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17 Attorneys for Plaintiff,  
18 **THROOP, LLC**

19 **UNITED STATES DISTRICT COURT**  
20 **CENTRAL DISTRICT OF CALIFORNIA**  
21 **WESTERN DIVISION**

22 **THROOP, LLC**, a California limited  
23 liability company,

24 Plaintiff,

25 v.

26 **GOOGLE LLC**, a Delaware limited  
27 liability company,

28 Defendant.

Case No. 2:19-cv-10602-AB-MRW  
Hon. Andre Birotte Jr.

**FIRST AMENDED COMPLAINT  
FOR PATENT INFRINGEMENT**

**DEMAND FOR JURY TRIAL**

1 Plaintiff Throop, LLC (“Throop” or “Plaintiff”) hereby alleges for its First  
2 Amended Complaint for Patent Infringement against Google LLC (“Google or  
3 Defendant”) the following:

4 **I. NATURE OF THE ACTION**

5 1. This is an action for patent infringement of United States Patent Nos.  
6 7,035,897 (the “’897 Patent”) and 9,479,726 (the “’726 Patent”) (collectively, the  
7 “Patents-in-Suit”) arising under the Patent Laws of the United States, 35 U.S.C. § 1,  
8 et seq., seeking damages and other relief under 35 U.S.C. § 281, et seq.

9 **II. THE PARTIES**

10 2. Throop is a California limited liability company having a principal  
11 place of business at 3580 Wilshire Blvd., Ste. 1460, Los Angeles, CA 90010.

12 3. Defendant Google LLC is a limited liability company organized under  
13 the laws of Delaware with its principal place of business located at 1600  
14 Amphitheatre Parkway, Mountain View, CA 94043. Google’s registered agent for  
15 Service of Process is located at Corporation Service Company, d/b/a CSC, 2710  
16 Gateway Oaks Drive, Suite 150N, Sacramento, CA 95833.

17 **III. JURISDICTION AND VENUE**

18 4. This is an action for patent infringement arising under the provisions of  
19 the Patent Laws of the United States of America, Title 35, United States Code.

20 5. This Court has subject matter jurisdiction over Throop’s claims under  
21 28 U.S.C. §§ 1331 and 1338(a).

22 6. This Court has personal jurisdiction over Defendant in this action  
23 because Defendant has committed acts within the Central District of California  
24 giving rise to this action and has established minimum contacts with this forum such  
25 that the exercise of jurisdiction over the Defendant would not offend traditional  
26 notions of fair play and substantial justice. The Defendant, directly and through  
27 subsidiaries or intermediaries, has committed and continues to commit acts of  
28

1 infringement in this District by, among other things, offering to sell and selling  
2 products and/or services that infringe the asserted patents.

3 7. Venue is proper in this judicial district pursuant to 28 U.S.C. § 1391(b),  
4 (c) and/or 28 U.S.C. § 1400(b). Defendant transacts business within this District  
5 and offers for sale in this District products that infringe the Patents-in-Suit.  
6 Defendant is registered to do business in California. Defendant has a regular and  
7 established place of business in Central District of California. For example,  
8 Defendant has offices located at 340 Main Street, Venice, California 90291.

9 **IV. THROOP'S PATENT-IN-SUIT**

10 8. On April 25, 2006, the '897 Patent, entitled "Wireless Augmented  
11 Reality Communication System," was duly and legally issued by the United States  
12 Patent and Trademark Office. A true and correct copy of the '897 Patent is attached  
13 as Exhibit A.

14 9. On October 25, 2006, the '726 Patent, entitled "Wireless Augmented  
15 Reality Communication System," was duly and legally issued by the United States  
16 Patent and Trademark Office. A true and correct copy of the '726 Patent is attached  
17 as Exhibit B.

18 10. The inventors listed on the Patents-in-Suit were all engineers who  
19 worked at NASA's Jet Propulsion Laboratory. Founded by Caltech faculty, NASA's  
20 Jet Propulsion Laboratory is the leading U.S. center for the robotic exploration of  
21 the solar system.

22 11. The '897 Patent has been cited by twenty-four issued United States  
23 patents as relevant prior art.

24 12. Throop is the owner of the Patents-in-Suit asserted in this action and  
25 has the exclusive right to sue and collect remedies for past, present, and future  
26 infringement of the Patents-in-Suit.

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28 //

1                   **V.    ACCUSED PRODUCTS AND/OR SERVICES**

2           13.       Defendant manufactures, provides, uses, sells, offers for sale, imports,  
3 and/or distributes infringing services for wearable devices, including, for example,  
4 Google Glass (including Google Enterprise Edition and Google Enterprise Edition  
5 2) (collectively, “Accused Products and/or Services”).

6           14.       The Accused Products and/or Services offer the benefits of Plaintiff’s  
7 technology by, for example, incorporating a highly integrated radio communication  
8 system allowing for true two-way multimedia access via a wearable device.

9           15.       Defendant has had knowledge of the Patents-in-Suit and its  
10 infringement since at least the filing of the Original Complaint in this action, or  
11 shortly thereafter, including by way of this lawsuit.

12                   **COUNT I: INFRINGEMENT OF U.S. PATENT NO. 7,035,897**

13           16.       Throop reasserts and incorporates herein by reference the allegations of  
14 all preceding paragraphs of this Complaint as if fully set forth herein.

15           17.       Defendant has infringed and continues to infringe at least claim 1 and  
16 one or more of its dependents of the ’897 Patent under 35 U.S.C. § 271(a), literally  
17 or under the doctrine of equivalents, by making, using, selling, and/or offering for  
18 sale in the United States, and/or importing into the United States, the Accused  
19 Products and/or Services.

20           18.       For example, the Accused Products and/or Services meet all of the  
21 claim limitations of claim 1 of the ’897 Patent, as set forth below with claim  
22 language in italics. To the extent the preamble is limiting, the Accused Products  
23 and/or Services include *[a] mobile access unit for use in a localized*  
24 *communications system.*

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<https://www.google.com/glass/start/>

19. The Accused Products and/or Services include *a video input configured to receive real-time video information; a video output configured to provide real-time video information; a wearable display connected to the video output; a codec connected to the video input and video output; and a transceiver.*

### **Improve accuracy**

Access training videos, images annotated with instructions, or quality assurance checklists that help you get the job done, safely, quickly and to a higher standard.

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Camera

### Collaborate in real-time

Glass can connect you with coworkers in an instant, bringing expertise to right where you are. Invite others to “see what you see” through a live video stream so you can collaborate and troubleshoot in real-time.

<https://www.google.com/glass/start/>

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#### Camera

8Mp, 80 DFOV

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#### Display

640x360 Optical Display Module

<https://www.google.com/glass/tech-specs/>

1        20.        The Accused Products and/or Services include *a transmitter connected*  
2 *to the codec that is configured to transmit a data stream provided by the codec over*  
3 *an upstream wireless communication link; and a receiver connected to the codec*  
4 *that is configured to receive a data stream transmitted over a downstream wireless*  
5 *communication link, which includes encoded real-time video.*

6            DHL is seeing similar results. DHL’s employees have a supply chain  
7 process called “order picking” where they fulfill orders by scanning items  
8 from racks before moving them into totes or bins on carts to be shipped.  
9 Using a solution from Ubimax with Glass, they now receive real-time  
10 instructions about where items have to be placed on the carts with the help  
11 of visual aids. With their hands now free of paper instructions, pickers can  
12 work far more efficiently and comfortably, and DHL estimates that they  
13 have increased supply chain efficiency by 15%.

14 <https://blog.x.company/a-new-chapter-for-glass-c7875d40bf24>

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17 **Wi-Fi**

18 **802.11ac, dual-band, single antenna**

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20 **Bluetooth**

21 **Bluetooth 5.x AoA**

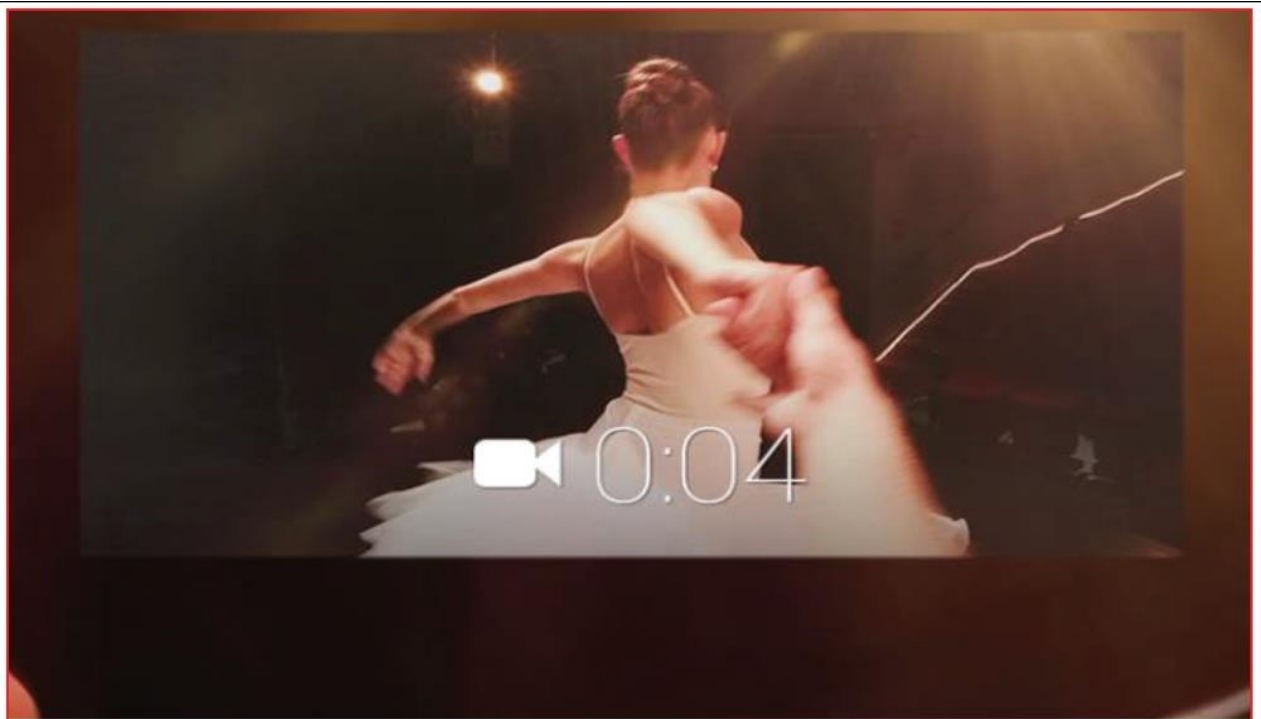
22 All public videos are streamed and not attached to timeline items.

23 Video aspect ratio is 16:9.

24 Video resolution is 640 × 360 pixels.

25 H.264 format

26 <https://developers.google.com/glass/distribute/best-practices>



Record what you see. Hands-free.

21. The Accused Products and/or Services include *wherein the codec is configured to: encode real-time video information received from the video input; and multiplex the encoded real-time video with other data to generate the data stream provided by the codec to the transmitter; and wherein the codec is also configured to: demultiplex the encoded real-time video from the data stream provided to the codec by the receiver; and decode the encoded real-time video information and provide the decoded real-time video information to the video output.*

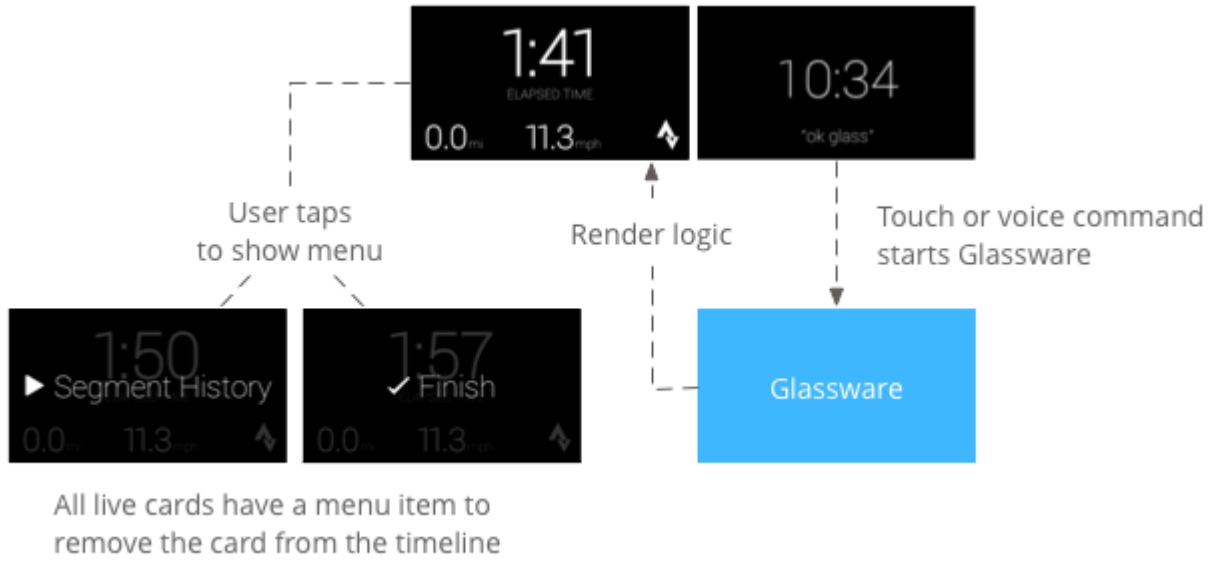
**Excels at video and live streaming.**

With an 8MP camera, Glass Enterprise Edition 2 allows workers to stream clear “point of view” video from expert remote assistants over Wi-Fi.

<https://www.google.com/glass/tech-specs/>



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<https://developers.google.com/glass/develop/gdk/live-cards>

## Camera

You can use the Glass camera to capture images and video and to also display the camera's preview stream for a variety of different use cases.

### A. Overview

You have two options for capturing images or video:

Calling the built-in camera activity with `startActivityForResult()`. Use this option when possible.

Building your own logic with the [Android Camera API](#). Follow these guidelines if you are using this method:

Take a picture on a camera button click and a video on a long click, just like Glass does.

Indicate to the user whether a picture was taken or a video was recorded.

Keep the screen on during capture.

<https://developers.google.com/glass/develop/gdk/camera>

1       22.       Defendant has committed acts of infringement without license or  
2 authorization. Defendant knew or should have known that its actions would cause  
3 direct and indirect infringement of the '897 Patent.

4       23.       Defendant is also liable under 35 U.S.C. § 271(b) for actively inducing  
5 infringement and continuing to actively induce infringement. Defendant actively  
6 induces and continues to induce its customers, distributors, end-users, vendors  
7 including customer-support and/or manufacturers to infringe the '897 Patent. On  
8 information and belief, Defendant possessed a specific intent to induce  
9 infringement, and in fact did induce infringement, by engaging in affirmative acts  
10 such as by selling and causing the Accused Products and/or Services to be  
11 manufactured, by providing user guides, installation or instruction manuals, and  
12 other training materials, by advertising and solicitation and otherwise providing  
13 sales-related materials, and by instructing and/or demonstrating to customers,  
14 distributors, end-users, vendors including customer-support and/or manufacturers  
15 the normal operation of the Accused Products and/or Services that infringe the '897  
16 Patent. Defendant is aware and/or willfully blind that these affirmative acts infringe  
17 and/or would induce infringement of the '897 Patent, of which it had knowledge.

18       24.       Defendant is also liable under 35 U.S.C. § 271(c) for contributing to  
19 and continuing to contribute to the infringement of the '897 Patent by, among other  
20 things, providing a mobile access unit for use in a localized communications system  
21 in its Accused Products and/or Services and by encouraging, at a minimum,  
22 customers, distributors, end-users, vendors including customer-support and/or  
23 manufacturers in this District and elsewhere, to infringe the '897 Patent. By  
24 importing, exporting, manufacturing, distributing, selling, and/or providing the  
25 Accused Products and/or Services for their intended use to customers, distributors,  
26 end-users, vendors including customer-support and/or manufacturers, Defendant  
27 has, in the past and continue to contribute to the infringement of one or more claims  
28 of the '897 Patent. The Accused Products and/or Services are material to the

1 inventions claimed in the '897 Patent, has no substantial non-infringing uses, and  
2 are known by Defendant (on information and belief) to be especially made or  
3 especially adapted for use in infringing the '897 Patent, and which are otherwise not  
4 staple articles of commerce suitable for substantial non-infringing use. Defendant  
5 are aware and/or willfully blind that these affirmative acts infringe and/or constitute  
6 contributory infringement of the '897 Patent, of which it had knowledge.

7 25. Defendant is liable for indirect infringement, i.e., both inducement and  
8 contributory infringement, based on the direct infringement that is the result of  
9 activities performed by customers, distributors, end-users, vendors including  
10 customer-support and/or manufacturers who use all elements or perform all steps of  
11 one or more claims of the '897 Patent. For example, end users of Defendant's  
12 Accused Products and/or Services infringe, either directly or under the doctrine of  
13 equivalents, one or more claims of the '897 Patent (e.g., claim 1 and one or more of  
14 its dependents). At a minimum, Defendant is liable for the indirect infringement of  
15 claim 1 and one or more of its dependents of the '897 Patent.

16 26. Plaintiff has been damaged as a result of Defendant's infringing  
17 conduct. Defendant is, thus, liable to Plaintiff in an amount that adequately  
18 compensates Plaintiff for Defendant's infringement, which, by law, cannot be less  
19 than a reasonable royalty, together with interest and costs as fixed by this Court  
20 under 35 U.S.C. § 284.

21 **COUNT II: INFRINGEMENT OF U.S. PATENT NO. 9,479,726**

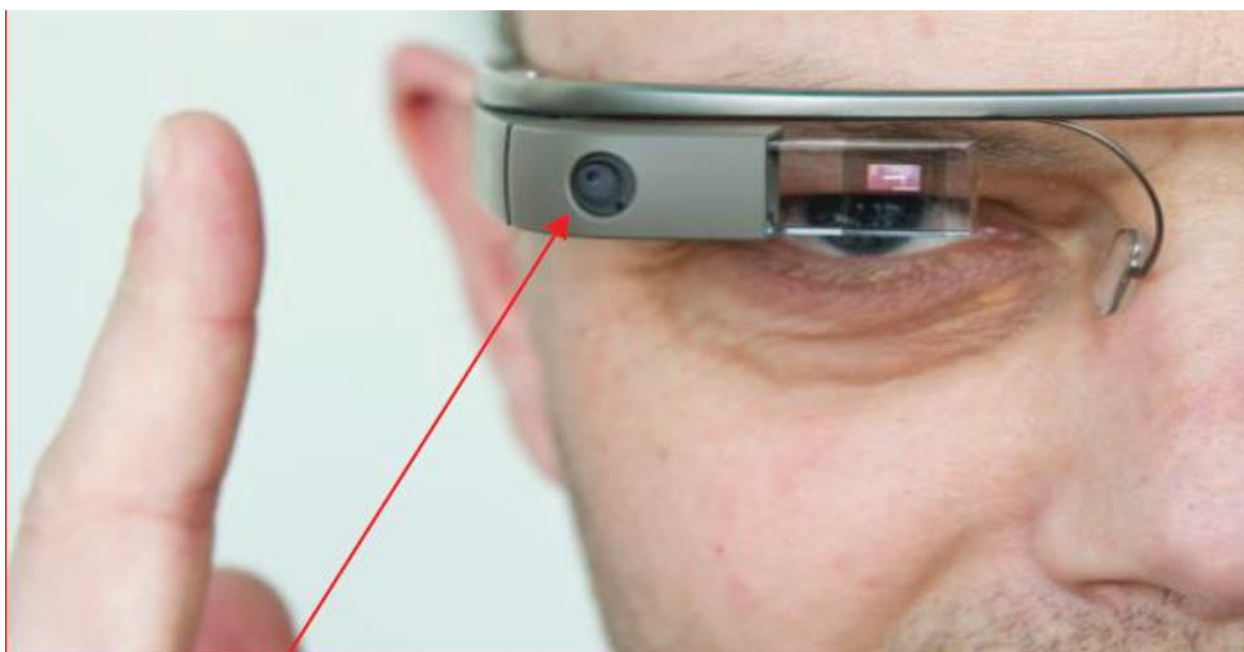
22 27. Throop reasserts and incorporates herein by reference the allegations of  
23 all preceding paragraphs of this Complaint as if fully set forth herein.

24 28. Defendant has infringed and continues to infringe at least claim 1, and  
25 one or more of its dependents of the '726 Patent under 35 U.S.C. § 271(a), literally  
26 or under the doctrine of equivalents, by making, using, selling, and/or offering for  
27 sale in the United States, and/or importing into the United States, the Accused  
28 Products and/or Services.

1        29.        For example, the Accused Products and/or Services meet all of the  
2 claim limitations of claim 1 of the '726 Patent, as set forth below with claim  
3 language in italics. To the extent the preamble is limiting, the Accused Products  
4 and/or Services include *[a] communication system comprising: a portable access*  
5 *unit comprising a wearable device, a touchpad and a transceiver.*

### Improve accuracy

6 Access training videos, images annotated with instructions, or quality  
7 assurance checklists that help you get the job done, safely, quickly and to a  
8 higher standard.



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Camera

### Collaborate in real-time

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24 Glass can connect you with coworkers in an instant, bringing expertise to  
25 right where you are. Invite others to “see what you see” through a live video  
26 stream so you can collaborate and troubleshoot in real-time.

1 <https://www.google.com/glass/start/>

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Camera

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8Mp, 80 DFOV

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Display

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640x360 Optical Display Module

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7 <https://www.google.com/glass/tech-specs/>

8 30. The Accused Products and/or Services include *a wearable device*  
9 *comprising a transparent display.*

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<https://www.google.com/glass/start/>

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31. The Accused Products and/or Services include *the touchpad connected*  
*to the wearable device and configured to receive user commands; and*

## Glass gestures

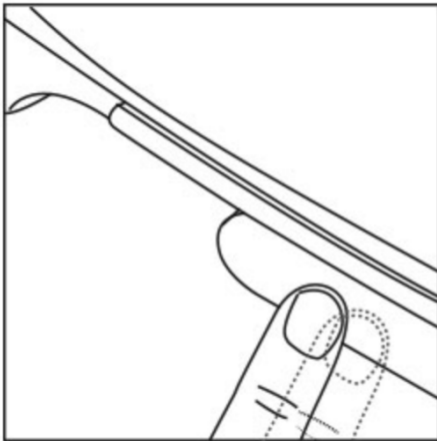
Pan by swiping on touchpad

Interacting with Glass is a unique experience that can range from head gestures to touch gestures that allow you to use Glass but stay in the moment with others with minimal distraction.

You can use touch gestures by tapping and sliding your finger on the touchpad located on the right side of the device near your temple.

**Activate Glass:** Tap the touchpad to turn the display on.

**Swipe forward and back:** Swipe forward to move right on your timeline, swipe backwards to move left through items on your timeline. To quickly navigate your timeline, swipe with two fingers, and you'll see a zoomed out view of the timeline.



<https://support.google.com/glass/answer/3064184?hl=en>

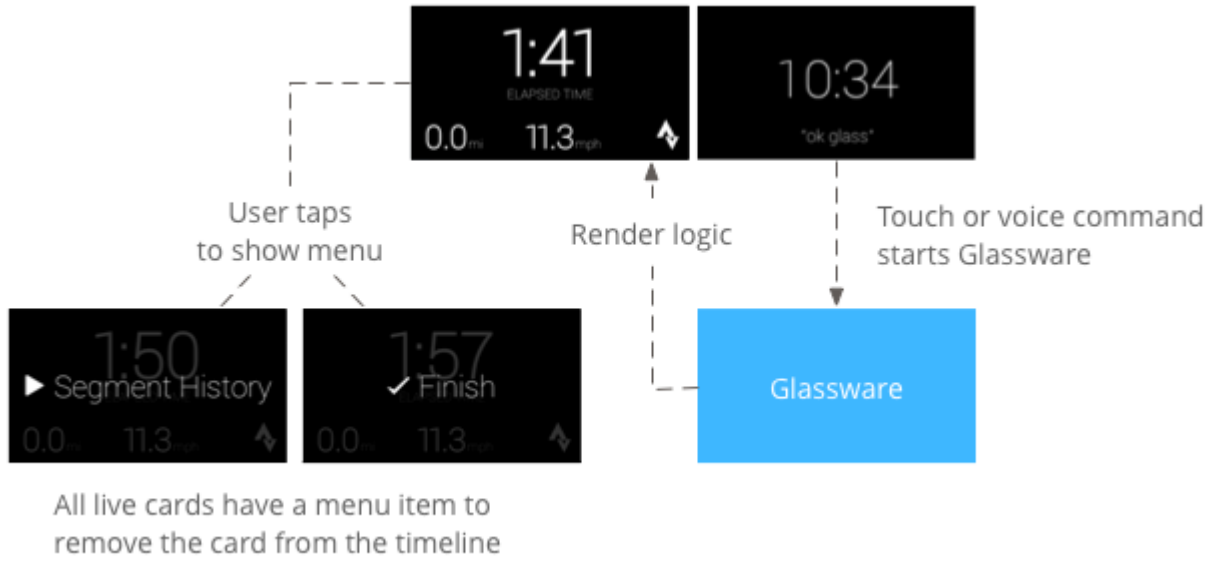
32. The Accused Products and/or Services include *the transceiver capable of wirelessly connecting to a general purpose node for establishing a data link with one or more media devices connected to the general purpose node.*

### **Excels at video and live streaming.**

With an 8MP camera, Glass Enterprise Edition 2 allows workers to stream clear “point of view” video from expert remote assistants over Wi-Fi.

<https://www.google.com/glass/tech-specs/>

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<https://developers.google.com/glass/develop/gdk/live-cards>

## Camera

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You have two options for capturing images or video:

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Building your own logic with the [Android Camera API](#). Follow these guidelines if you are using this method:

Take a picture on a camera button click and a video on a long click, just like Glass does.

Indicate to the user whether a picture was taken or a video was recorded.

Keep the screen on during capture.

<https://developers.google.com/glass/develop/gdk/camera>

1 33. The Accused Products and/or Services include, to the extent the  
2 wherein clause is limiting, the following claim element: *wherein subsequent to*  
3 *connecting to the general purpose node, the portable access unit is configured to*  
4 *display on the transparent display a list of one or more media devices that are*  
5 *connected to the general purpose node.*

## Pairing Glass to your Bluetooth phone

For a great on-the-go Glass experience, it's essential to pair Glass to your phone or tablet. You'll need the [MyGlass app](#) from the Google Play Store to make full use of Glass's Bluetooth capabilities

### On your Glass

1. Using Glass, from the Home screen, swipe back repeatedly until you see the Settings card.
2. Tap the Settings card and then swipe forward until you see Bluetooth settings. Swipe to find your phone type, either Android or iPhone, and select it to watch the tutorial.

<https://support.google.com/glass/answer/3064189?hl=en>

14 34. The Accused Products and/or Services include, to the extent the  
15 wherein clause is limiting, the following claim element: *wherein the portable access*  
16 *unit is configured to receive, at the touchpad, a first user command for selecting a*  
17 *first media device from the list to establish a data link with the first media device via*  
18 *the general purpose node.*



<https://support.google.com/glass/answer/3064189?hl=en>





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Dated: May 13, 2020

**ONE LLP**

By: */s/ Nathaniel L. Dilger*

Nathaniel L. Dilger

John E. Lord

*Attorneys for Plaintiff,*

*Throop, LLC*

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**DEMAND FOR JURY TRIAL**

Throop demands trial by jury on all claims and issues so triable.

Dated: May 13, 2020

**ONE LLP**

By: */s/ Nathaniel L. Dilger*  
Nathaniel L. Dilger  
John E. Lord

*Attorneys for Plaintiff,  
Throop, LLC*