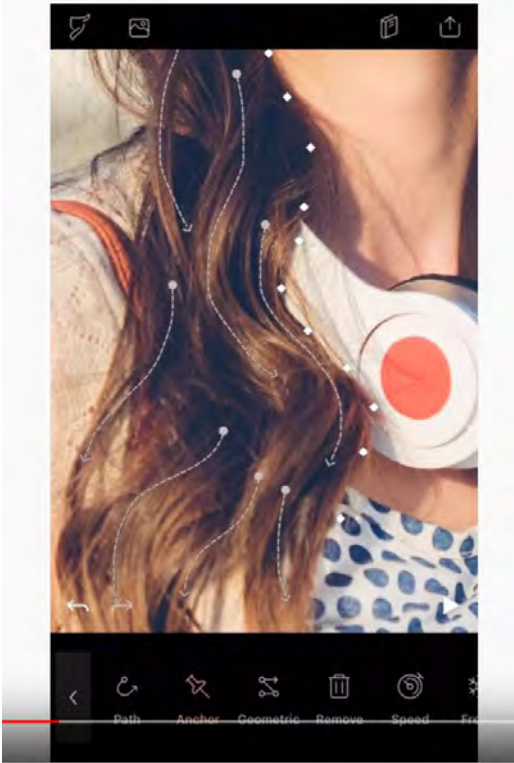
is received through a user selection of a portion of the digital image;		
receiving, through the user interface, a second direction associated with the second starting point;	The second direction is the roughly 45 degree orientation of the dashed arrow in the still above.	
selecting a second set of pixels extending in the direction away from the second starting point; and	The Pixaloop programming selects a second set of pixels extending in the direction away from the second starting point.	

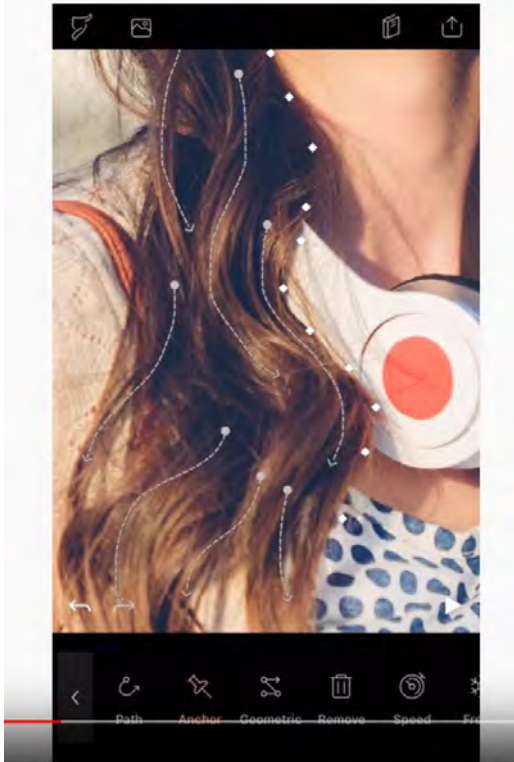
shifting the second set of pixels in the second direction, wherein shifting the pixels comprises rendering and re-rendering in a loop the second set of pixels being shifted.	The Pixaloop programming shifts the second set of pixels in the second direction as visible beginning at about 0:50 sec in the Lightricks tutorial video. The Pixaloop programming appears to shift the pixels by rendering and re-rendering them in a loop.	
14. The method as recited in claim 13, wherein the non-linear pathway is different from the second direction.	The non-linear pathway (basically vertical curved line) is different from the second direction (generally a 45 degree angle to the vertical)	
15. A method for automating a shifting of pixels within a digital image, comprising:		

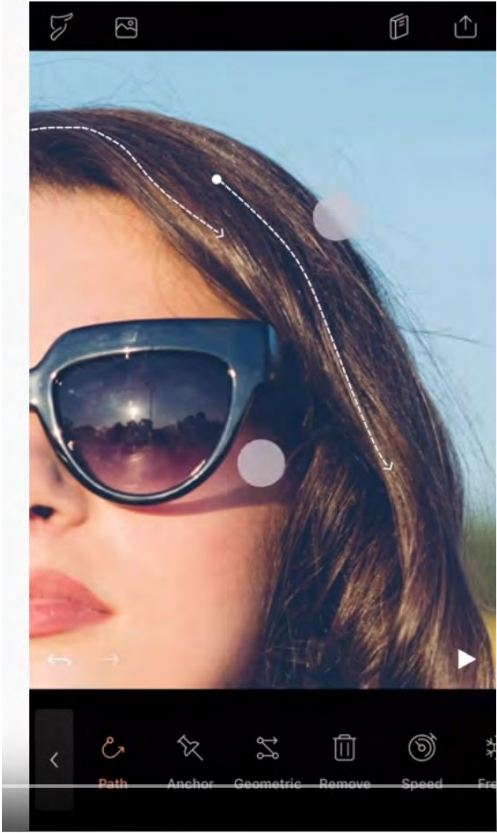
accessing, from memory, a digital image file, wherein the digital image file comprises information that corresponds to individual pixels within the digital image;	This step is performed when a user selects a digital photo within the Pixaloop app from his/her photo collection. 	
receiving a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of the digital image;	This step is performed when a user starts to draw a path on the screen. In this still below, the first starting point is the round dot at the top of white dashed line that has been drawn.	

		
receiving a first ending point through the user interface, wherein the first ending point is received through a user selection of a first ending portion of the user interface;	The first ending point is the arrowhead at the bottom end of the dashed white line in the above still. The user establishes the first ending point by ending the path he/she is drawing.	
creating a first link between the first starting point and the first ending point, wherein the first link comprises:	The first link is the dashed white line between the dot and the arrowhead.	

a non-linear pathway extending between the first starting point and the first ending point; and	The first link is a non-linear pathway because it is curved. The first link extends between the first starting point and first ending point.	
a first length extending along the non-linear pathway between the first starting point and the first ending point;	The first length is the length of the dashed line that extends from the first starting point to the first ending point.	
identifying a first set of pixels that lie along the first length of the non-linear pathway between the first starting point and the first ending point; and	The Pixaloop programming identifies a set of pixels that lie along the first length of the non-linear pathway between the first starting point and first ending point.	
shifting the first set of pixels along the first length of the non-linear pathway, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the first set of pixels being shifted.	The Pixaloop programming shifts the first set of pixels along the first length of the non-linear pathway in a manner which appears to be rendering and re-rendering in a loop. Shifting of the first set of pixels is visible beginning at about 0:50 sec in the Lightricks tutorial video.	
16. The method of claim 15, further comprising:		

identifying a particular portion of the digital image to mask, wherein a mask prevents pixels covered by the mask from being shifted; and	 The “Anchor” tool of Pixaloop is used to identify a particular portion of the digital image to mask. The white diamonds on the still image are indicating a particular portion of the image to mask.	
receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	The white diamonds indicate selection of a particular pixel within the digital image.	

17. The method of claim 15, further comprising:		
generating a mask, wherein generating the mask comprises:		
identifying one or more edges that form a boundary around a particular pixel; and	 The Pixaloop “Anchor” tool is used to identify an edge (made up of the white diamonds) that form a boundary around a particular pixel (the face/neck area)	
generating the mask to cover area within the boundary.	The Pixaloop programming generates a mask to cover the face/neck area within the boundary of the white diamonds.	

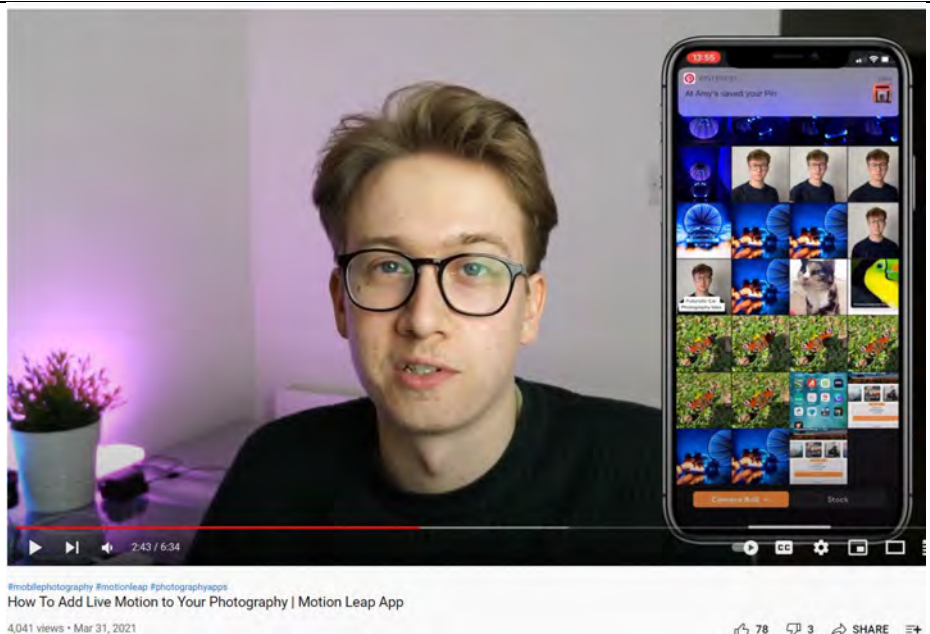
18. The method of claim 15, further comprising:		
receiving a second starting point through the user interface, wherein the second starting point is received through a user selection of a second beginning portion of the digital image and the second beginning portion of the digital image is different than the first beginning portion of the digital image;	 At about 0:15 in the Lightricks Tutorial, a second pathway is drawn. The second starting point is the round dot indicating the beginning of the second pathway.	
receiving a second ending point through the user interface, wherein the second ending point is received through a	The second ending point is the arrowhead of the second pathway shown above.	

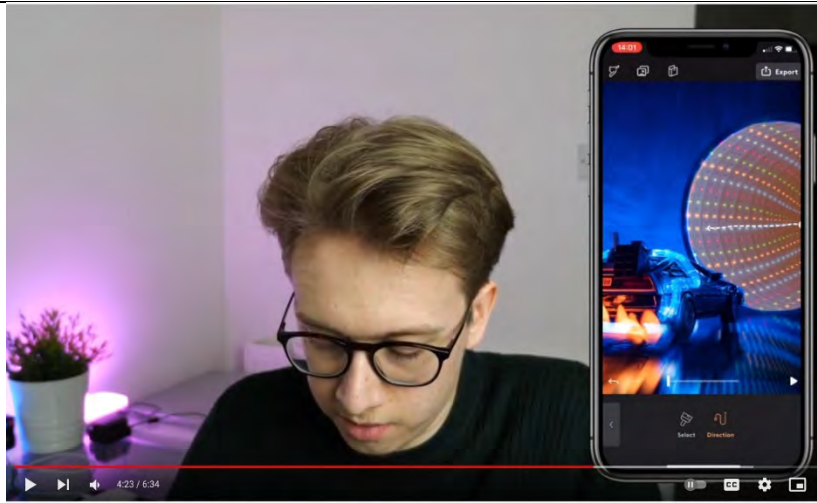
user selection of a second ending portion of the user interface and the second ending portion of the digital image is different than the first ending portion of the digital image;		
creating a second link between the second starting point and the second ending point, wherein the second link comprises:	The second link is the dashed line which extends between the dot and arrowhead of the second pathway.	
a second direction extending from the second starting point to the second ending point; and	The second direction is the roughly 45 degree orientation of the dashed arrow in the still above.	
a second length between the second starting point and the second ending point;	The second link has a second length between the second starting point and the second ending point.	
identifying a second set of pixels that lie between the second starting point and the second ending point; and	The Pixaloop programming identifies a second set of pixels that lie between the second starting point and the second ending point.	
shifting the second set of pixels in the second direction , wherein shifting the second set of pixels comprises	The Pixaloop programming shifts the second set of pixels in the second direction by rendering and re-rendering the pixels in a loop. Shifting is visible beginning at about 0:50 sec in the Lightricks tutorial video.	

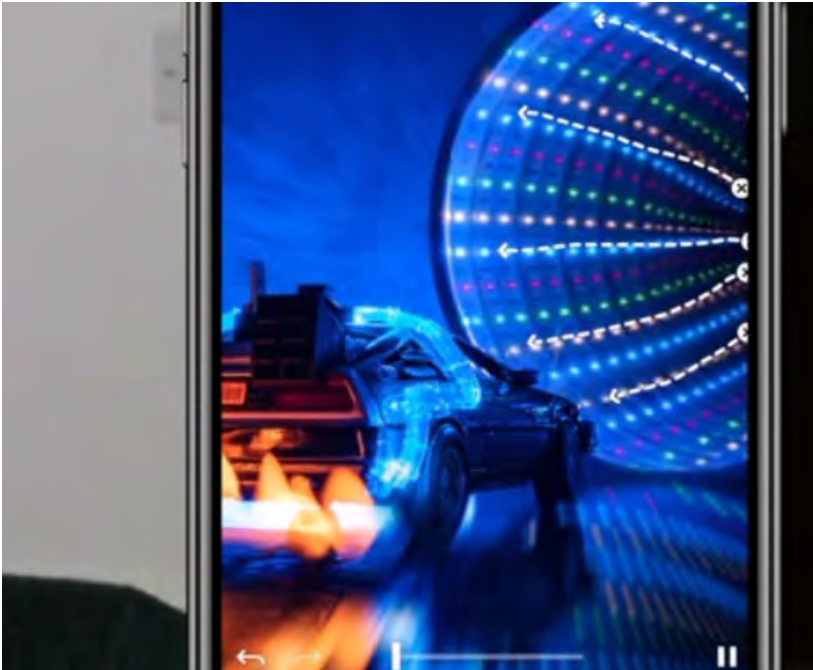
rendering and re-rendering in a loop the second set of pixels being shifted.		
19. The method of claim 18, wherein the non-linear pathway is different from the second direction.	The non-linear pathway (basically vertical curved line) is different from the second direction (generally a 45 degree angle to the vertical)	
20. The method of claim 18, wherein the first ending portion of the user interface is outside the edges of the digital image.	This method is not demonstrated in the Lightricks Tutorial	

**Infringement Claim Chart for Infringement of
U.S. Patent No. 10,558,342 [the “’342 patent] by Motionleap**

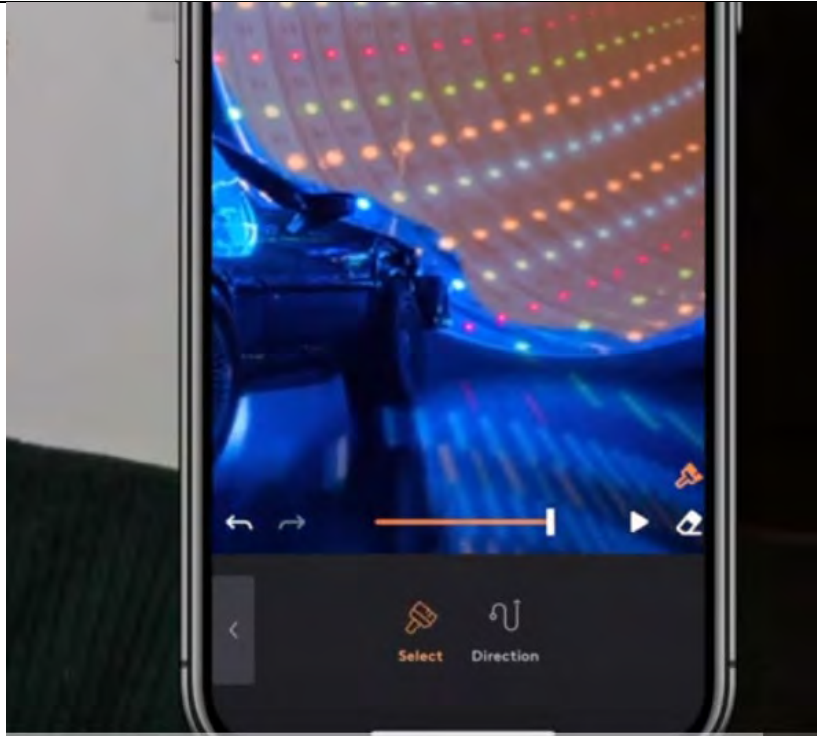
Claim Elements	Evidence of Presence in Motionleap program	Notes
1. A computer system for automating a shifting of pixels within a digital image, comprising:		Claim 1 is infringed when the claimed invention is made. The claimed computer system is made when a user downloads the Motionleap app or program to his/her smartphone, tablet or computer.
one or more processors ; and	The processor(s) is the processor within a user's smartphone, tablet or computer.	
one or more computer-readable media having stored thereon executable instructions that when executed by the one or more processors configure the computer system to perform at least the following:	The computer-readable media is the Motionleap app's program which contains executable instructions for the processor to operate.	
access, from memory, a digital image file , wherein the digital image file comprises information that	This step is performed when a user selects a digital photo within the Motionleap app from his/her photo collection. Starting at 2:43 in the Motionleap video, the user selects a digital photo from a collection stored in memory.	Screenshot from 2:43 of YouTube video entitled “How to Add Live Motion to Your Photography Motion Leap App” uploaded

corresponds to individual pixels within the digital image;		March 21, 2021 and found at https://www.youtube.com/watch?v=ip27b0BAHQw [hereinafter the "Motionleap Video"].
receive a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of the digital image;	This step is performed when a user starts to draw a path on the screen using the Direction tool of Motionleap. In this still below, the first starting point is the round dot at the far right side of the screen.	Screenshot from 4:23 of Motionleap Video

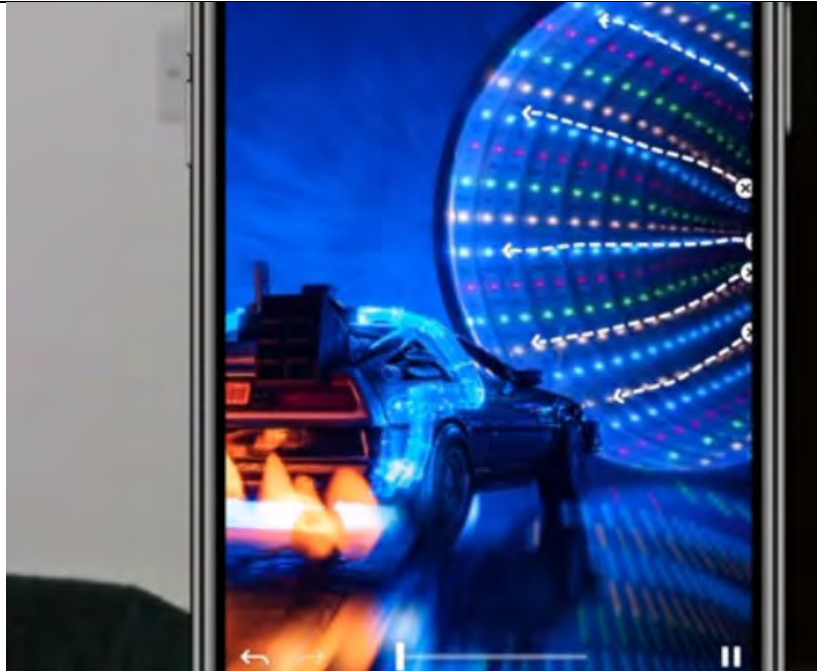
	 #mobilephotography #motionleap #photographyapps How To Add Live Motion to Your Photography Motion Leap App 3,937 views · Mar 31, 2021 Oliver Howells 1.1K subscribers	
receive a first ending point through the user interface, wherein the first ending point is received through a user selection of a first ending portion of the user interface;	The first ending point is the arrowhead at the left end of the dashed white line in the below still. The user establishes the first ending point by ending the path he is drawing. 	Screenshot from 4:23 of Motionleap Video

create a first link between the first starting point and the first ending point,	The first link is the dashed white line between the dot and the arrowhead.	
wherein the first link comprises: a non-linear pathway extending between the first starting point and the first ending point; and	The first link is a non-linear pathway because it has some curves. Other links are also visible in the Motionleap Video (shown below) which are curved. The first link extends between the first starting point and the first ending point. 	Screenshot from 4:48 of the Motionleap Video.
a first length extending along the non-linear pathway between the first starting point and the first ending point;	The first length is the length of the dashed line that extends from the first starting point to the first ending point.	

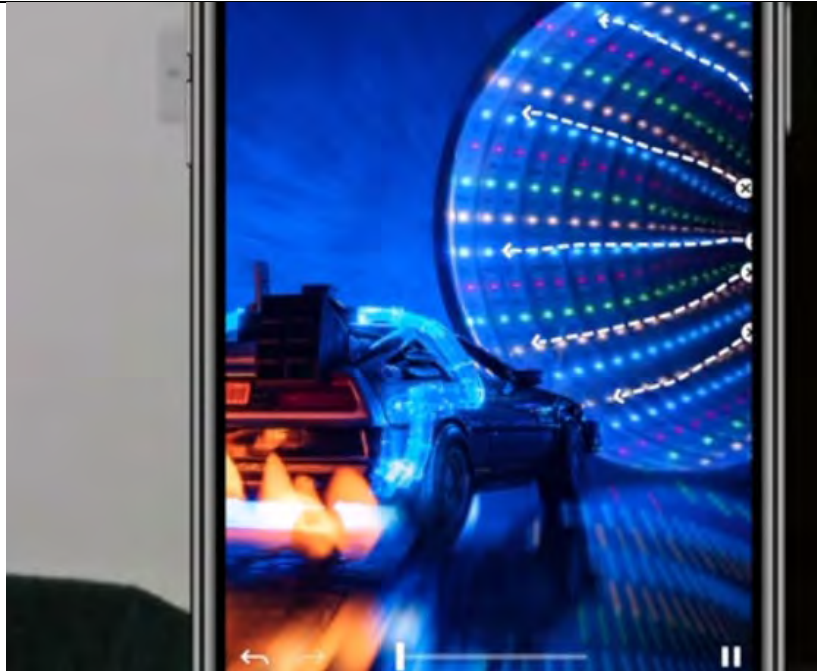
identify a first set of pixels that lie along the first link between the first starting point and the first ending point; and	The Motionleap programming identifies a first set of pixels that lie along the first link between the first starting point and first ending point.	
shift the first set of pixels along the first length of the non-linear pathway, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the first set of pixels being shifted.	Shifting of the first set of pixels is visible beginning at around 4:48 of the Motionleap Video.	
2. The computer system of claim 1, wherein the executable instructions include instructions that are executable to configure the computer system to identify a particular portion of the digital image to mask, wherein:		

a mask prevents pixels covered by the mask from being shifted, and		
receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	Beginning at around 3:23 of the MotionLeap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting. The user selects one or more particular pixels to mask using the “Erase” tool.	

3. The computer system of claim 2, wherein the executable instructions include instructions that are executable to configure the computer system to generate the mask by:		
identifying one or more edges that form a boundary around the particular pixel; and	The user identifies one or more edges that form a boundary around the car in the photo using the “Erase” tool.	
generating the mask to cover area within the boundary.	The Motionleap programming generates a mask covering areas which have been erased.	
4. The computer system of claim 1, wherein the executable instructions include instructions that are executable to configure the computer system to:		
receive a second starting point through the user interface, wherein the second starting point is received through a user selection of a second beginning portion of the digital image	At 4:24-4:30 in the Motionleap Video, a second pathway is drawn as well as others. The second starting point is the round dot indicating the beginning of the second pathway.	Screenshot taken at 4:33 in the Motionleap Video.

		
and the second beginning portion of the digital image is different than the first beginning portion of the digital image;	The second beginning portion for the second starting point is different from the first beginning portion, which is represented by the first beginning point.	
receive a second ending point through the user interface, wherein the second ending point is received through a user selection of second ending portion of the user interface and	The second ending point is the arrowhead of the second pathway shown above.	

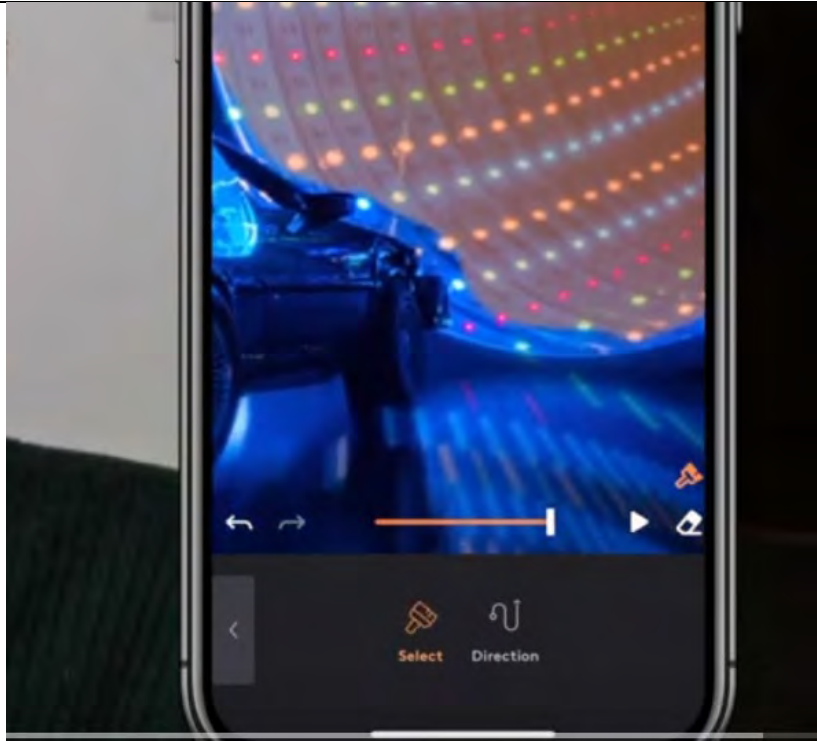
the second ending portion of the digital image is different than the first ending portion of the digital image;	The second ending portion of the digital image is different than the first ending portion of the digital image.	
create a second link between the second starting point and the second ending point,	The second link in the above still photo is the dashed white line of the second line drawn using the Direction tool	
wherein the second link comprises: a second direction extending from the second starting point to the second ending point; and	The second link extends in a second direction from the second starting point to the second ending point.	
a second length between the second starting point and the second ending point;	The second link has a second length between the second starting point and the second ending point.	
identify a second set of pixels that lie between the second starting point and the second ending point; and	The Motionleap programming identifies a second set of pixels that lie between the second starting point and the second ending point. A set of pixels will be identified by the Motionleap programming that will be associated with each of the arrows drawn using the Direction tool.	

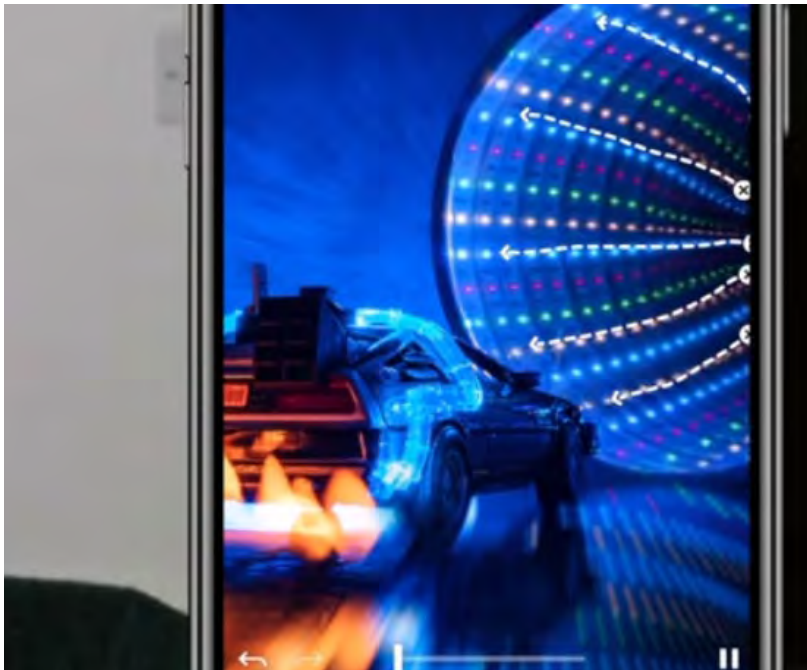
		
shift the second set of pixels in the second direction, wherein shifting the second set of pixels comprises rendering and re-rendering in a loop the second set of pixels being shifted.	Shifting of the second set of pixels is visible beginning at around 4:38 of the Motionleap Video.	
5. The computer system of claim 4, wherein the non-linear pathway is different from the second direction.	The non-linear pathway is different from the second direction because the direction of the second arrow drawn is different from the direction of the first arrow drawn.	

6. The computer system of claim 4, wherein the first ending portion of the user interface is outside the edges of the digital image.	There is no evidence that this can be done with Motionleap.	
7. A method for automating a shifting of pixels within a digital image, comprising:		Claim 7 is infringed when a user uses the Motionleap programming in a manner that the programming performs the steps of the claim.
receiving a first indication of a first starting point through a user interface, wherein the first starting point is received through a user selection of a portion of the digital image;	This step is performed when a user starts to draw a path on the screen using the Direction tool of Motionleap. In this still below, the first starting point is the round dot at the far right side of the screen. 	Screenshot from 4:23 of Motionleap Video.
receiving, through the user interface, an indication of a non-linear	This step is performed when a user draws a curved pathway with the Direction tool of Motionleap from the first starting point.	

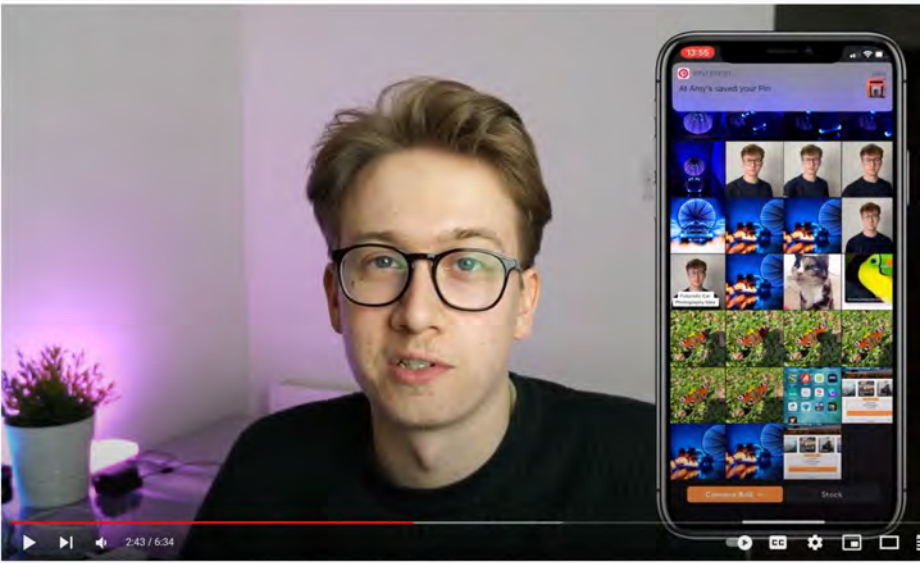
pathway extending away from the first starting point;		
selecting a first set of pixels extending along a length of the non-linear pathway and away from the first starting point; and	The Motionleap programming selects a first set of pixels which extends along the length of the non-linear pathway and away from the first starting point.	
shifting the first set of pixels along the non-linear pathway, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the first set of pixels being shifted.	The Motionleap programming shifts the first set of pixels along the non-linear pathway by rendering and re-rendering in a loop. The shifting is visible starting a around 4:38 in the Motionleap Video.	
8. The method as recited in claim 7, further comprising receiving an indication of an ending point through a user interface, wherein the ending point is received through a user selection of a different portion of the digital image.	The ending portion is chosen by the user when the user stops drawing a pathway with the Direction tool of Motionleap. The ending point is the arrowhead at the end of the pathway shown below.	Screenshot from 4:23 of the Motionleap Video.

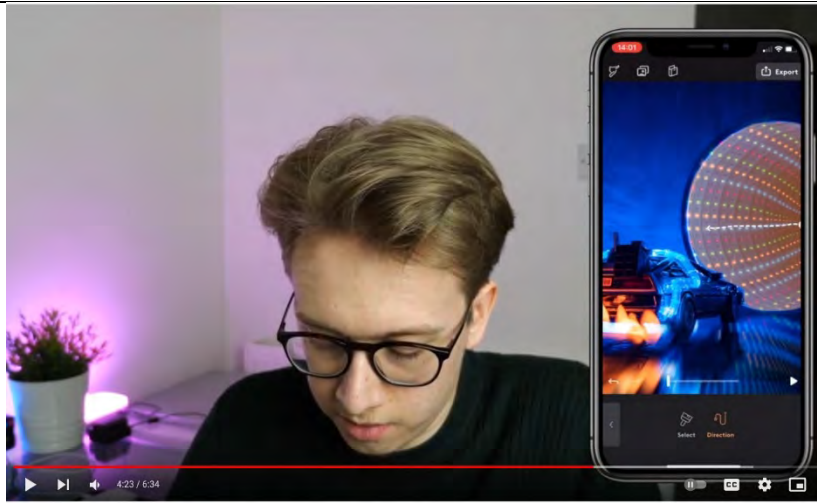
		
9. The method as recited in claim 8, further comprising when a pixel selected from the first set of pixels reaches the ending point, rendering and re-rendering in the loop the pixel being shifted from the first starting point to the ending point.	Pixel shifting in a loop is visible starting at around 4:38 in the Motionleap Video	
10. The method as recited in claim 7, further comprising receiving an indication to generate a mask over a portion of the digital image, wherein pixels under the	Beginning at around 3:23 of the Motionleap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting.	

mask are prevented from shifting.		
11. The method as recited in claim 10, further comprising receiving through a user interface a selection of a particular pixel within the digital image from which the mask should be generated.	The Erase tool is used to select particular pixels within the digital image from which the mask is generated.	
12. The method of claim 11, further comprising:		

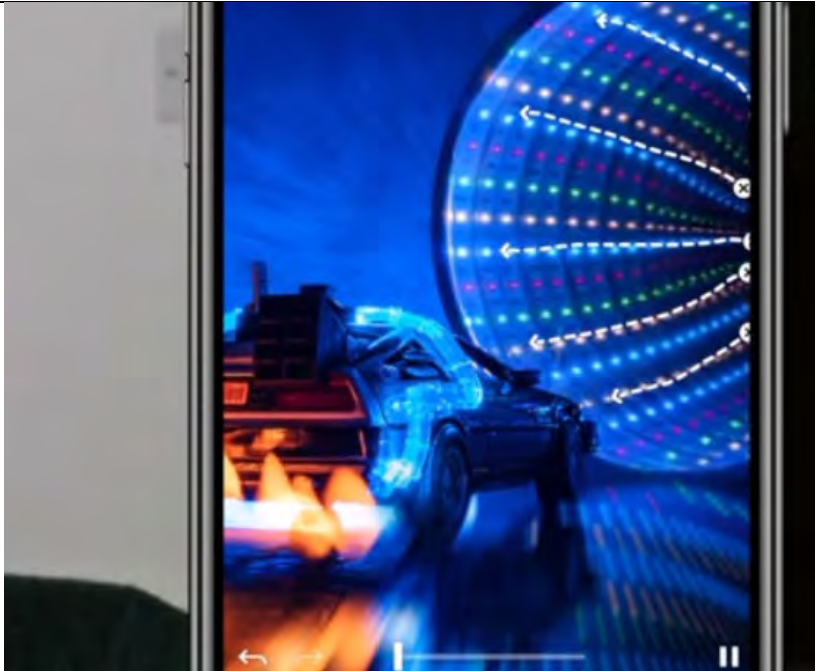
identifying one or more edges that form a boundary around the particular pixel; and	The Erase tool of Motionleap can be used to identify edges that form a boundary.	
generating the mask to cover area within the boundary.	The Motionleap programming generates a mask to cover areas that have been erased with the Erase tool.	
13. The method as recited in claim 7, further comprising:		
receiving a second indication of a second starting point through a user interface, wherein the second starting point is received through a user selection of a portion of the digital image;	The second starting point is created when a user draws a second pathway using the Direction tool. The second starting point is displayed as a round dot. 	Screenshot taken at about 4:48 of the Motionleap Video.

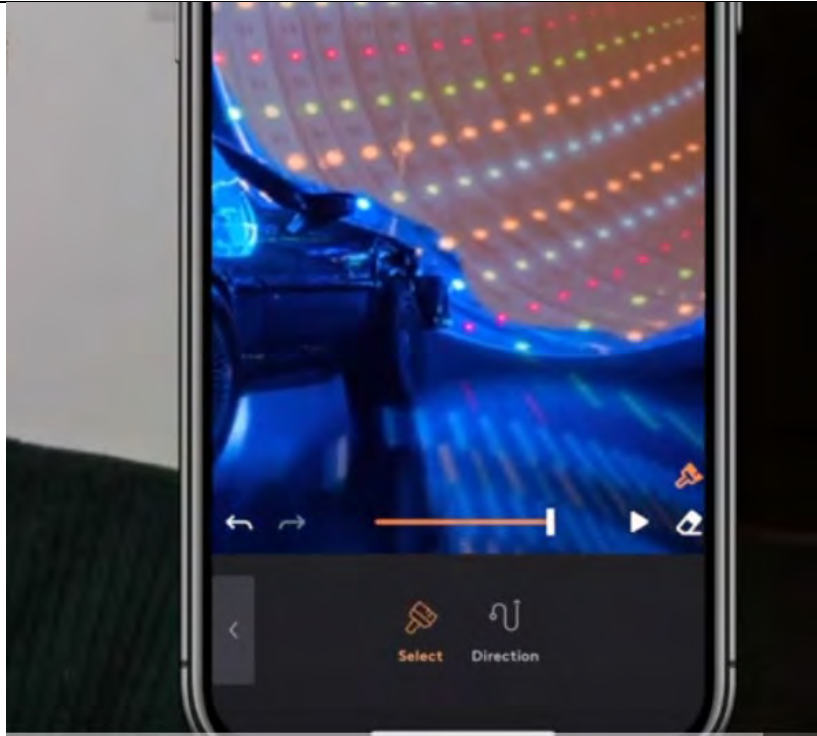
receiving, through the user interface, a second direction associated with the second starting point;	A direction is provided with the Direction tool of Motionleap. The direction provided is from the starting point to the ending point of the pathways drawn by the user.	
selecting a second set of pixels extending in the direction away from the second starting point; and	The Motionleap programming selects a second set of pixels extending in the direction away from the second starting point.	
shifting the second set of pixels in the second direction, wherein shifting the pixels comprises rendering and re-rendering in a loop the second set of pixels being shifted.	The Motionleap programming shifts the second set of pixels in the second direction by rendering and re-rendering them in a loop. Shifting of the second set of pixels in the second direction is visible starting at around 4:38 of the Motionleap Video.	
14. The method as recited in claim 13, wherein the non-linear pathway is different from the second direction.	The non-linear pathway is different from the second direction because the direction of the second arrow drawn is different from the direction of the first arrow drawn.	
15. A method for automating a shifting of pixels within a digital image, comprising:		
accessing, from memory, a digital image file, wherein the digital image file comprises	This step is performed when a user selects a digital photo within the Motionleap app from his/her photo collection. Starting at 2:43 in the Motionleap video, the user selects a digital photo from a collection stored in memory.	

information that corresponds to individual pixels within the digital image;		
receiving a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of the digital image;	This step is performed when a user starts to draw a path on the screen using the Direction tool of Motionleap. In this still below, the first starting point is the round dot at the far right side of the screen.	Screenshot from 4:23 of the Motionleap Video

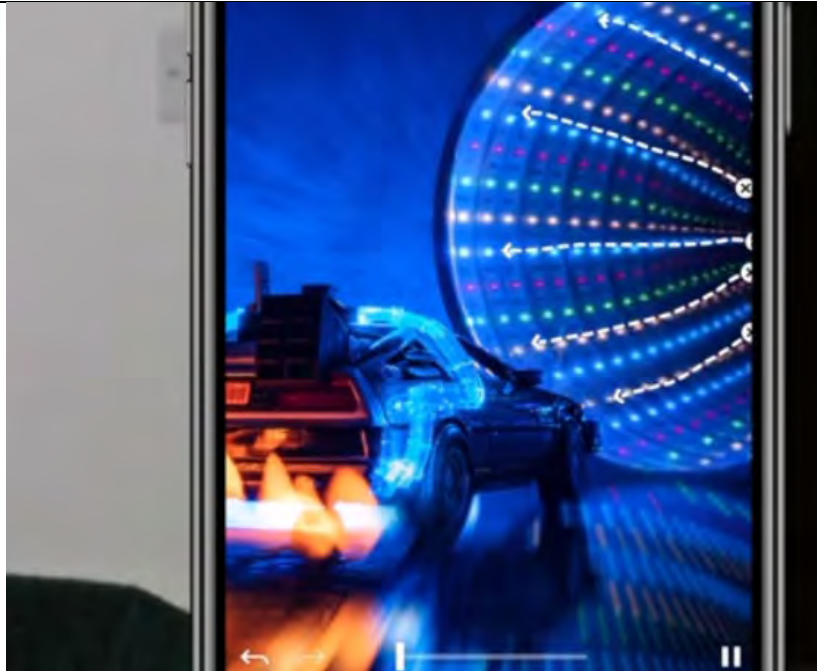
	 #mobilephotography #motionleap #photographyapps How To Add Live Motion to Your Photography Motion Leap App 3,937 views · Mar 31, 2021 Oliver Howells 1.1K subscribers	
receiving a first ending point through the user interface, wherein the first ending point is received through a user selection of a first ending portion of the user interface;	The first ending point is the arrowhead at the left end of the dashed white line in the below still. The user establishes the first ending point by ending the path he is drawing. 	Screenshot from 4:23 of the Motionleap Video

creating a first link between the first starting point and the first ending point, wherein the first link comprises:	The first link is the dashed white line connecting the round dot and the arrowhead.	
a non-linear pathway extending between the first starting point and the first ending point; and	The first link is a non-linear pathway since it has curves.	
a first length extending along the non-linear pathway between the first starting point and the first ending point;	The first length is the length of the non-linear pathway.	
identifying a first set of pixels that lie along the first length of the non-linear pathway between the first starting point and the first ending point; and	The Motionleap programming selects a first set of pixels that lie along the first length between the first starting point and the first ending point.	
shifting the first set of pixels along the first length of the non-linear pathway, wherein shifting the first set of pixels comprises rendering and re-rendering in a loop the first set of pixels being shifted.	Shifting of the first set of pixels in the first direction is visible starting at around 4:38 of the Motionleap Video.	Screenshot taken at about 4:48 of the Motionleap Video

		
16. The method of claim 15, further comprising:		

identifying a particular portion of the digital image to mask, wherein a mask prevents pixels covered by the mask from being shifted; and		
receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	Beginning at around 3:23 of the Motionleap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting. The Erase tool of Motionleap can be used to select particular pixels within the digital image.	

17. The method of claim 15, further comprising:		
generating a mask, wherein generating the mask comprises:		
identifying one or more edges that form a boundary around a particular pixel; and	The Erase tool of Motionleap can be used to identify edges that form a boundary.	
generating the mask to cover area within the boundary.	The Motionleap programming generates a mask to cover areas that have been erased with the Erase tool.	
18. The method of claim 15, further comprising:		
receiving a second starting point through the user interface, wherein the second starting point is received through a user selection of a second beginning portion of the digital image and the second beginning portion of the digital image is different than the first beginning portion of the digital image;	The second starting point is created when a user draws a second pathway using the Direction tool. The second starting point is displayed as a round dot.	Screenshot taken at about 4:48 of the Motionleap Video.

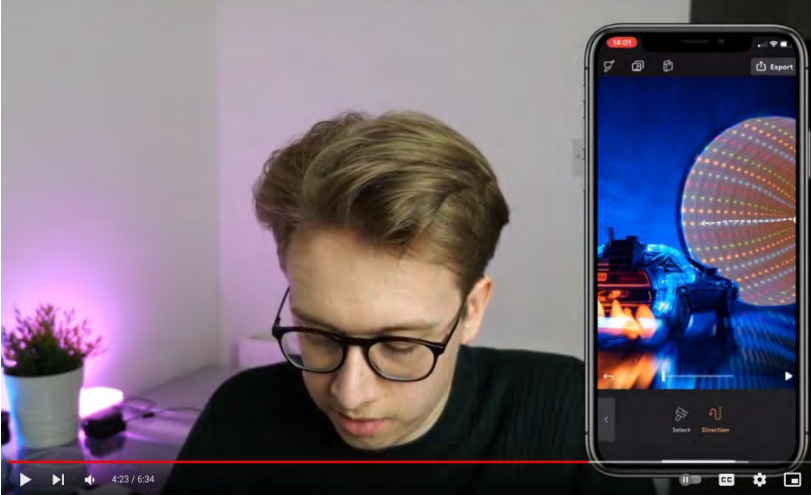
		
receiving a second ending point through the user interface, wherein the second ending point is received through a user selection of a second ending portion of the user interface and the second ending portion of the digital image is different than the first ending portion of the digital image;	The second ending point is the arrowhead of the second pathway (top arrow) shown above.	
creating a second link between the second	The second link is the dashed line which extends between the dot and the arrowhead of the second pathway.	

starting point and the second ending point, wherein the second link comprises:		
a second direction extending from the second starting point to the second ending point; and	The second direction is the roughly 45 degree angle of the top arrow shown above.	
a second length between the second starting point and the second ending point;	The second link has a second length between the second starting point and the second ending point.	
identifying a second set of pixels that lie between the second starting point and the second ending point; and	The Motionleap programming identifies a second set of pixels that lie between the second starting point and the second ending point.	
shifting the second set of pixels in the second direction , wherein shifting the second set of pixels comprises rendering and re-rendering in a loop the second set of pixels being shifted.	The Motionleap programming shifts the second set of pixels in the second direction by rendering and re-rendering the pixels in a loop. Shifting is visible starting at around 4:38 of the Motionleap Video.	
19. The method of claim 18, wherein the non-linear pathway is different from the second direction .	The non-linear pathway (which is basically horizontal) is different from the second direction (generally a 45 degree angle to the vertical).	

20. The method of claim 18, wherein the first ending portion of the user interface is outside the edges of the digital image.	There is no evidence that Motionleap can perform this method.	

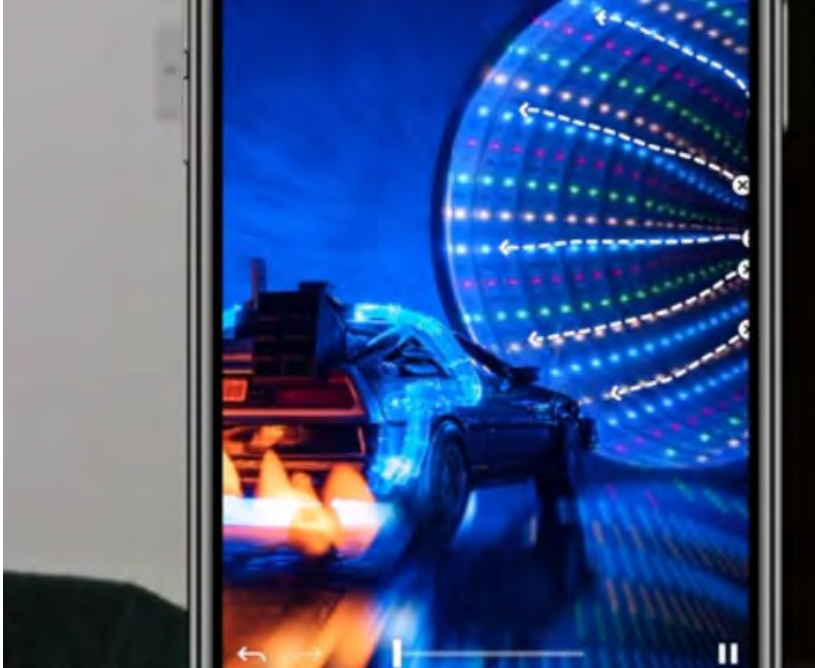
**Infringement Claim Chart for Infringement of
U.S. Patent No. 10,621,469 [the “’469 patent]**

Claim Elements	Evidence of Presence in Motionleap program (circa September 2021)	Notes
1. A computer system for automating shifting of pixels within a video file, comprising:		Claim 1 is infringed when the claimed invention is made. The claimed computer system is made when a user downloads the Motionleap app or program to his/her smartphone, tablet or computer.
one or more processors ;	The processor(s) is the processor within a user's smartphone, tablet or computer.	
one or more computer-readable media having stored thereon executable instructions that when executed by the one or more processors configure the computer system to perform at least the following:	The computer-readable media is the Motionleap app's program which contains executable instructions for the processor to operate.	
access, from memory, a digital video file, wherein the digital video file comprises information that corresponds to individual pixels within various frames of the digital video file;	A user can open a video file within Motionleap. When this is done the user can animate portions of the first frame of the video. The steps of the claims hereafter are shown using a published video demonstrating a user working with a single digital image, not a video file. But the same steps could be performed with a video file, which would open as a digital image with Motionleap.	In Motionleap, a user is instructed to open a New Project by selecting a file, which can include a video file.

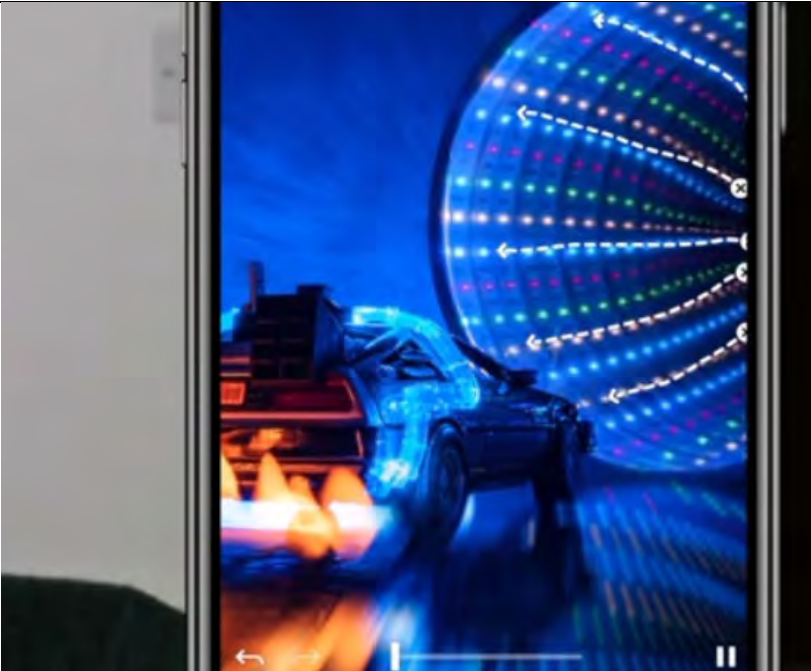
		
receive a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of a first video frame;	 At about 4:23 in the Motionleap Video, the user draws a path from right to left in the colored lights in the tunnel using the Direction tool in Motionleap. The selected first starting point is displayed on the user interface as a round white dot located at the right edge of the user interface (phone screen).	Screenshot from 4:23 of YouTube video entitled “How to Add Live Motion to Your Photography Motion Leap App” uploaded March 21, 2021 and found at https://www.youtube.com/watch?v=ip27b0BAHQw [hereinafter the “Motionleap Video”].
receive a first ending point through the user interface, wherein the first ending point is received through a	The first ending point is the arrowhead at the left end of the dashed white line in the below still. The user establishes the first ending point by ending the path he is drawing.	Screenshot from 4:23 of Motionleap Video

user selection of a second ending portion of a second video frame;		
	The “second video frame” may be the same frame as the “first video frame”. See ‘469 patent at col. 6, lines 47-50; Claim 2).	
create a first digital link between the first starting point and the first ending point, wherein the first digital link comprises:	The first digital link is the dashed white line between the dot and the arrowhead.	
a first direction extending from the first starting point to the first ending point; and	The first direction is generally from right to left.	
a first length between the first starting point and the first ending point;	The first length is the length of the dashed line that extends from the first starting point to the first ending point.	
identify a first set of pixels that are:	The Motionleap programming identifies a first set of pixels that are:	
parallel to the first digital link,	parallel to the first digital link,	

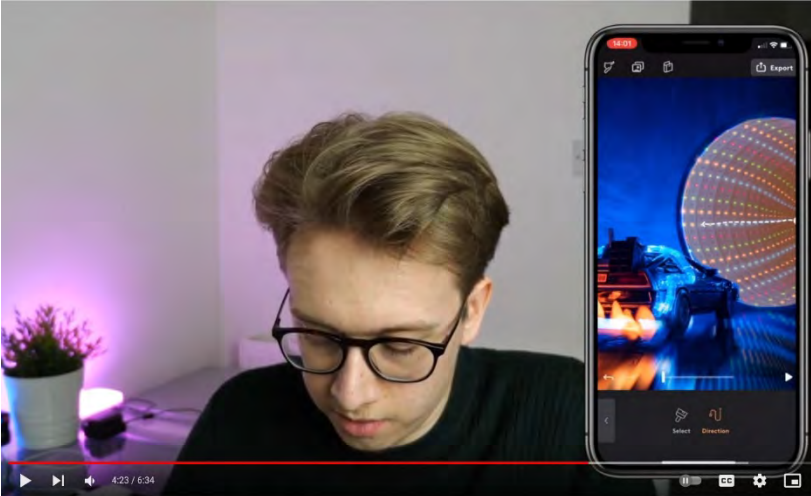
within a user-defined threshold distance from the first digital link, and	within a user-defined threshold distance from the first digital link, and	
extending from the first starting point to the first ending point; and	which extend from the first starting point to the first ending point.	
shift the first set of pixels in the first direction.	Shifting of the first set of pixels is visible beginning at around 4:48 of the Motionleap Video.	
2. The computer system of claim 1, wherein the first video frame and the second video frame are the same video frame.	This element is necessarily present. When a video file is opened in Motionleap, it is opened as a single video frame.	
3. The computer system of claim 1, wherein the first digital link extends across the first video frame and the second video frame, and the first video frame and the second video frame are different.	This claim is not infringed by Motionleap. It is not possible to move between different frames of a video file in Motionleap.	
4. The computer system of claim 3, wherein the executable instructions include instructions that are executable to:	This claim is not infringed by Motionleap.	
select, from within the first video frame, a first set of pixels adjacent to the first digital link;		
shift the first set of pixels within the first video frame along a first portion of the first digital link;		
select, from within the second video frame, another set of pixels adjacent to the first digital link; and		

shift the other set of pixels within the second video frame along a second portion of the first digital link.		
5. The computer system of claim 4, wherein shifting the first set of pixels occurs at a shifting rate that is faster than a frame rate associated with first video frame and the second video frame.	This claim is not infringed by Motionleap.	
6. The computer system of claim 1, wherein the executable instructions include instructions that are executable to:	At 4:24-4:30 in the Motionleap Video, a second pathway [second digital link] is drawn as well as others.	Screenshot taken at 4:33 in the Motionleap Video.
		

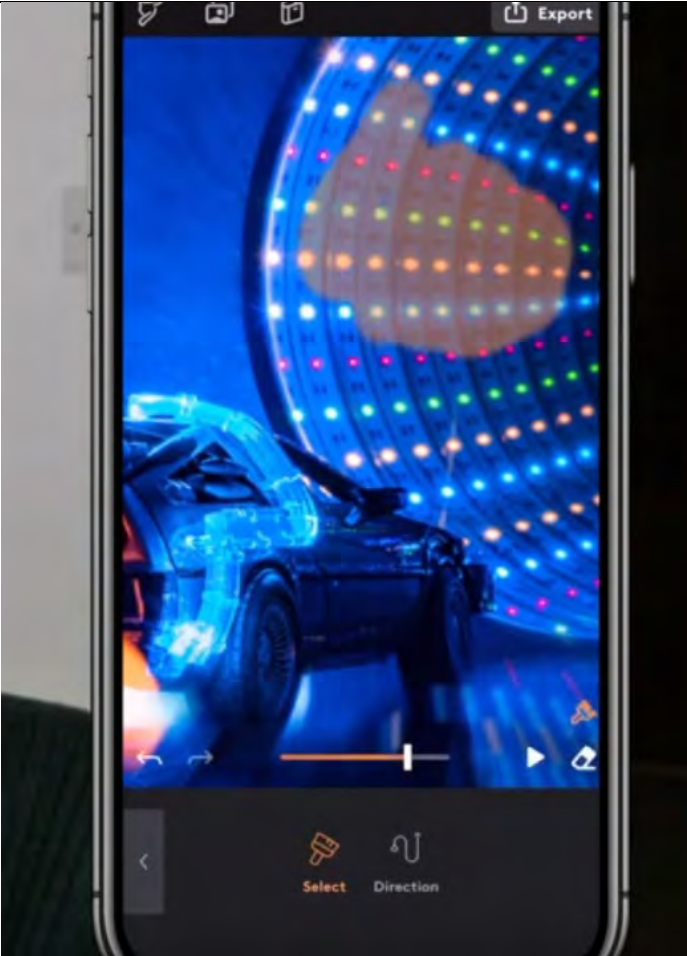
select a second set of pixels adjacent to a second digital link ; and shift the second set of pixels in a second direction.	The Motionleap programming selects a second set of pixels adjacent to the second digital link	
	Shifting of the second set of pixels is visible beginning at around 4:38 of the Motionleap Video.	
7. The computer system of claim 6, wherein shifting the first set of pixels comprises rendering in a loop the first set of pixels being shifted within the first video frame.	The Motionleap programming renders the first set of pixels being shifted in a loop.	
8. The computer system of claim 1, wherein the executable instructions include instructions that are executable to configure the computer system to:		
receive a second starting point through the user interface, wherein the second starting point is received through a first user selection of a second beginning portion of the first video frame;	At 4:24-4:30 in the Motionleap Video, a second pathway is drawn as well as others. The second starting point is the round dot indicating the beginning of the second pathway.	Screenshot taken at 4:33 in the Motionleap Video.

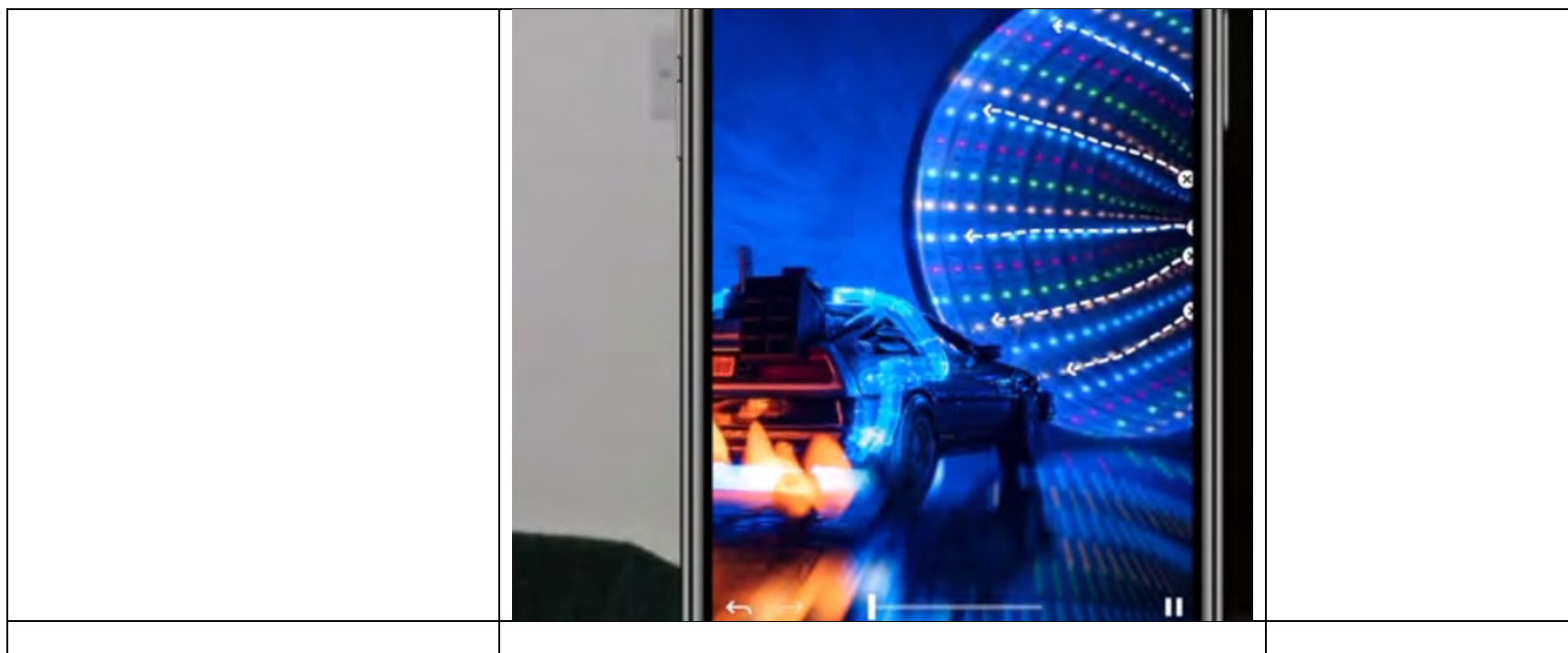
		
receive a second ending point through the user interface, wherein the second ending point is received through a second user selection of a second ending portion of the second video frame;	The second ending point is the arrowhead of the second pathway shown above.	
create a second digital link between the second starting point and the second ending point, wherein the second digital link comprises:	The second digital link is the dashed line which extends between the second starting point and the second ending point.	
a second direction extending from the second starting point to the second ending point;	The second direction is generally right to left and angled.	

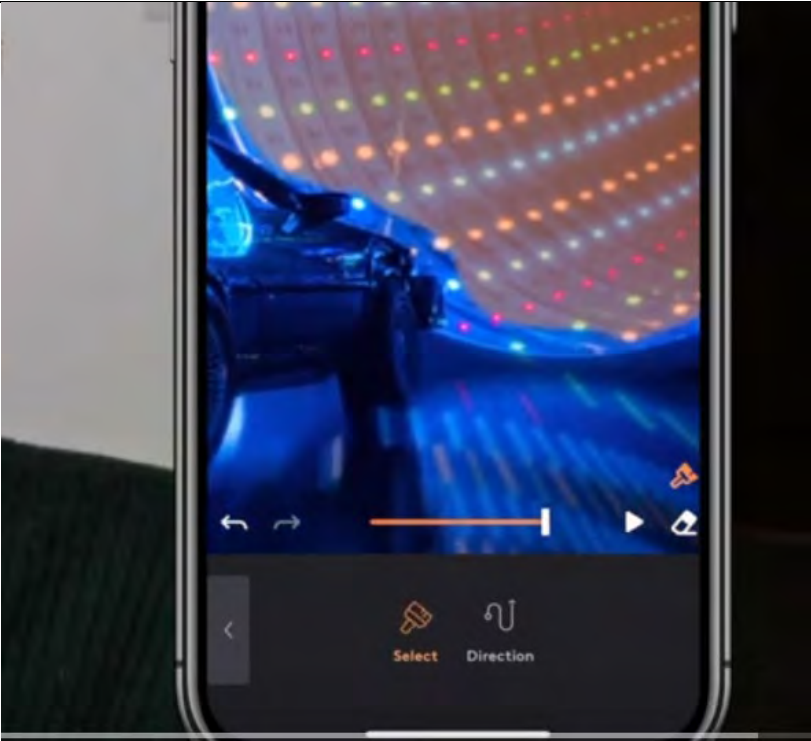
a second length between the second starting point and the second ending point;	The second length is the length of the second digital link.	
identify a second set of pixels that are:	The Motionleap programming identifies a second set of pixels that are:	
parallel to the second digital link,	parallel to the second digital link	
within the user-defined threshold distance from the second digital link, and	within the user-defined threshold distance from the second digital link, and	
extending from the second starting point to the second ending point; and	extend from the second starting point to the second ending point	
shift the second set of pixels in the second direction.	Shifting of the second set of pixels is visible beginning at around 4:38 of the Motionleap Video.	
9. The computer system of claim 8, wherein the first direction is different from the second direction.	The first direction (horizontally right to left) is different from the second direction (horizontally right to left and angled).	
10. The computer system of claim 8, wherein a first magnitude of the shifting of the first set of pixels is proportionally related to the first length and a second magnitude of the shifting of the second set of pixels is proportionally related to the second length.	Not known at this time whether the Motionleap programming operates in this manner. Whether claim 10 is infringed can probably be determined upon examination of source code.	
11. A method for automating a shifting of pixels within a video file, comprising:	A user can open a video file within Motionleap. When this is done the user can animate portions of the first frame of the video. The steps of the method claims hereafter are shown using a published video demonstrating a user working with a single digital image, not a video file. But	In Motionleap, a user is instructed to open a New Project by selecting a file, which

	the same steps could be performed with a video file, which would open as a digital image with Motionleap.	can include a video file. 
receiving a first indication of a first starting point through a user interface, wherein the first starting point is received through a user selection of a first portion of a first video frame in the video file;	 At about 4:23 in the Motionleap Video, the user draws a path from right to left in the colored lights in the tunnel using the Direction tool in Motionleap. The selected first starting point is displayed on the user interface as a round white dot located at the right edge of the user interface (phone screen).	Screenshot from 4:23 of the Motionleap Video.

receiving, through the user interface, a first direction associated with the first starting point;	The first direction is from right to left, as indicated by the arrow shown in greater detail here:  The first direction is associated with the first starting point.	
create a first digital link extending in the first direction from the first starting point;	The first digital link is the white dashed line which extends in the first direction from the first starting point (dot).	
selecting a first set of pixels that are:	The Motionleap programming selects a first set of pixels which	
parallel to the first digital link,	are parallel to the first digital link,	
within a user-defined threshold distance from the first digital link, and	The user defines the threshold distance from the first digital link by using the Select tool to paint an area to be animated, as shown here:	Screenshot taken at 3:15 of the MotionLeap Video.

	 As well as by drawing other paths.	
extending from the first starting point to a first ending point; and	The Motionleap programming selects a set of pixels which extends from the first starting point (round dot) to a first ending point (arrowhead).	
shifting the first set of pixels, in the first video frame, in the first direction.	Shifting of the first set of pixels in the first direction is visible starting at around 4:38 of the Motionleap Video.	Screenshot taken at about 4:48 of the Motionleap Video

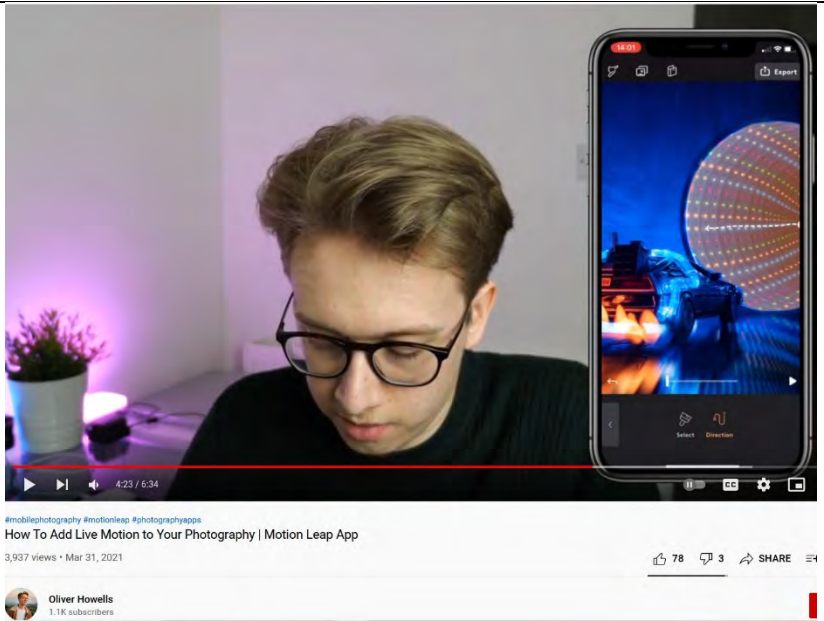


12. The method as recited in claim 11, further comprising receiving an indication to generate a first mask over a second portion of the first video frame, wherein pixels under the first mask are prevented from shifting.	 Beginning at around 3:23 of the Motionleap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting.	
13. The method as recited in claim 12, further comprising receiving through the user interface a selection of the second portion of the first video frame around which the first mask should be generated.	The Erase tool is used to create a mask over portions of the digital image proximate the car in the photo. Areas which have been erased are prevented from shifting.	

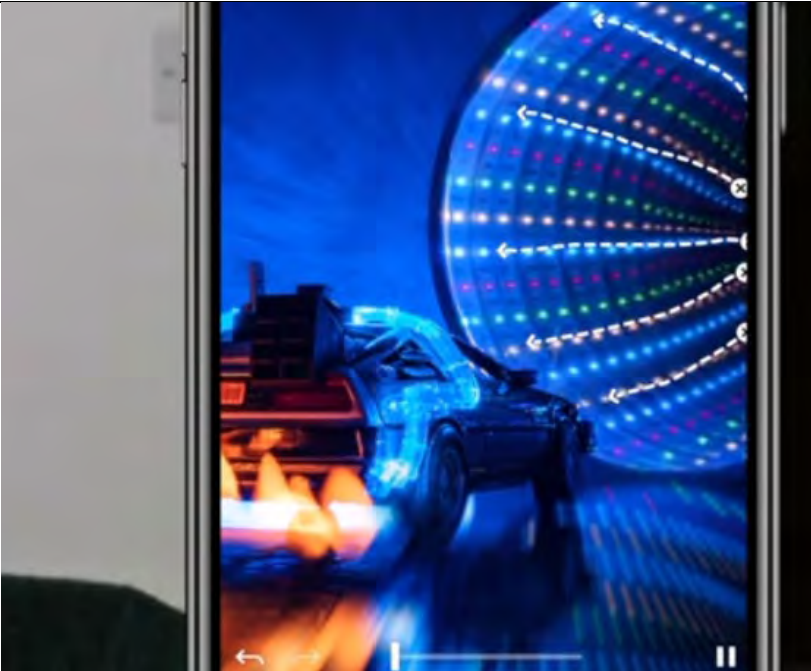
14. The method of claim 13, further comprising:		
identifying one or more edges that form a first boundary around the second portion; and	The Erase tool of Motionleap can be used to identify edges that form a boundary.	
generating the first mask to cover area within the first boundary.	The Motionleap programming generates a mask to cover areas that have been erased with the Erase tool.	
15. The method as recited in claim 12, further comprising:	It does not appear that this claim can be infringed with Motionleap.	
mapping the second portion of the first video frame to an equivalent portion in a second video frame;		
identifying one or more edges that form a second boundary around the second portion; and		
generating a second mask to cover area within the second boundary.		
16. The method as recited in claim 15, further comprising:	It does not appear that this claim can be infringed with Motionleap.	
receiving a second indication of the first ending point through the user interface, wherein the first ending point is received through a user selection of a particular portion of the second video frame;		
create the first digital link between the first starting point and the first ending point;		
selecting, within the second video frame, a second set of pixels adjacent to the first digital link and		

extending towards the first ending point; and		
shifting the second set of pixels toward the first ending point.		
17. The method as recited in claim 16, wherein pixels within the second video frame that are covered by the second mask are prevented from shifting.	It does not appear that this claim can be infringed with Motionleap.	
18. A method for automating a shifting of pixels within a video file, comprising:		
accessing, from memory, a digital video file, wherein the digital video file comprises information that corresponds to individual pixels within various frames of the digital video file;	This step is performed when a user selects a digital video file within the Motionleap app from his/her photo collection. Starting at 2:43 in the Motionleap video, the user selects a digital photo from a collection stored in memory. However, a digital video file can also be selected within the Motionleap application.	

	 #mobilephotography #motionleap #photographyapps How To Add Live Motion to Your Photography Motion Leap App 4,041 views · Mar 31, 2021	
receiving a first starting point through a user interface, wherein the first starting point is received through a first user selection of a first beginning portion of a first video frame;	This step is performed when a user starts to draw a path on the screen using the Direction tool of Motionleap. In this still below, the first starting point is the round dot at the far right side of the screen.	

	 The image shows a man with glasses looking at a smartphone. The phone screen displays a video of a car with a motion path overlay. The path is a dashed white line with an arrowhead at the left end. The video is titled 'How To Add Live Motion to Your Photography Motion Leap App' and has 3,937 views as of March 31, 2021. The user is Oliver Howells, with 1.1K subscribers.	
receiving a first ending point through the user interface, wherein the first ending point is received through a second user selection of a second ending portion of a second video frame;	The first ending point is the arrowhead at the left end of the dashed white line in the below still. The user establishes the first ending point by ending the path he is drawing.  The image is a close-up of the smartphone screen from the video above. It shows the car and the motion path overlay. The path is a dashed white line with an arrowhead at the left end. The path starts from the right side of the screen and extends towards the left, ending at the arrowhead.	The “second video frame” may be the same frame as the “first video frame”. See ‘469 patent at col. 6, lines 47-50; Claim 2).

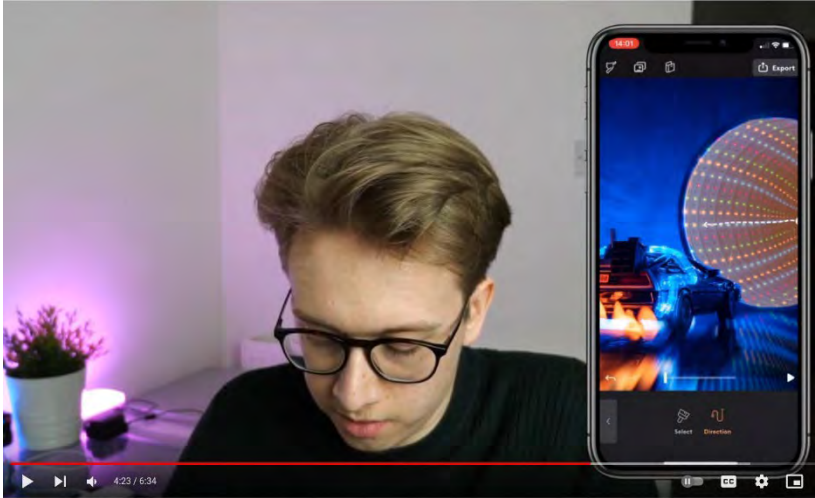
creating a first digital link between the first starting point and the first ending point, wherein the first digital link comprises:	The first digital link is the dashed white line between the dot and the arrowhead.	
a first direction extending from the first starting point to the first ending point; and	The first direction is the generally horizontally right to left.	
a first length between the first starting point and the first ending point:	The first length is the length of the dashed line that extends from the first starting point to the first ending point.	
identifying a first set of pixels that are:	The Motionleap programming identifies a first set of pixels that are:	
parallel to a second digital link,	These are the pixels that are parallel to a second digital link, which is the dashed line for the second or any subsequent path drawn by the user, as depicted in the below screen shot.	

		
within a user-defined threshold distance from the second digital link, and	The pixels selected by the Motionleap programming are within a user-defined threshold distance from the second digital link.	
extending from a second starting point to a second ending point; and	The pixels selected by the Motionleap programming extend from the second starting point to the second ending point of the second digital link.	
shifting the first set of pixels in the first direction.	Shifting of the first set of pixels is visible beginning at around 4:48 of the Motionleap Video.	
19. The method of claim 18, wherein the first digital link extends across the first video frame and the second video frame, and the first video frame and the second video frame are different.	It does not appear that this claim can be infringed with Motionleap.	

20. The method of claim 19, further comprising:	It does not appear that this claim can be infringed with Motionleap.	
selecting, from within the first video frame, the first set of pixels adjacent to the first digital link;		
shifting the first set of pixels within the first video frame along a first portion of the first digital link;		
selecting, from within the second video frame, another set of pixels adjacent to the first digital link; and		
shifting the other set of pixels within the second video frame along a second portion of the first digital link.		

**Infringement Claim Chart for Infringement of
U.S. Patent No. 11,182,641 [the “’641 Patent]**

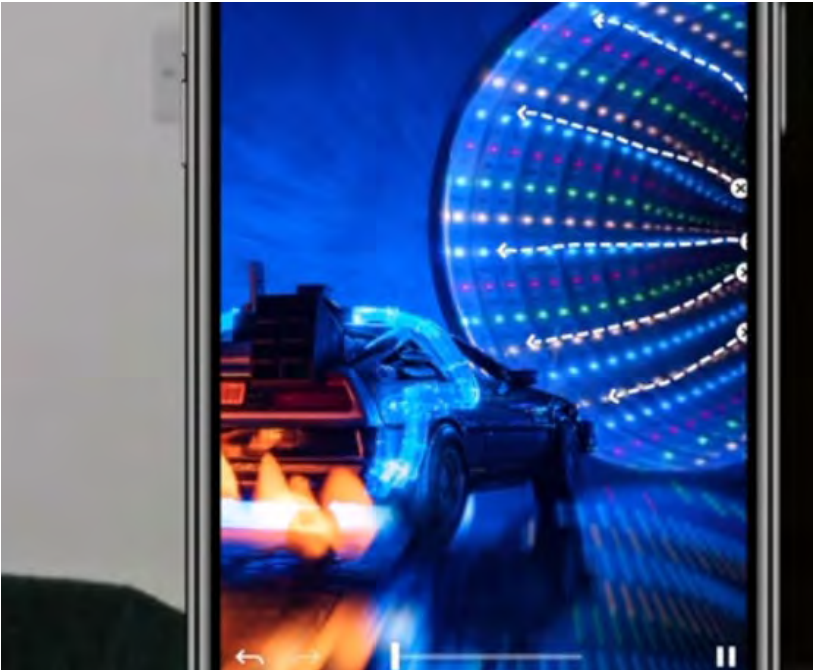
Claim Elements	Evidence of Presence in Motionleap program	Notes
1. A computer system providing, to a client computing device, software for automating a shifting of pixels within a video file, the computer system comprising:		Claim 1 is infringed when the claimed invention is made. The claimed computer system is made when a user downloads the Motionleap app or program to his/her smartphone, tablet or computer.
one or more processors ; and	The processor(s) is the processor within a user's smartphone, tablet or computer.	
one or more computer-readable media having stored thereon executable instructions that are transmitted to the client computing device for execution by one or more client processors on the client computing device, the executable instructions comprising instructions that when executed by the one or more client processors configure the client computing device to perform at least the following:	The computer-readable media is the Motionleap app's program which contains executable instructions for the processor to operate.	
access, from memory, a digital image file, wherein the digital image file comprises information that	A user can open a digital image file within Motionleap. When this is done the user can shift pixels of the first frame of the video. The steps of the claims hereafter are shown	In Motionleap, a user is instructed to open a New Project by

corresponds to individual pixels within various frames of the digital video file;	using a published video demonstrating a user working with a single digital image, not a video file. But the same steps could be performed with a video file, which would open as a digital image with Motionleap.	selecting a file, which can include a video file. 
receive a first starting point through a user interface, wherein the first starting point is received through a user selection of a first beginning portion of a first image frame;	 At about 4:23 in the Motionleap Video, the user draws a path from right to left in the colored lights in the tunnel using the Direction tool in Motionleap. The selected first starting point is displayed on the user interface as a round white dot located at the right edge of the user interface (phone screen).	Screenshot from 4:23 of YouTube video entitled “How to Add Live Motion to Your Photography Motion Leap App” uploaded March 21, 2021 and found at https://www.youtube.com/watch?v=ip27b0BAHQw [hereinafter the “Motionleap Video”].

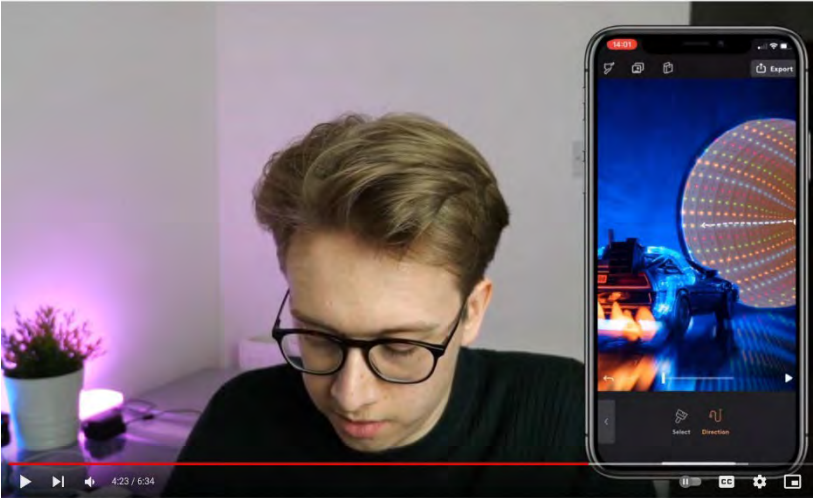
receive a first ending point through the user interface, wherein the first ending point is received through a user selection of a first ending portion;	The first ending point is the arrowhead at the left end of the dashed white line in the below still. The user establishes the first ending point by ending the path he is drawing.  The “second video frame” may be the same frame as the “first video frame”. See ‘469 patent at col. 6, lines 47-50; Claim 2).	Screenshot from 4:23 of Motionleap Video
create a first digital link between the first starting point and the first ending point, wherein the first digital link comprises:	The first digital link is the dashed white line between the dot and the arrowhead.	
a first direction extending from the first starting point to the first ending point; and	The first direction is generally from right to left.	
identify a first set of pixels that lie along the first digital link between the first starting point and the first ending point; and	The Motionleap programming identifies a first set of pixels that lie along the digital link.	

shift the first set of pixels in the first direction.	Shifting of the first set of pixels is visible beginning at around 4:48 of the Motionleap Video.	
2. The computer system of claim 1, wherein the first ending portion comprises a particular portion of the first image frame.	The first ending portion (depicted as an arrowhead) is a particular portion of the image selected by the user.	
3. The computer system of claim 1, wherein the digital image file comprises a video file and the first image frame comprises a first video frame of the video file.	A user can open a video file within Motionleap. When this is done the user can shift pixels of the first frame of the video.	
4. The computer system of claim 3, wherein the first ending portion comprises a particular portion of a second video frame within the video file.	The first ending portion can comprise a particular portion of a second video frame where the second video frame is the same as the first video frame.	"In at least one embodiment, the ending portion may be within the same video frame as the starting point or within a subsequent video frame." '641 Patent, col. 6, lines 51-54.
5. The computer system of claim 4, wherein the first digital link extends across the first video frame and the second video frame, and the first video frame and the second video frame are different.	This claim is not infringed by Motionleap.	
6. The computer system of claim 5, wherein the executable instructions	This claim is not infringed by Motionleap.	

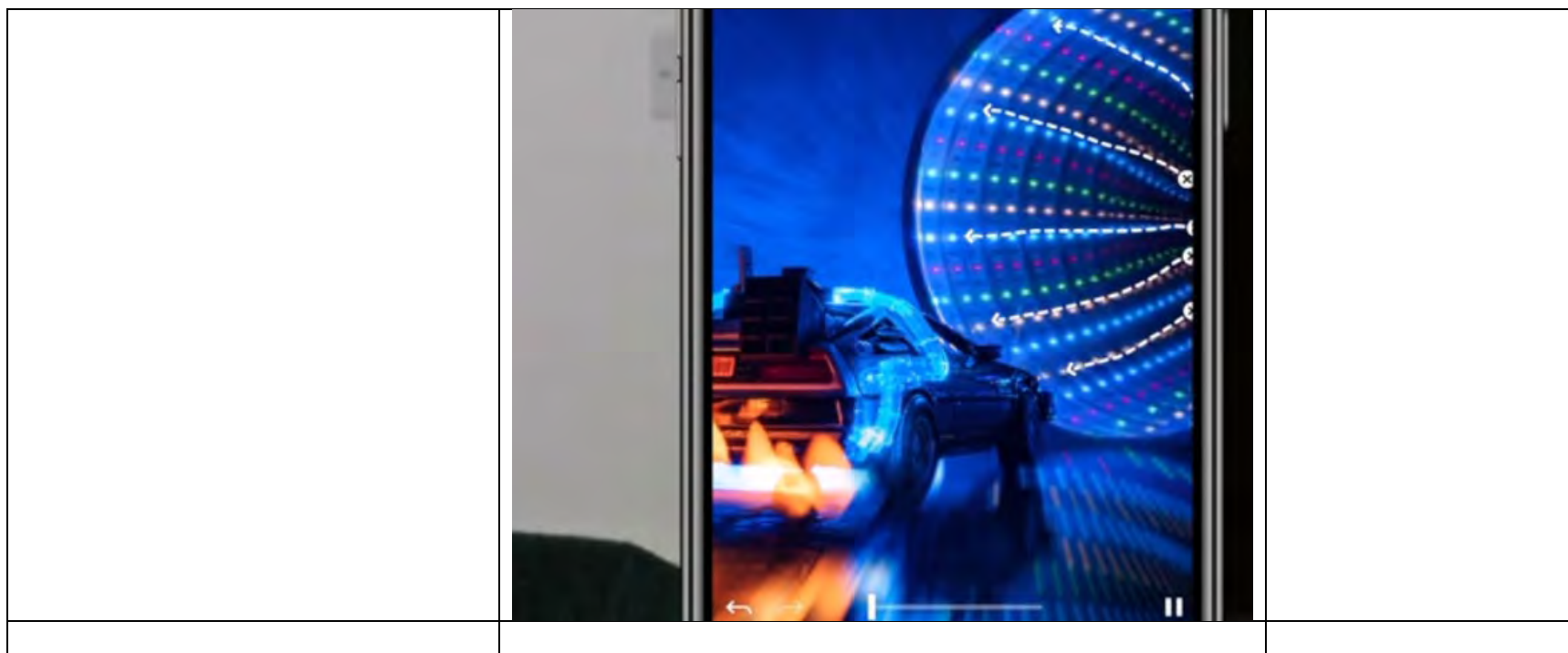
include instructions that are executable to:		
select, from within the first video frame, a first set of pixels adjacent to the first digital link;		
shift the first set of pixels within the first video frame along a first portion of the first digital link;		
select, from within the second video frame, another set of pixels adjacent to the first digital link; and		
shift the other set of pixels within the second video frame along a second portion of the first digital link.		
7. The computer system of claim 6, wherein shifting the first set of pixels occurs at a shifting rate that is faster than a frame rate associated with the first video frame and the second video frame.	This claim is not infringed by Motionleap.	
8. The computer system of claim 1, wherein shifting the first set of pixels comprises rendering in a loop the first set of pixels being shifted within the first image frame.	The Motionleap programming shifts pixels by rendering them in a loop.	
9. The computer system of claim 1, wherein the executable instructions include instructions that are executable to configure the system to:		

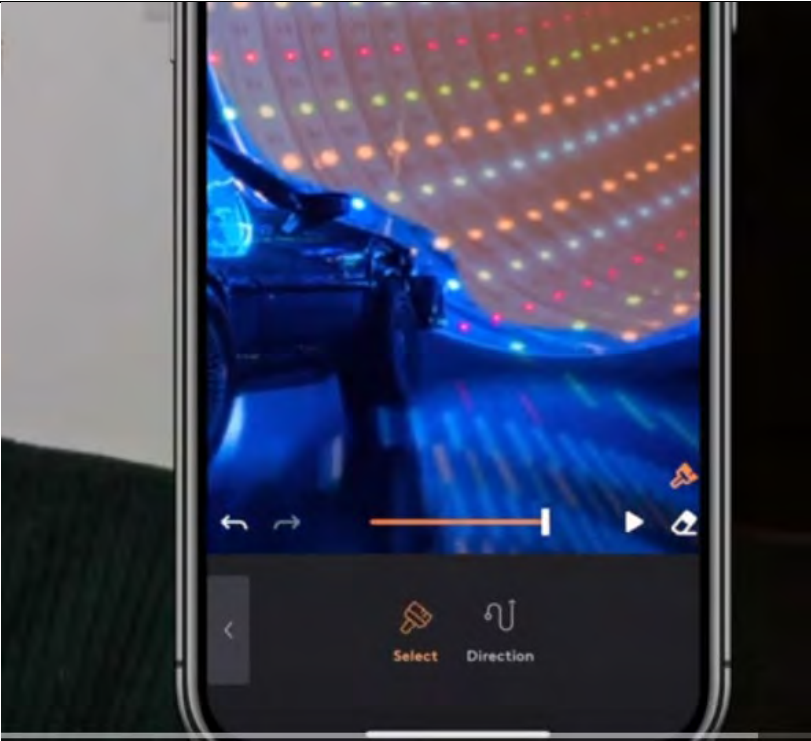
receive a second starting point through the user interface, wherein the second starting point is received through a user selection of a second beginning portion of the first image frame;	At 4:24-4:30 in the Motionleap Video, a second pathway is drawn as well as others. The second starting point is the round dot beginning the second pathway. 	
receive a second ending point through the user interface, wherein the second ending point is received through a user selection of second ending portion;	The second ending point is the arrowhead of the second pathway drawn.	
create a second digital link between the second starting point and the second ending point, wherein the digital link comprises:	The second digital link is the dashed line extending between the round dot and the arrowhead of the second pathway drawn.	

a second direction extending from the second starting point to the second ending point; and	The second direction is generally right to left and angled.	
a second length between the second starting point and the second ending point;	The second length is the length of the second digital link.	
identify a second set of pixels that lie between the second starting point and the second ending point; and	The Motionleap programming identifies a second set of pixels that lie between the second starting point and the second ending point.	
shift the second set of pixels in the second direction.	Shifting of the second set of pixels is visible beginning at around 4:38 of the Motionleap Video.	
10. The computer system of claim 9, wherein the first direction is different from the second direction.	The first direction (horizontally right to left) is different from the second direction (horizontally right to left and angled).	
11. The computer system of claim 9, wherein a magnitude of the shifting of the first set of pixels is proportionally related to the first length and the magnitude of the shifting of the second set of pixels is proportionally related to the second length.	Not known at this time whether the Motionleap programming operates in this manner. Whether claim 11 is infringed can probably be determined upon examination of source code.	
12. A computer program product comprising one or more non-transitory computer storage media having stored thereon computer-executable instructions that, when transmitted to a remote computer system for execution at a processor, cause the remote computer system	The Motionleap app is the computer program product.	

to perform a method for automating a shifting of pixels within an image file, the method comprising:		
receiving a first indication of a first starting point through a user interface, wherein the first starting point is received through a user selection of a first portion of a first image frame;	 At about 4:23 in the Motionleap Video, the user draws a path from right to left in the colored lights in the tunnel using the Direction tool in Motionleap. The selected first starting point is displayed on the user interface as a round white dot located at the right edge of the user interface (phone screen).	Screenshot from 4:23 of the Motionleap Video.
receiving, through the user interface, a first direction associated with the first starting point;	The first direction is from right to left, as indicated by the arrow shown in greater detail here:	

		
	The first direction is associated with the first starting point.	
create a first digital link extending in the first direction from the first starting point;	The first digital link is the white dashed line which extends in the first direction from the first starting point (dot).	
selecting a first set of pixels that are along the first digital link and extend in the first direction away from the first starting point; and	Using the Motionleap "Select" tool a user selects a first set of pixels which are along the first digital link and extend in the first direction away from the first starting point. In the video still above, the set of pixels are those within the tunnel.	
shifting the first set of pixels , in the first image frame, in the first direction.	Shifting of the first set of pixels in the first direction is visible starting at around 4:38 of the Motionleap Video.	Screenshot taken at about 4:48 of the Motionleap Video



13. The computer program product as recited in claim 12, further comprising receiving an indication to generate a first mask over a second portion of the first image frame, wherein pixels under the first mask are prevented from shifting.	 Beginning at around 3:23 of the Motionleap Video, the user uses the Erase tool to create a first mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting.	
14. The computer program product as recited in claim 13, further comprising computer-executable instructions that, when transmitted to the remote computer system for execution at the processor, cause	The user selects through the user interface (screen) the second portion (portion being erased) around which the first mask is generated.	

the remote computer system to perform a method for automating the shifting of pixels within the image file, the method comprising receiving through a user interface a selection of the second portion of the first image frame around which the first mask should be generated.		
15. The computer program product of claim 14, further comprising computer-executable instructions that, when transmitted to the remote computer system for execution at the processor, cause the remote computer system to perform a method for automating the shifting of pixels within the image file, the method comprising:		
identifying one or more edges that form a first boundary around the second portion; and	The Erase tool of Motionleap can be used to identify edges that form a boundary. Beginning at around 3:23 of the Motionleap Video, the user uses the Erase tool to create a boundary.	

		
generating the first mask to cover area within the first boundary.	The Motionleap programming generates a mask to cover areas that have been erased with the Erase tool.	
16. The computer program product as recited in claim 13, further comprising computer-executable instructions that, when transmitted to the remote computer system for execution at the processor, cause the remote computer system to perform a method for automating the shifting of pixels within the image file, the method comprising:	It does not appear that this claim can be infringed with Motionleap	

mapping the second portion of the first video frame to an equivalent portion in a second video frame, wherein the first image frame comprises the first video frame of a video file and the second image frame comprises a second video frame of the video file;		
identifying one or more edges that form a second boundary around the second portion; and		
generating a second mask to cover area within the second boundary.		
17. The computer program product as recited in claim 16, further comprising computer-executable instructions that, when transmitted to the remote computer system for execution at the processor, cause the remote computer system to perform a method for automating the shifting of pixels within the image file, the method comprising:	It does not appear that this claim can be infringed with Motionleap.	
receiving a second indication of a first ending point through the user interface, wherein the first ending point is received through a user selection of a particular portion of the second video frame;		
create a first digital link between the first starting point and the first ending point;		

selecting, within the second video frame, a second set of pixels adjacent to the first digital link and extending towards the first ending point; and		
shifting the second set of pixels toward the first ending point.		
18. The method as recited in claim 17, wherein pixels within the second video frame that are covered by the second mask are prevented from shifting.	It does not appear that this claim can be infringed with Motionleap.	
19. A method for transmitting to a client computing device instructions for shifting pixels within a video file, comprising:	The client computing device is a phone, tablet or other device to which Motionleap is downloaded.	
transmitting computer executable instructions to a client computing device, the computer executable instructions configured to cause the client computing device to:	This step is performed when a user downloads Motionleap.	
access, from memory, a digital image file, wherein the digital image file comprises information that corresponds to individual pixels within a frame of the digital image file;	This step is performed when a user selects a digital image file within the Motionleap app from his/her photo collection. Starting at 2:43 in the Motionleap video, the user selects a digital photo from a collection stored in memory.	

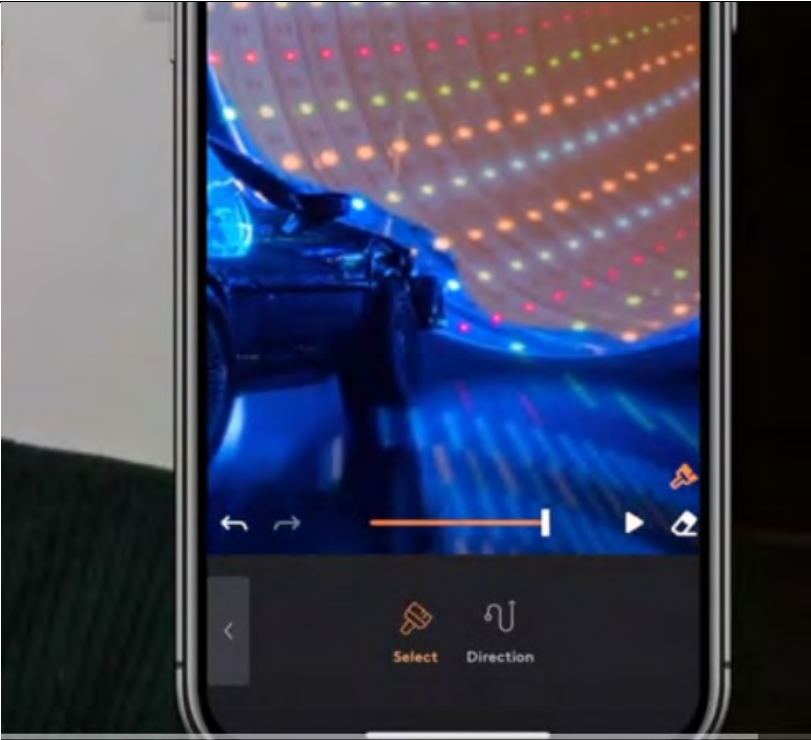
	 #mobilephotography #motionleap #photographytips How To Add Live Motion to Your Photography Motion Leap App 4,041 views · Mar 31, 2021	
receive a first starting point through a user interface, wherein the first starting point is received through a first user selection of a first beginning portion of a first image frame;	This step is performed when a user starts to draw a path on the screen using the Direction tool of Motionleap. In this still below, the first starting point is the round dot at the far right side of the screen.	

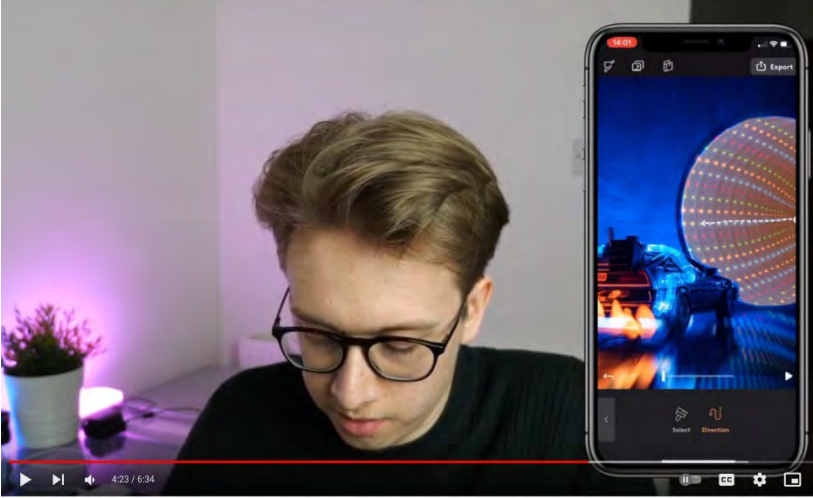
	 The image shows a man with glasses looking at a smartphone. The phone screen displays a video of a car with motion tracking points. The video is titled "How To Add Live Motion to Your Photography Motion Leap App" and has 3,937 views. The man is in a room with a potted plant and a lamp.	
receive a first ending point through the user interface, wherein the first ending point is received through a second user selection of a first ending portion;	The first ending point is the arrowhead at the left end of the dashed white line in the below still. The user establishes the first ending point by ending the path he is drawing.  The image is a close-up of the smartphone screen from the video above. It shows a car with motion tracking points and a dashed white line with an arrowhead pointing left. The background is a blue sky with a large, colorful, dotted sphere.	

create a first digital link between the first starting point and the first ending point, wherein the first digital link comprises:	The first digital link is the dashed white line between the dot and the arrowhead.	
a first direction extending from the first starting point to the first ending point; and	The first direction is the generally horizontally right to left.	
a first length between the first starting point and the first ending point:	The first length is the length of the dashed line that extends from the first starting point to the first ending point.	
identify a first set of pixels that lie along the first digital link between the first starting point and the first ending point;	The Motionleap programming identifies a first set of pixels that are:	
shift the first set of pixels in the first direction.	Shifting of the first set of pixels is visible beginning at around 4:48 of the Motionleap Video.	
20. The method of claim 19, wherein the digital image file comprises a video file and the first image frame comprises a frame of the video file.	A user can open a video file within Motionleap. When this is done the user can shift pixels within the first frame of the video.	

**Infringement Claim Chart for Infringement of
U.S. Patent No. 11,301,119 [the “119 Patent”]**

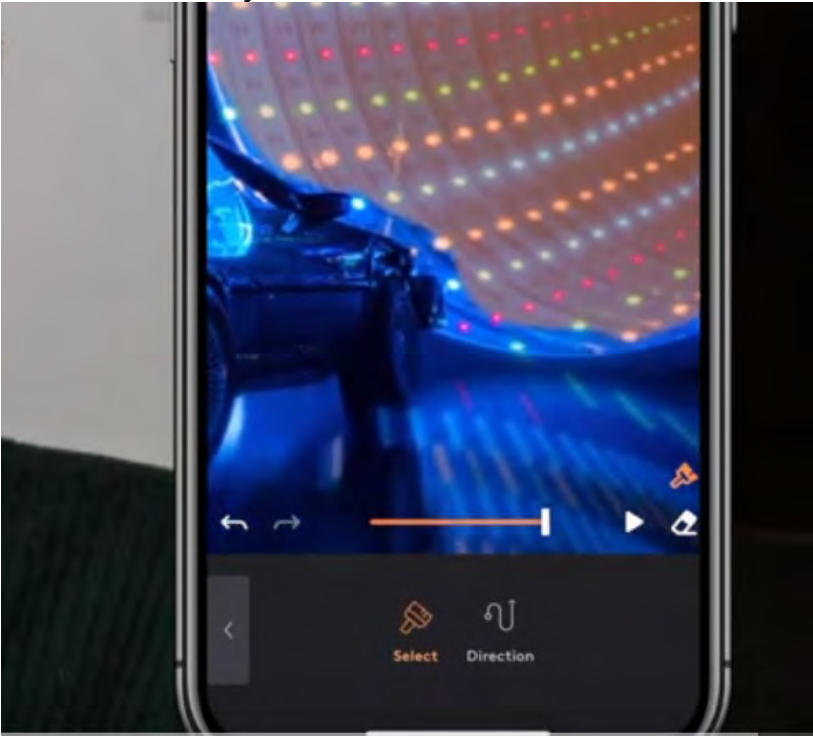
Claim Elements	Evidence of Presence in Motionleap program	Notes
1. A computer system for automating the shifting of pixels within a digital image, comprising:		Claim 1 is infringed when the claimed invention is made. The claimed computer system is made when a user downloads the Motionleap app or program to his/her smartphone, tablet or computer.
one or more processors ; and	The processor(s) is the processor within a user's smartphone, tablet or computer.	
one or more computer-readable media having stored thereon executable instructions that when executed by the one or more processors configure the computer system to perform at least the following:	The computer-readable media is the Motionleap app's program which contains executable instructions for the processor to operate.	
access, from memory, a digital image file, wherein the digital image file comprises information that corresponds to individual pixels within the digital image;	A user can open a digital image file within Motionleap.	In Motionleap, a user is instructed to open a New Project by selecting a file, which can include a digital image.

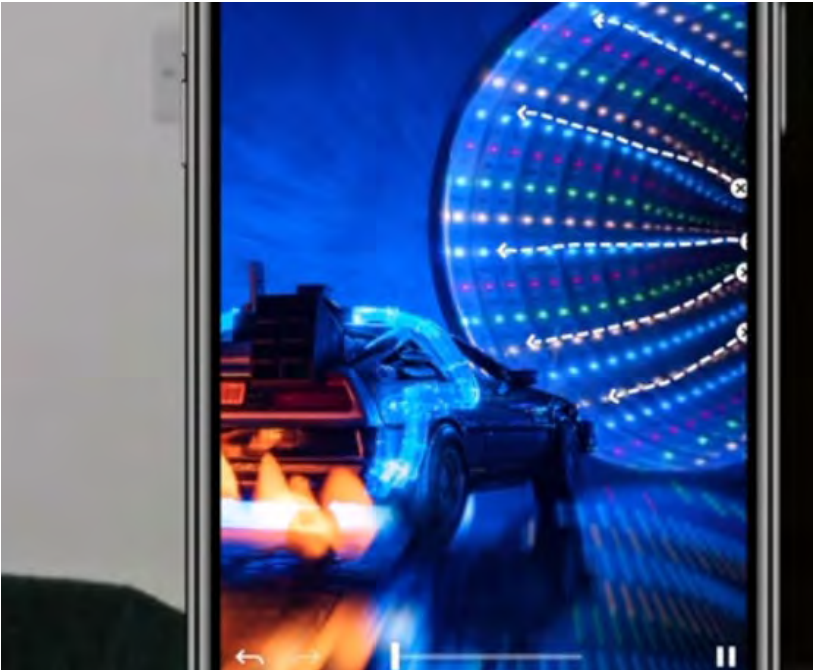
		
apply a mask to a particular portion of the digital image, wherein the mask prevents pixels covered by the mask from being shifted;	 Beginning at around 3:23 of the Motionleap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting.	

receive a first starting point through a user interface;	 At about 4:23 in the Motionleap Video, the user draws a path from right to left in the colored lights in the tunnel using the Direction tool in Motionleap. The selected first starting point is displayed on the user interface as a round white dot located at the right edge of the user interface (phone screen).	Screenshot from 4:23 of YouTube video entitled “How to Add Live Motion to Your Photography Motion Leap App” uploaded March 21, 2021 and found at https://www.youtube.com/watch?v=ip27b0BAHQw [hereinafter the “Motionleap Video”].
receive a first ending point through the user interface;	The first ending point is the arrowhead at the left end of the dashed white line in the below still. The user establishes the first ending point by ending the path he is drawing.	Screenshot from 4:23 of Motionleap Video

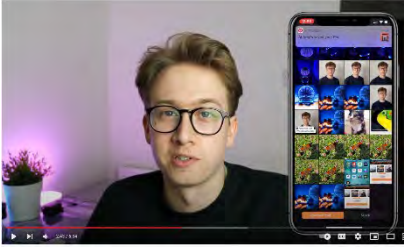
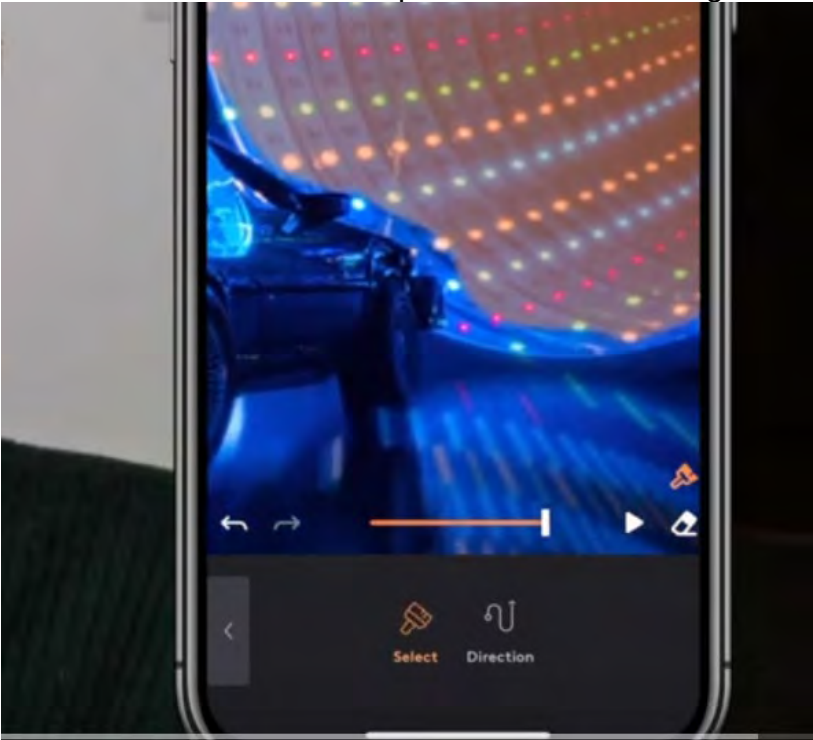
		
create a first link between the first starting point and the first ending point, wherein the first link comprises:	The first link is the dashed white line between the dot and the arrowhead.	
a non-linear pathway extending a first direction between the first starting point and the first ending point;	The first link is non-linear since it includes curves.	
identify a first set of pixels that lie along the first link between the first starting point and the first ending point; and	The Motionleap programming identifies a first set of pixels that lie along the first link between the first starting point and first ending point	
shift the first set of pixels in the first direction along the first length of the non-linear pathway, wherein shifting the first set of pixels comprises rendering in a loop the first set of pixels being shifted.	Shifting of the first set of pixels is visible beginning at around 4:48 of the Motionleap Video.	

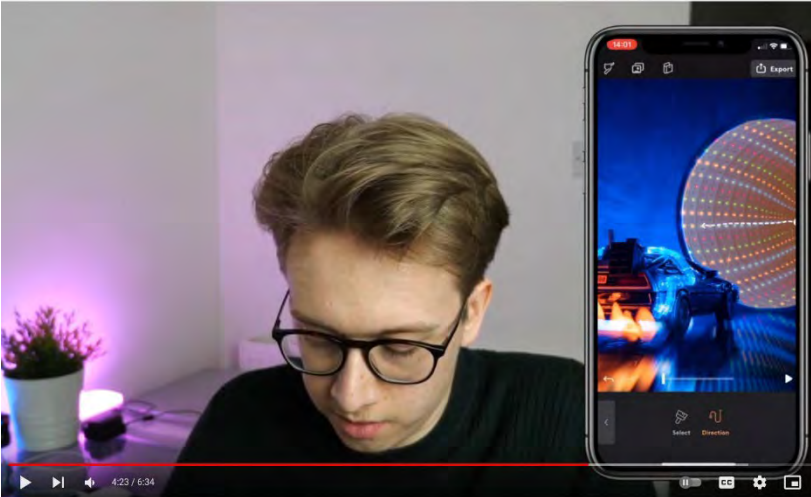
2. The computer system of claim 1, wherein receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	The user uses the user interface (screen) to select particular pixels within the digital image to mask. In the image here, the selected pixels are those between the tunnel and car which the user has selected with the Erase tool. 	
3. The computer system of claim 2, wherein the executable instructions include instructions that are executable to configure the computer system to apply the mask by:		

identifying one or more edges that form a boundary around the particular pixel; and	The Erase tool of Motionleap can be used to identify edges that form a boundary. Beginning at around 3:23 of the Motionleap Video, the user uses the Erase tool to create a boundary. 	
generating the mask to cover area within the boundary.	The Motionleap programming generates a mask to cover areas that have been erased with the Erase tool.	
4. The computer system of claim 1, wherein the executable instructions include instructions that are executable to configure the computer system to generate the mask by:		

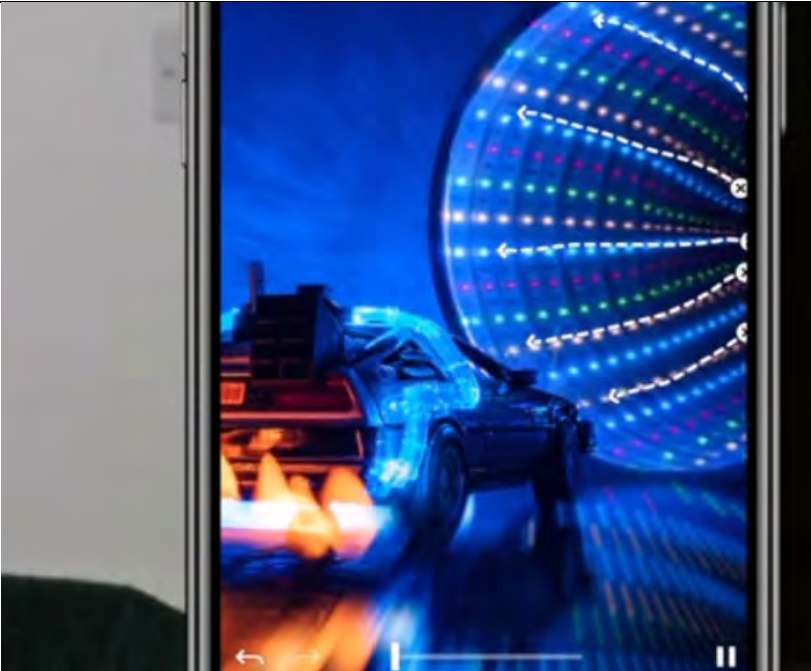
receiving a second indication of a second starting point through a user interface, wherein the second starting point is received through a user selection of a portion of the digital image;	At 4:24-4:30 in the Motionleap Video, a second pathway is drawn as well as others. The second starting point is the round dot beginning the second pathway. 	
receiving, through the user interface, a second direction associated with the second starting point;	The second direction is generally right to left and angled.	
selecting a second set of pixels extending in the second direction away from the second starting point; and	A user uses the Motionleap programming Select Brush tool to select a second set of pixels.	
shifting the second set of pixels in the second direction, wherein shifting the second set of pixels comprises rendering and re-	Shifting of the second set of pixels is visible beginning at around 4:38 of the Motionleap Video as the pixels are rendered and re-rendered in a loop.	

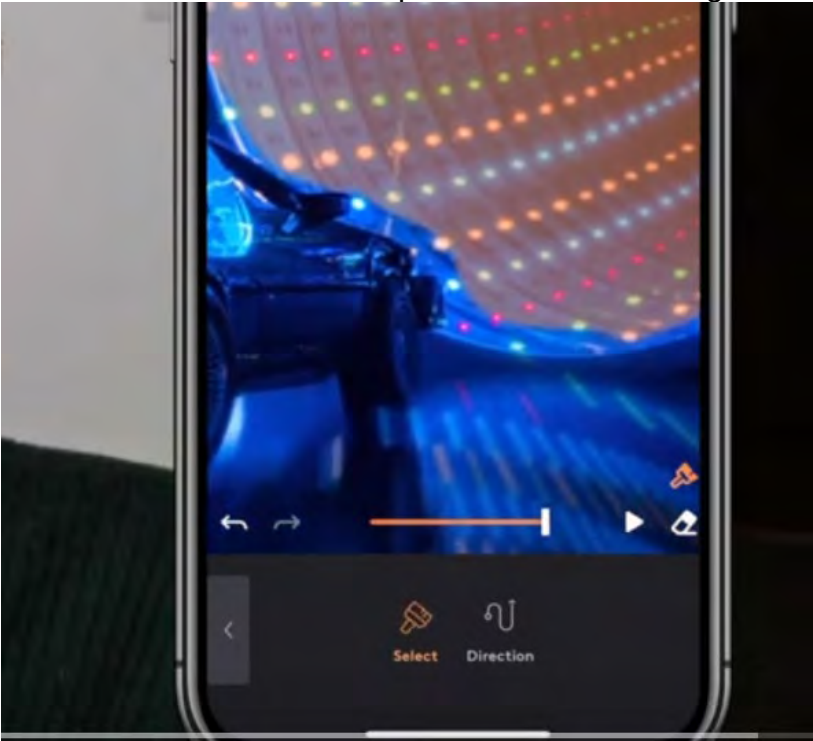
rendering in a loop the second set of pixels being shifted.		
5. The computer system of claim 4, wherein the non-linear pathway is different from the second direction.	The non-linear pathway of the first link is generally horizontal while the second direction is horizontally right to left but angled.	
6. The computer system of claim 4, wherein the first direction is different from the second direction.	The first direction (horizontally right to left) is different from the second direction (horizontally right to left and angled).	
7. The computer system of claim 4, wherein a first magnitude of the shifting of the first set of pixels is proportionally related to the first length and a second magnitude of the shifting of the second set of pixels is proportionally related to a second length extending along a pathway between the second starting point and the second ending point.	Not known at this time whether the Motionleap programming operates in this manner. Whether claim 7 is infringed can probably be determined upon examination of source code.	
8. A computer-implemented method, executed on one or more processors, for automating the shifting of pixels within a digital image, the computer-implemented method comprising:		
accessing, from memory, a digital image file, wherein the digital image file comprises information that	A user can open a digital image file within Motionleap. Starting at 2:43 in the Motionleap Video, the user selects a digital photo from a collection stored in memory.	

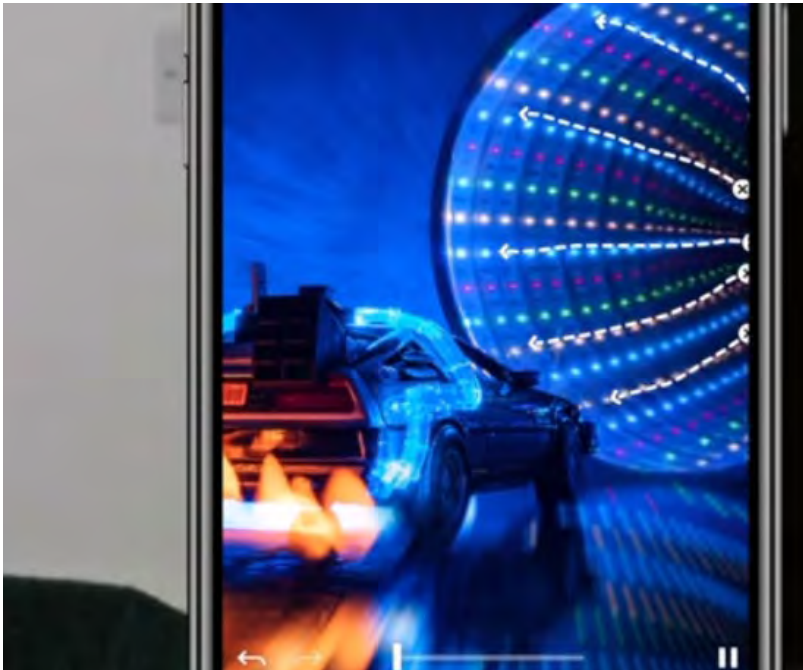
corresponds to individual pixels within the digital image;		
applying a mask to a particular portion of the digital image, wherein the mask prevents pixels covered by the mask from being shifted;	Beginning at around 3:23 of the Motionleap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting. 	
receiving a first starting point through a user interface;	This step is performed when a user starts to draw a path on the screen using the Direction tool of Motionleap. In	Screenshot from 4:23 of Motionleap Video

	this still below, the first starting point is the round dot at the far right side of the screen.  #mobilephotography #motionleap #photographyapps How To Add Live Motion to Your Photography Motion Leap App 3,937 views · Mar 31, 2021 78 3 SHARE Oliver Howells 1.1K subscribers	
receiving a first ending point through the user interface;	The first ending point is the arrowhead at the left end of the dashed white line in the below still. The user establishes the first ending point by ending the path he is drawing.	Screenshot from 4:23 of Motionleap Video

		
creating a first link between the first starting point and the first ending point, wherein the first link comprises:	The first link is the dashed white line between the dot and the arrowhead.	
a non-linear pathway extending a first direction between the first starting point and the first ending point; and	The first link is a non-linear pathway because it has some curves. Other links are also visible in the Motionleap Video (shown below) which are curved. The first link extends between the first starting point and the first ending point.	Screenshot from 4:48 of the Motionleap Video.

		
a first length extending along the non-linear pathway between the first starting point and the first ending point;	The first length is the length of the dashed line that extends from the first starting point to the first ending point.	
identifying a first set of pixels that lie along the first link between the first starting point and the first ending point; and	The Motionleap programming identifies a first set of pixels that lie along the first link between the first starting point and first ending point.	
shifting the first set of pixels in the first direction along the first length of the non-linear pathway, wherein shifting the first set of pixels comprises rendering in a loop the first set of pixels being shifted.	Shifting of the first set of pixels is visible beginning at around 4:48 of the Motionleap Video.	

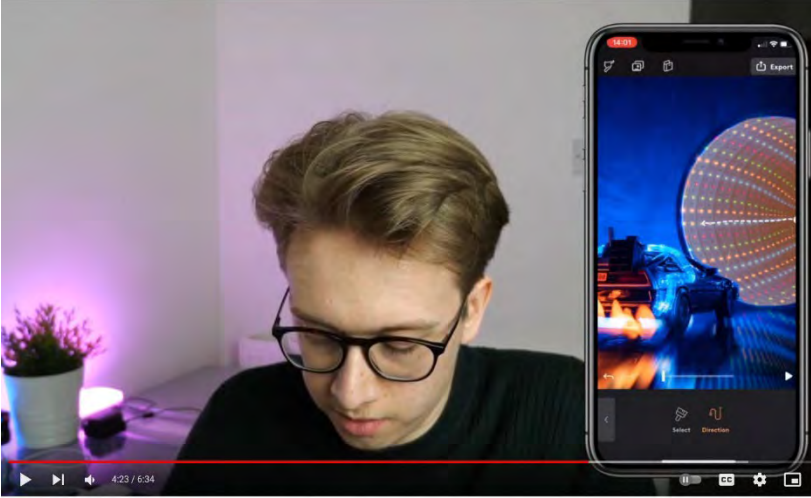
9. The computer-implemented method of claim 8, wherein receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	Beginning at around 3:23 of the MotionLeap Video, the user uses the Erase tool to create a mask over portions of the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting. 	
10. The computer-implemented method of claim 9, wherein applying the mask further comprises:		
identifying one or more edges that form a boundary around the particular pixel; and	The user identifies one or more edges that form a boundary around the car in the photo using the “Erase” tool.	
generating the mask to cover area within the boundary.	The Motionleap programming generates a mask covering areas which have been erased.	

11. The computer-implemented method of claim 8, further comprising:		
receiving a second indication of a second starting point through a user interface, wherein the second starting point is received through a user selection of a portion of the digital image;	At 4:24-4:30 in the Motionleap Video, a second pathway is drawn as well as others. The second starting point is the round dot indicating the beginning of the second pathway.	Screenshot taken at 4:33 in the Motionleap Video.
		
receiving, through the user interface, a second direction associated with the second starting point;	The second direction is the direction of the second pathway. Here, that second direction is generally from right to left and angled.	
selecting a second set of pixels extending in the second direction	With user input, the Motionleap programming selects a second set of pixels which extends in the second direction away from the starting point.	

away from the second starting point; and		
shifting the second set of pixels in the second direction, wherein shifting the second set of pixels comprises rendering and re-rendering in a loop the second set of pixels being shifted.	Shifting of the second set of pixels is visible beginning at around 4:38 of the Motionleap Video.	
12. The computer-implemented method of claim 11, wherein the non-linear pathway is different from the second direction.	The non-linear pathway is different from the second direction because the direction of the second arrow drawn is different from the direction of the first arrow drawn.	
13. The computer-implemented method of claim 11, wherein the first direction is different from the second direction.	The first direction is basically horizontally right to left. The second direction is horizontally right to left and angled.	
14. The computer-implemented method of claim 11, wherein a first magnitude of the shifting of the first set of pixels is proportionally related to the first length and a second magnitude of the shifting of the second set of pixels is proportionally related to a second length extending along a pathway between the second starting point and a second ending point.	Not known at this time whether the Motionleap programming operates in this manner. Whether claim 7 is infringed can probably be determined upon examination of source code.	
15. A computer-readable media comprising one or more physical	The computer-readable media is the Motionleap app	

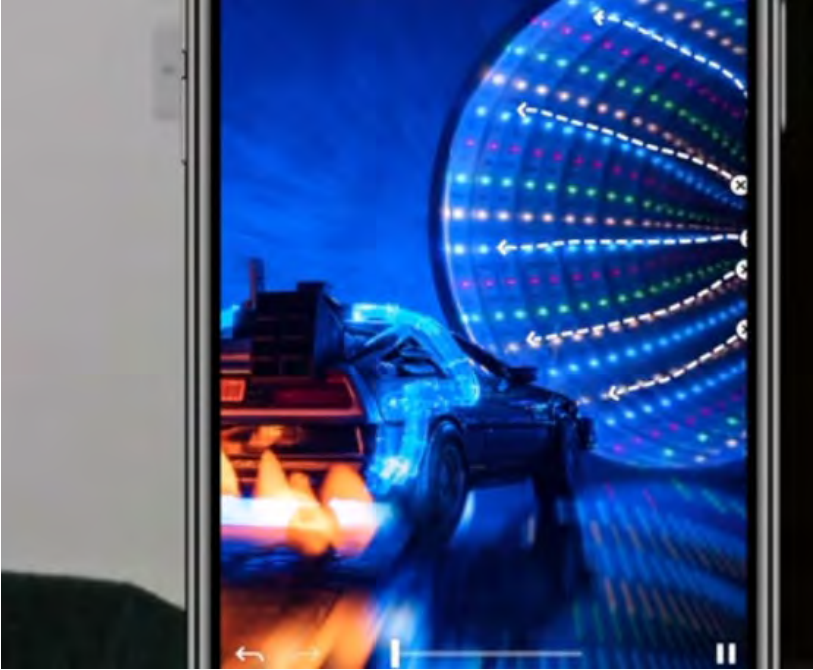
computer-readable storage media having stored thereon executable instructions that, when executed at a processor, cause a computer system to perform a method for automating the shifting of pixels within a digital image, the method comprising:		
accessing, from memory, a digital image file, wherein the digital image file comprises information that corresponds to individual pixels within the digital image;	This step is performed when a user selects a digital image file within the Motionleap app from his/her photo collection. Starting at 2:43 in the Motionleap video, the user selects a digital photo from a collection stored in memory. 	
applying a mask to a particular portion of the digital image, wherein	Beginning at around 3:23 of the MotionLeap Video, the user uses the Erase tool to create a mask over portions of	

the mask prevents pixels covered by the mask from being shifted;	the digital image proximate the car in the photo. Pixels in areas which are erased are prevented from shifting. 	
receiving a first starting point through a user interface;	At about 4:23 in the Motionleap Video, the user draws a path from right to left in the colored lights in the tunnel using the Direction tool in Motionleap. The selected first starting point is displayed on the user interface as a round white dot located at the right edge of the user interface.	

		
receiving a first ending point through the user interface;	The first ending point is the arrowhead at the left end of the dashed white line in the below still. The user establishes the first ending point by ending the path he is drawing.	

		
creating a first link between the first starting point and the first ending point, wherein the first link comprises:	The first link is the dashed white line between the dot and the arrowhead.	
a non-linear pathway extending a first direction between the first starting point and the first ending point;	The first link is non-linear since it has curves.	
a first length extending along the non-linear pathway between the first starting point and the first ending point;	The first length is the length of the first link.	
identifying a first set of pixels that lie along the first link between the first starting point and the first ending point; and	The Motionleap programming identifies a first set of pixels that lie along the first link.	
shifting the first set of pixels in the first direction along the first length of the non-linear pathway, wherein shifting the first set of pixels	Shifting of the first set of pixels is visible beginning at around 4:48 of the Motionleap Video. The Motionleap programming renders the pixels being shifted in a loop.	

comprises rendering in a loop the first set of pixels being shifted.		
16. The computer-readable media of claim 15, wherein receiving an indication of a particular portion of the digital image to mask comprises receiving through a user interface a selection of a particular pixel within the digital image.	 Beginning at around 3:23 of the Motionleap Video, the user uses the Erase tool to select pixels over which to create a mask proximate the car in the photo. Pixels in areas which are erased are prevented from shifting.	
17. The computer-readable media of claim 16, wherein configuring the computer system to apply the mask further comprises:		

identifying one or more edges that form a boundary around the particular pixel; and	The user identifies one or more edges that form a boundary around the car in the photo using the “Erase” tool.	
generating the mask to cover area within the boundary.	The Motionleap programming generates a mask to cover the area of pixels which have been erased.	
18. The computer-readable media of claim 15, wherein the executable instructions include instructions that are executable to cause the computer system to generate the mask by:		
receiving a second indication of a second starting point through a user interface, wherein the second starting point is received through a user selection of a portion of the digital image;	 At 4:24-4:30 in the Motionleap Video, a second pathway is drawn as well as others. The second starting point is the round dot beginning the second pathway	

receiving, through the user interface, a second direction associated with the second starting point;	The second direction is the direction of the second pathway, generally right to left and angled.	
selecting a second set of pixels extending in the second direction away from the second starting point; and	The Motionleap programming selects a second set of pixels extending in the second direction away from the second starting point.	
shifting the second set of pixels in the second direction, wherein shifting the second set of pixels comprises rendering and re-rendering in a loop the second set of pixels being shifted.	Shifting of the second set of pixels is visible beginning at around 4:38 of the Motionleap Video.	
19. The computer-readable media of claim 18, wherein the non-linear pathway is different from the second direction.	The non-linear pathway is different from the second direction because the direction of the second arrow drawn is different from the direction of the first arrow drawn.	
20. The computer-readable media of claim 18, wherein the first direction is different from the second direction.	The first direction is basically horizontally right to left. The second direction is horizontally right to left and angled.	

