IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

UNILOC 2017 LLC

    Plaintiff,

v.

GOOGLE LLC,

    Defendant.

§
§   CIVIL ACTION NO. 2:18-cv-00549
§
§
§
§   PATENT CASE
§
§
§
§   JURY TRIAL DEMANDED
§

ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Uniloc 2017 LLC ("Uniloc"), as and for their complaint against defendant Google

LLC ("Google") allege as follows:

THE PARTIES

1.   Uniloc is a Delaware limited liability company having places of business at 620

Newport Center Drive, Newport Beach, California 92660 and 102 N. College Avenue, Suite 303,

Tyler, Texas 75702.

2.   Uniloc holds all substantial rights, title and interest in and to the asserted patent.

3.   On information and belief, Google, a Delaware corporation with its principal office

at 1600 Amphitheatre Parkway, Mountain View, CA 94043. Google offers its products and/or

services, including those accused herein of infringement, to customers and potential customers

located in Texas and in the judicial Eastern District of Texas.

JURISDICTION

4.   Uniloc brings this action for patent infringement under the patent laws of the United

States, 35 U.S.C. § 271 *et seq.* This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§

1331 and 1338(a).

5.   This Court has personal jurisdiction over Google in this action because Google has committed acts within the Eastern District of Texas giving rise to this action and has established minimum contacts with this forum such that the exercise of jurisdiction over Google would not offend traditional notions of fair play and substantial justice. Google has committed and continues to commit acts of infringement in this District by, among other things, offering to sell and selling products and/or services that infringe the asserted patent.

6.   Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391 and 1400(b). Google is registered to do business in Texas, and upon information and belief, Google has transacted business in the Eastern District of Texas and has committed acts of direct and indirect infringement in the Eastern District of Texas. Google has a regular and established place of business in this District, as set forth below.

7.   Google is a multinational technology company that collects, stores, organizes, and distributes data. In addition to its service model for distribution of data (e.g., movies, search results, maps, music, etc.), Google has an expansive regime that gathers data on residents of this District through the hardware devices it sells (e.g., phones, tablets, and home audio devices) and, also, through the operating systems and apps it provides. As an example, Google gathers data when a resident runs its operating systems and apps (e.g., location services).[1] As another example, Google gather's data when a resident interacts with Google's plethora of services such as search, email, and music and movie streaming. *See* https://safety.google/privacy/data/ (indicating that Google gathers data from "things you search for," "Videos you watch," "Ads you view or click," "Your location," "Websites you visit," and "Apps, browsers, and devices you use to access Google

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[1] *See* e.g., "AP Exclusive: Google tracks your movements, like it or not," https://apnews.com/828aefab64d4411bac257a07c1af0ecb/AP-Exclusive:-Google-tracks-your-movements,-like-it-or-not

services"). As yet another example, Google gathers data by listening and recoding everything a resident says within proximity of one of its products such as Google Home.[2] Others have reported that Google gathers "where you've been," "everything you've ever searched – and deleted," "all the apps you use," "all of your YouTube history," "which events you attended, and when," "information you deleted [on your computer]," "your workout routine," "years' worth of photos," and "every email you ever sent."[3]

8.   Google takes these massive amounts of gathered data on residents of this district and monetizes them, for example, through targeted advertising. Some have reported that "creepy" advertisements for items never searched for, but only spoken out loud appeared. *See* e.g., https://www.youtube.com/watch?v=zBnDWSvaQ1I (conducting test on the term "dog toys" spoken out loud, but never searched; tester claims targeted "dog toy" advertisements only appeared after speaking the phrase out loud).

9.   In addition to extensive data gathering of information on residents of this District, Google has a substantial presence in the District directly through the products and services Google provides residents of this District (some of which also gather data).[4] One of Google's main businesses in this District is delivering information, including digital content such as movies, music, apps, and advertising.

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[2] *See* https://www.unilad.co.uk/technology/google-is-listening-to-everything-we-say-and-you-can-hear-it-back/ ("Tech giant and the font of all pub quiz knowledge, Google, can quietly record many of the conversations that people have in close proximity to its products.").

[3] *See* https://www.theguardian.com/commentisfree/2018/mar/28/all-the-data-facebook-google-has-on-you-privacy.

[4] Non-limiting examples include Google Search, Maps, Translate, Chrome Browser, YouTube, YouTube TV, Google Play Music, Chromecast, Google Play Movies and TV, Android Phones, Android Wear, Chromebooks, Android Auto, Gmail, Google Allo, Google Duo, Google+, Google Photos, Google Contacts, Google Calendar, Google Keep, Google Docs, Google Sheets, Google Slides, Google Drive, Google Voice, Google Assistant, Android operating system, Project Fi Wireless phone systems, Google Pixel, Google Home, Google Wifi, Daydream View, Chromecast Ultra.

10.   Google describes itself as an "information company."[5] Its vision is "to provide access to the world's information in one click," and its mission is "to organize the world's information and make it universally accessible and useful."[6] Making information available to people wherever they are and as quickly as possible is critical to Google's business.

Google Global Cache (GGC)

11.   As Google's CEO, Sundar Pichai, explains, "We want to make sure that no matter who you are or where you are or how advanced the device you are using—Google works for you."[7] To meet this goal, Google developed a content delivery network that it calls the Edge Network.

12.   One non-limiting example of physical presence in this District is Google's Edge Network. Google provides web-based services, such as YouTube, YouTube TV, and Google Play, to users throughout the world. These services are in high demand. Google reports that Google Play reaches more than 1 billion Android users and that YouTube serves over 1.8 billion users per month.[8] Studies show that YouTube alone is responsible for approximately 20% of all internet traffic.[9] YouTube TV, which has been described as an "add-on to YouTube" allows Google to essentially become the local TV provider for residents of this District. For example, residents in this District obtain local Dallas-Fort Worth area channels such as WFAA, ABC (Channel 8); CBS (Channel 11); NBC (Channel 5); and Fox (Channel 4).[10]

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[5] *See* "This Year's Founder's Letter" by Alphabet CEO, Sundar Pichai, https://blog.google/inside-google/alphabet/this-years-founders-letter/.

[6] http://panmore.com/google-vision-statement-mission-statement.

[7] *See* e.g., http://time.com/4311233/google-ceo-sundar-pichai-letter/.

[8] *See* https://www.theverge.com/2018/5/3/17317274/youtube-1-8-billion-logged-in-monthly-users-brandcast-2018

[9] *See* https://www.sandvine.com/hubfs/downloads/archive/2016-global-internet-phenomena-report-latin-america-and-north-america.pdf and http://testinternetspeed.org/blog/half-of-all-internet-traffic-goes-to-netflix-and-youtube/

[10] *See*, e.g. https://support.google.com/youtubetv/answer/7068923?hl=en and https://support.google.com/youtubetv/answer/7370552?hl=en&ref_topic=7071745.
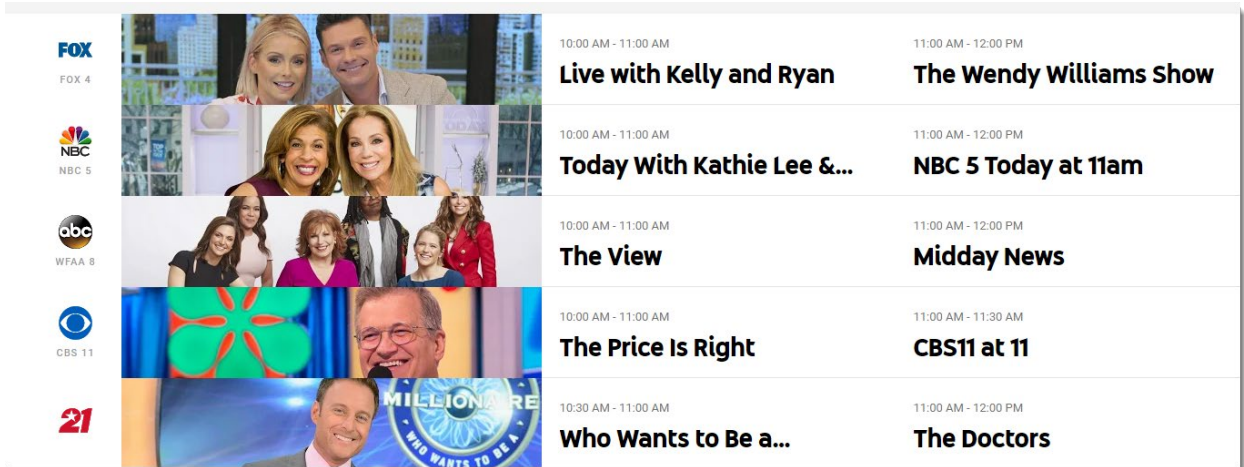
Source: https://tv.youtube.com/live (as accessed from this District).

To verify a resident should receive such local channels, Google verifies a location of such resident.

13.   Google's Edge Network, itself, has three elements: Core Data Centers, Edge Points of Presence, and Edge Nodes. The Core Data Centers (there are eight in the United States) are used for computation and backend storage. Edge Points of Presence are the middle tier of the Edge Network and connect the Data Centers to the internet. Edge Nodes are the layer of the network closest to users. Popular content, including YouTube TV, YouTube, video advertising, music, mobile apps, and other digital content from the Google Play store, is cached on the Edge Nodes, which Google refers to as Google Global Cache or "GGC".

14.   Google Global Cache is recognized as "one of Google's most important pieces of infrastructure,"[11] and Google uses it to conduct the business of providing access to the world's information. GGC servers in the Edge Nodes function as local data warehouses, much like a shoe manufacturer might have warehouses around the country. Instead of requiring people to obtain information from distant Core Data Centers, which would introduce delay, Google stores information in the local GGC servers to provide quick access to the data.

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[11] http://blog.speedchecker.xyz/2015/11/30/demystifying-google-global-cache/.

15.   Caching and localization are vital for Google's optimization of network resources. Because hosting all content everywhere is inefficient, it makes sense to cache popular content and serve it locally. Doing so brings delivery costs down for Google, network operators, and internet service providers. Storing content locally also allows it to be delivered more quickly, which improves user experience. Serving content from the edge of the network closer to the user improves performance and user happiness. To achieve these benefits, Google has placed Edge Nodes throughout the United States, including in this District. Google describes these nodes as the workhorses of video delivery.

16.   Just like brick-and-mortar stores, Google's GGC servers independently determine what content to cache based on local requests. The GGC servers in Google's Edge Nodes include software that Google refers to as "μstreamer." μstreamer is responsible for serving video content from YouTube and other Google services, along with other large content such as Google Play applications and Chrome downloads. It operates on a content-delivery platform at the edge of Google's network called "bandaid"; it does not run in the core (except for some internal testing purposes), unlike the majority of the Google services, such as search or gmail.

17.   Using μstreamer and bandaid, a GGC server handles requests directly from its clients, predominantly YouTube's video players. When such a request is received, if the content is stored in the node's local cache, the node will serve it to the end user, improving the user experience and saving bandwidth. If cache-eligible content is not already stored on the node, and the content is cache-eligible, the node will retrieve it from Google, serve it to the user, and store it for future requests.

18.   μstreamer is largely autonomous, in the sense that almost all decisions related to serving a particular request are made locally, without coordinating with other servers. Like a brick-and-mortar store sells directly to customers from inventory and stocks that inventory based

on local customer demand, µstreamer in each GGC node decides—independently from other nodes in Google's Edge Network— whether to serve requested content, whether to cache content, and whether to send requests to other servers.

19.   Google's GGC servers are housed in spaces in the District leased by Google. Google's GGC servers are housed in spaces leased by Google from Internet Service Providers (ISPs) whose networks have substantial traffic to Google and are interested in saving bandwidth. Hosting Google servers allows ISPs to save both bandwidth and costs, as they do not incur the expense of carrying traffic across their peering and/or transit links.

20.   When an ISP agrees to host a GGC server, the parties enter into a Global Cache Service Agreement, under which Google provides:

- hardware and software— including GGC servers and software—to be housed in the host's facilities;

- technical support; service management of the hardware and software; and

- content distribution services, including content caching and video streaming.

In exchange, the host provides, among other things, a physical building, rack space where Google's computer hardware is mounted, power, and network interfaces. All ownership rights, title, and intellectual property rights in and to the equipment (i.e., the hardware and software provided by Google) remain with Google and/or its licensors.

21.   Multiple ISPs hosted GGC servers are in this District. Google provides the location of its GGC servers, namely Sherman, Tyler, and Texarkana.

Source: https://peering.google.com/#/infrastructure

22.   Suddenlink Communications, for example, is an ISP that hosts six GGC servers in Tyler, Texas.

23.   CableOne is an ISP that hosts three GGC servers in Sherman, Texas, and three GGC servers Texarkana, Texas.

24.   Google caches content on these GGC servers located in this District.

25.   Google's GGC servers located in this District cache content that includes, among other things: (i) video advertising; (ii) apps; and (iii) digital content from the Google Play store.

26.   Google's GGC servers located in this District deliver cached content for the items in the preceding paragraph to residents in this District.

27.   Google generates revenue (i) by delivering video advertising, (ii) from apps,

and (iii) from digital content in the Google Play store.

28.   Google treats its GGC servers in this District the same as it treats all of its other GGC servers in the United States.

29.   The photographs below show Google's GGC servers hosted by Suddenlink and the building where they are located at 322 North Glenwood Boulevard, Tyler, Texas 75702.

Exterior   Interior Rack Spaces   Google GGC Servers

30.   Google not only exercises exclusive control over the digital aspects of the GGC, Google, but also exercises exclusive control over the physical server and the physical space within which the server is located and maintained.

31.   This District has previously determined that the GGC server itself and the place of the GGC server, both independently and together, meet the statutory requirement of a "physical place." *See Seven Networks, LLC v. Google, LLC*, Case No. 2:17-cv-00442-JRG (E.D. Tex)(Jul. 19, 2018) at Page 24.

32.   Likewise, this District has determined that GGC servers and their several locations within this District constitute "regular and established place[s] of business" within the meaning of the special patent venue statute *See Seven Networks, LLC v. Google, LLC*, Case No. 2:17-cv-00442-JRG (E.D. Tex.)(Jul. 19, 2018) at page 38.

33.   Similarly, this District has determined that the GGC servers and their locations within the various ISPs within this District are "places of Google" sufficient to meet the statutory requirement of § 1400(b). *See Seven Networks, LLC v. Google, LLC*, Case No. 2:17-cv-00442-JRG (E.D. Tex.)(Jul. 19, 2018) at page 41.

Google's Cell Phone Service (aka Google Fi)

34.   Google also provides phone, messaging, and data services in this District from its wireless phone services called Google Fi. Via this Google Fi service, Google provides its customers voice and high-speed data coverage (4G LTE) for cities such as Tyler and Marshall, TX.

Source: https://fi.google.com/coverage?q=Marshall%2C%20TX%2C%20USA
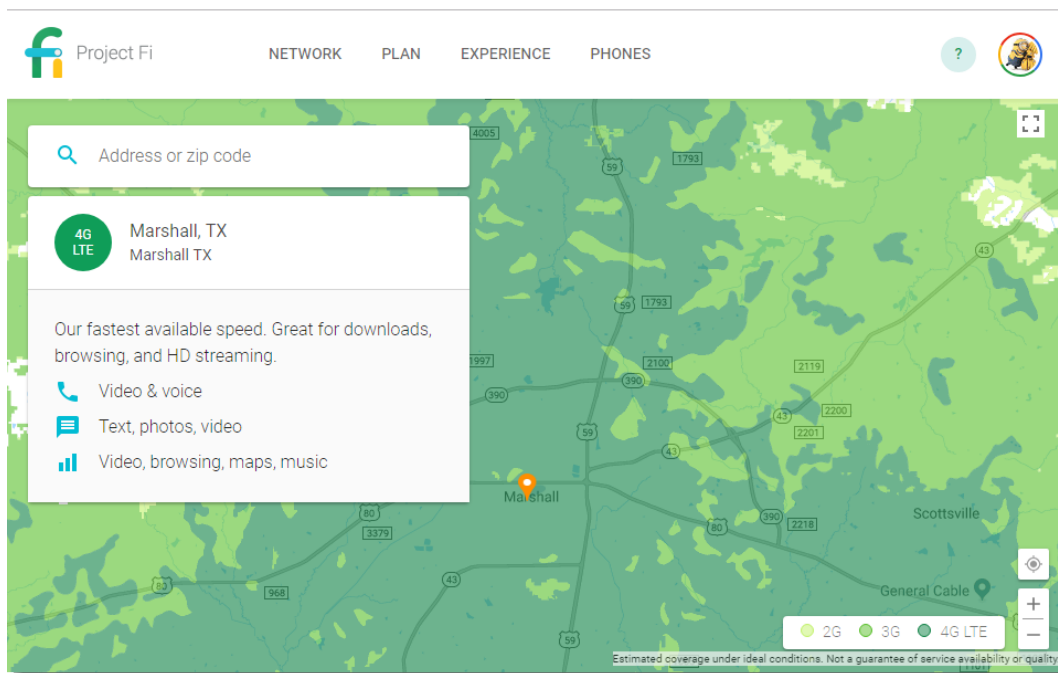
35.   The cell towers used for Google's services are fixed geographical locations. They are "regular" and "established" because they operate in a "steady, uniform, orderly, and methodical manner" and are sufficiently permanent. They are "of the defendant" because Google has contractual and/or property rights to use the cell towers to operate its business. Google also ratifies the service locations through its coverage lookup service.
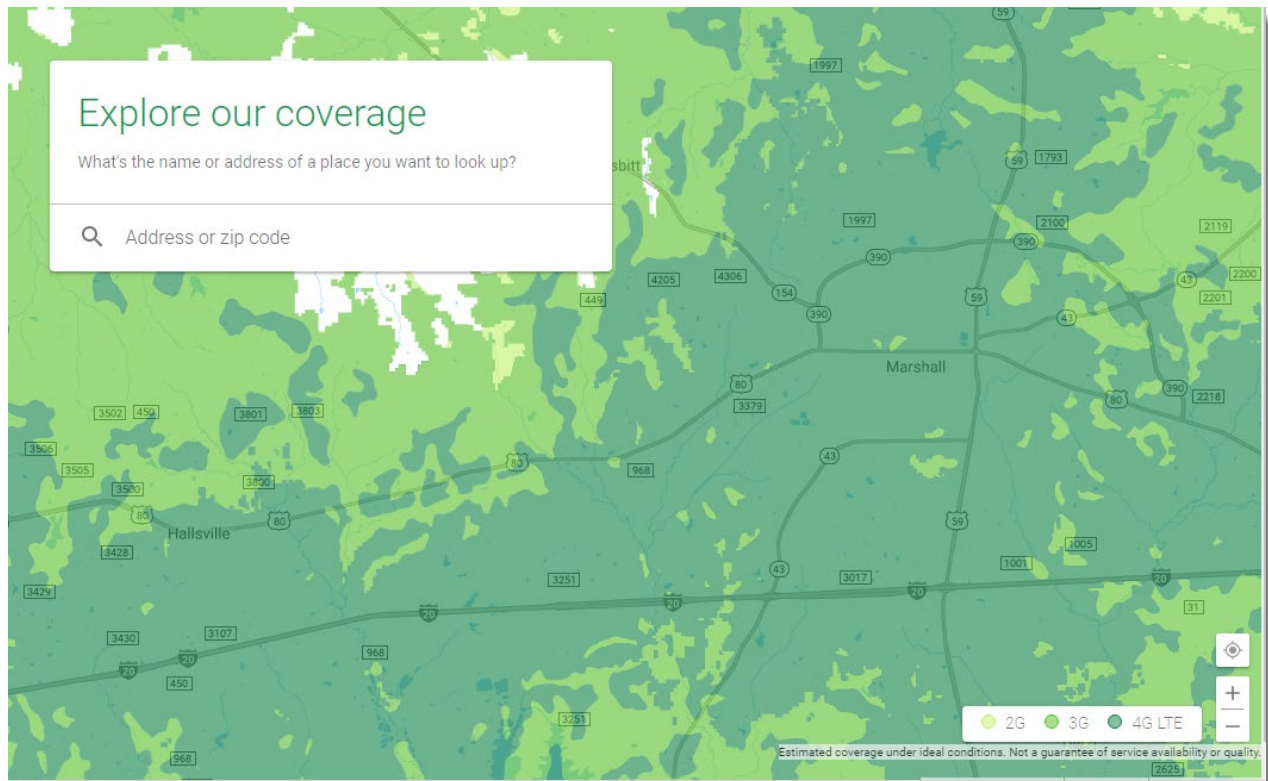
Source: https://fi.google.com/coverage?

36.   With this coverage lookup service, Google advertises its ability to provide cell coverage in this District and it selected cell towers in and near this District to provide the advertised coverage (e.g., 2G, 3G, or 4GLTE) depending on the location in the District. See https://fi.google.com/coverage?. Google is not indifferent to the location of its cell towers. It "established" and "ratified" them where they are for a specific business purpose.

37.   Residents of this District also directly contract with and are billed by Google for these services.

Source: https://fi.google.com/about/plan

38.   Google also determines which cell tower a particular project Fi customer will use while within the District.
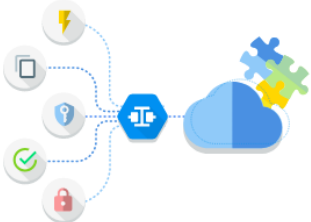
Source: https://fi.google.com/about/faq/#network-and-coverage-4

Google Cloud Interconnect (GCI) and Direct Peering

39.   Google additionally services its customers in this District (and other districts) through yet other facilities it has in this District. More particularly, Google's equipment is located in this District in Denton County Texas at two facilities referred to as "Megaport." At the Megaport facilities in this District, Google offers two services: Google Cloud Interconnect (GCI) and Direct Peering.

40.   Google Cloud's Interconnect (GCI) is a service from Google that allows customers to connect to Google Cloud Platform directly as opposed to, for example, over the public network.

Source: https://cloud.google.com/interconnect/

41.   Google's Direct Peering services allows its customers to exchange Internet traffic between its customers network and Google's at one of its broad-reaching Edge network locations such as the one at Megaport.

Source: https://cloud.google.com/interconnect/docs/how-to/direct-peering

42.   In establishing such a direction connection, Google provides the necessary physical

equipment at Megaport to enable such GCI or Direct Peering connections. Google advertises only two GCI facilities in Texas – the Equinix facility and Megaport facility (the latter is located in this District).

Source: https://cloud.google.com/interconnect/docs/concepts/service-providers#by-location
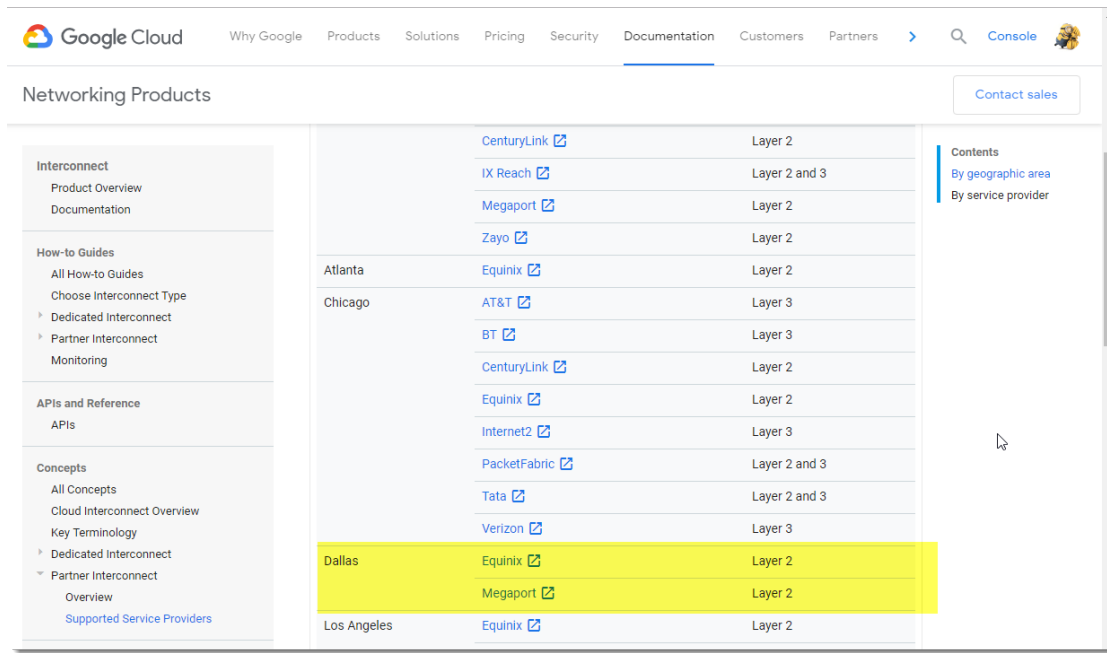
43.   Clicking on the Megaport link from screenshot of Google's website in the preceding paragraph directs a customer as to the details of directly connecting to Google's equipment at the facility in this District to connect to Google's GCI service.

https://www.megaport.com/services/google-cloud-partner-interconnect/
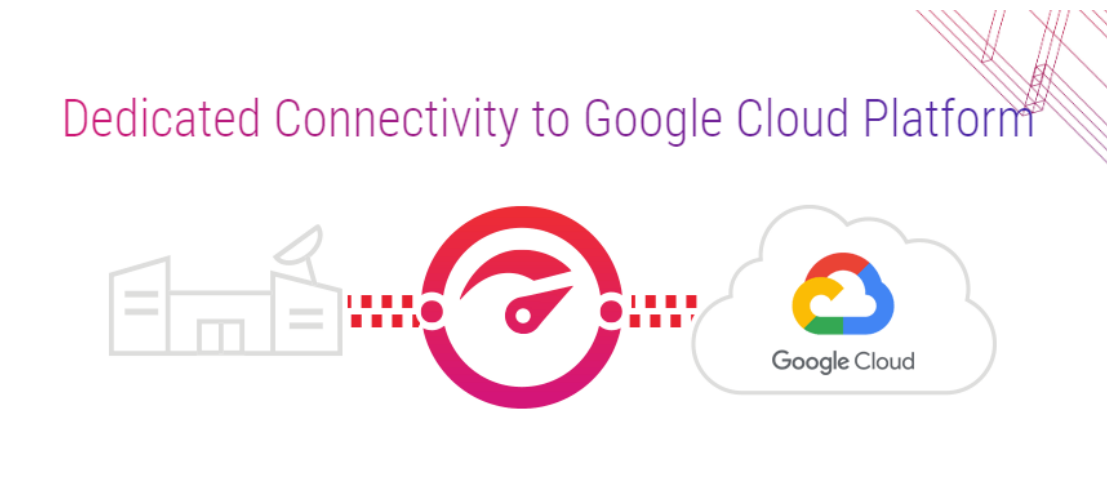
44.   More particularly, the Google-linked Megaport site explains how a Google customer

can use the Google Cloud Platform console to enable connection to the Google equipment at the

Megaport facility in this district.
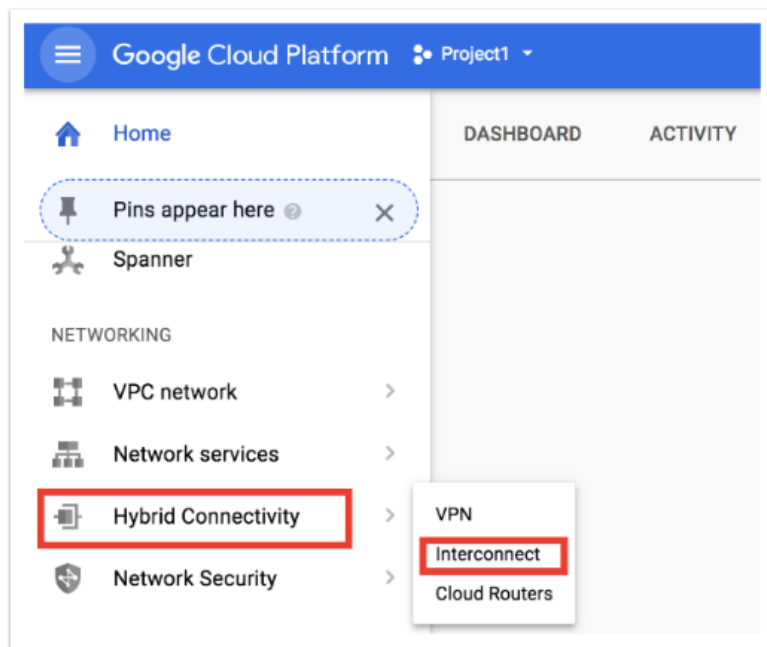
Source: https://knowledgebase.megaport.com/cloud-connectivity/google-
cloud/?_ga=2.258056911.476938490.1538320465-1560947970.1538320465

45.   Both Google's website and Megaport's website advertise the peering service and

point a consumer the website, www.peeringdb.com, for details. The peering DB website lists

Megaport Dallas as a Google peering facility.

Who can peer with Google?

Any Google Cloud Platform customers that meet Google's technical peering requirements specified in our peering page can be considered for the direct peering service. Google can peer at the Internet Exchanges (IXPs) and private facilities that are listed in our PeeringDB entry.

Source: https://cloud.google.com/interconnect/docs/how-to/direct-peering

Megaport – Google IX Peering Locations:

- MegaIX: Ashburn, Dallas, Los Angeles, Seattle, Singapore, Sofia, Sydney
- AMS-IX: Chicago, New York, Bay Area

See PeeringDB for additional details.

https://knowledgebase.megaport.com/cloud-connectivity/google-cloud-platform-direct-peering/

https://www.peeringdb.com/net/433

46.   Megaport's website also confirms in its "Looking Glass" tool the presence of Google at its facility – (AS No. 15169).

Source: https://portal.megaport.com/tools/looking-glass

47.   Both of Megaport's "Dallas" locations are in the Eastern District of Texas in Denton County.[12] The larger Megaport facility, the Carrolton facility, is located at 1649 West Frankford Rd and is the largest of its kind in the state of Texas.[13] The smaller Megaport facility, the Lewisville facility, is located at 2501 St. State Hwy 121.

48.   The Google equipment at Megaport's facilities which provide the GCI and Direct Peering services for Google customer are fixed geographical locations. They are "regular" and "established" because they operate in a "steady, uniform, orderly, and methodical manner" and are sufficiently permanent. They are "of the defendant" because Google holds contractual and/or property rights to use this space and to maintain this equipment. Google also ratifies the equipment through advertising of the Megaport location as authorized to provide these Google services.

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[12] https://www.megaport.com/blog/cyrusone-brings-dallas-closer-cloud/

[13] *Id.*

Other Google Presence in this District

49.   In addition to the Google presence described above, Google has other pervasive contacts in this District.

50.   Google has multiple authorized repair centers in the Eastern District. A resident can visit Google' website to find a list of these repair centers:

| United States	uBreakiFix ☑	Pixel, Pixel XL, Pixel 2, Pixel 2 XL	Walk-in	• uBreakiFix ☑ • **Phone:** 1-877-320-2237
	Puls ☑	Pixel, Pixel XL, Pixel 2, Pixel 2 XL	At home (Dial-in)	• Puls ☑ • **Phone:** (855) 256-3709
	Google ☑	Pixel, Pixel XL, Pixel 2, Pixel 2 XL	Mail-in	• Google ☑ • Repair program currently expanding, option might not be available

In US and Canada, replacement of parts or product service is made available for a minimum of three years after end of production for all phones through Google or its service providers.

Source: https://support.google.com/store/answer/7182296?hl=en

51.   Google's only authorized walk-in repair center, uBreakiFix, lists at least four facilities in this District

Source: https://www.ubreakifix.com/google
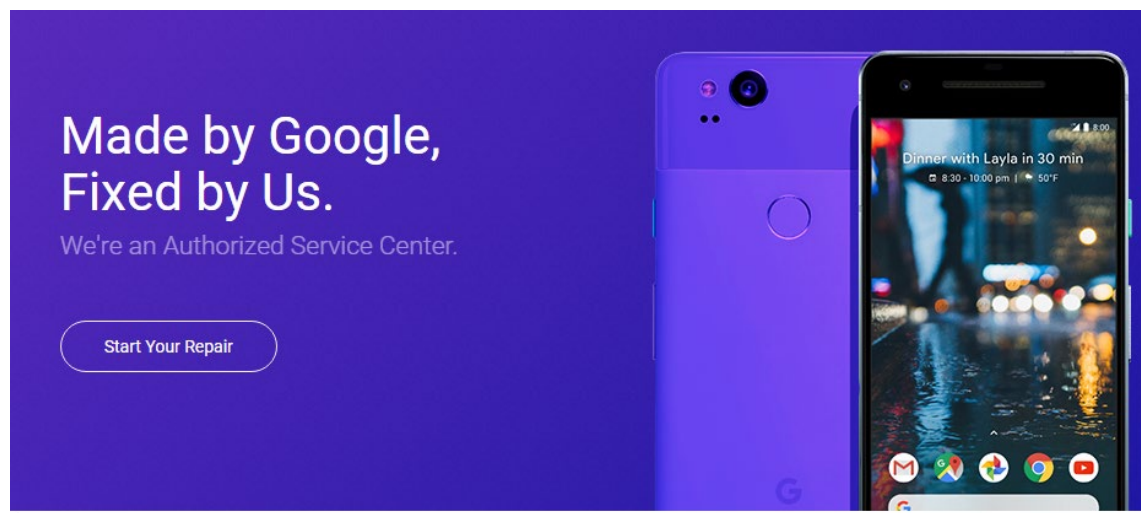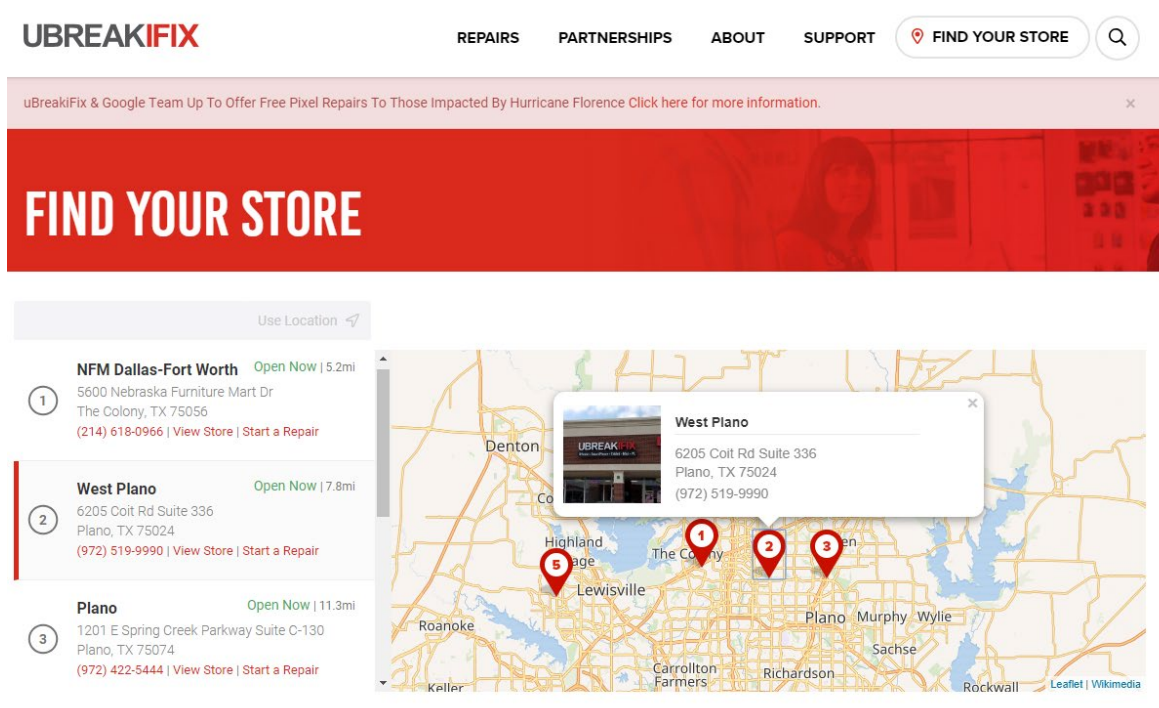
Source: https://www.ubreakifix.com/google

52.   Google and uBreakiFix teamed up to offer free repairs to those impacted by Hurricane Florence.[14]

53.   uBreakiFix has fixed geographical location. They are "regular" and "established" because they operate in a "steady, uniform, orderly, and methodical manner" and are sufficiently permanent. These stores are "of the defendant" because Google has contractual rights with uBreakiFix -- the only authorized walk-in repair centers in the United States. Google also ratifies these facilities through its advertising of them through its website.

54.   Google's also has a branded mail-in repair service that is contracted with a company called KMT Wireless, LLC dba Cynergy. Cynergy receives phones at its facility in Grapevine, TX.

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[14] *See* https://www.ubreakifix.com/blog/hurricane-florence

United States	uBreakiFix ⧉	Pixel, Pixel XL, Pixel 2, Pixel 2 XL	Walk-in	• uBreakiFix ⧉ • **Phone**: 1-877-320-2237
	Puls ⧉	Pixel, Pixel XL, Pixel 2, Pixel 2 XL	At home (Dial-in)	• Puls ⧉ • **Phone**: (855) 256-3709
	Google ⧉	Pixel, Pixel XL, Pixel 2, Pixel 2 XL	Mail-in	• Google ⧉ • Repair program currently expanding, option might not be available

In US and Canada, replacement of parts or product service is made available for a minimum of three years after end of production for all phones through Google or its service providers.

Source: https://support.google.com/store/answer/7182296?hl=en

55.   Google has operated and is currently operating its Google Maps Street View business and services in this District. For example, the image below shows the Google Maps Street View of the Eastern District of Texas courthouse in Marshall.

Source:https://www.google.com/maps/@32.5447534,-
94.3670371,3a,75y,170.99h,76.06t/data=!3m6!1e1!3m4!1smECZXlUFylR2yu5E-
6wj2g!2e0!7i13312!8i6656

Furthermore, in the lower right-hand corner of the Google Street View above, the image is credited

to Google and states that it was captured in June 2016.
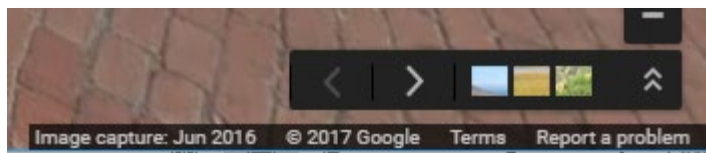
56.   Google also operates a Street View car in and around this District in order to provide

the Google Maps Street View service.[15]

57.   In addition to the above Google Street View image, Google operates and continues

to operate a fleet of Google Street View vehicles in this District, including in the counties of

Houston, Trinity, Polk, Angelina, Anderson, VanZandt, Denton, and Collin, as shown below.

WHERE WE'VE BEEN & WHERE WE'RE HEADED NEXT

The blue areas on the map show where Google has collected Street View. Zoom in for greater
detail, or browse this content with our websites and apps. The list shows where we're driving
(or Trekking) next. Select a country to browse.

Because of factors outside our control (weather, road closures, etc), it is always possible that our cars may not be
operating, or that slight changes may occur. Please also be aware that where the list specifies a particular city, this may
include smaller cities and towns that are within driving distance.

United States

Oregon	Clackamas County, Multnomah County, Washington County	June 2018 – October 2018
Pennsylvania	Delaware, Philadelphia, Bucks, Montgomery, Berks, Lancaster, York, Lebanon, Dauphin, Schuylkill, Lehigh, Northhampton, Adams, Venango, Clarion, Jefferson, Indiana, Armstrong, Butler, Allegheny, Westmoreland	March 2018 – November 2018
Tennessee	Knox, Jefferson, Grainger, Union, Anderson, Rane, Loudon	March 2018 – October 2018
Texas	Houston, Trinity, Polk, Angelina, Anderson, Leon, Madison, Walker, Caldwell, Comal, Guadalupe, Hays, Travis, Williamson, Dallas, Ellis, Johnson, Hood, Tarrant, Rockwall, Rains, VanZandt, Denton, Collin, Hunt	January 2018 – December 2018
Virginia	New Kent, Sussex, Hanover, Caroline, Essex, King and Queen, Gloucester, York, King William	June 2018 –

Source: https://www.google.com/streetview/understand/

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[15] See https://www.google.com/streetview/understand/

58.   Google also has operated and currently operates its Google Express business and services in this District. Google Express allows residents of this District to shop – directly from Google's website – for select products with companies that Google has contracted with.

Source: https://express.google.com/u/0/about

To verify which stores a user may shop, a resident enters his or her zip code and begins shopping at the Google contracted stores.   The image below shows the Google Express website showing

that its business and services are available in this District.
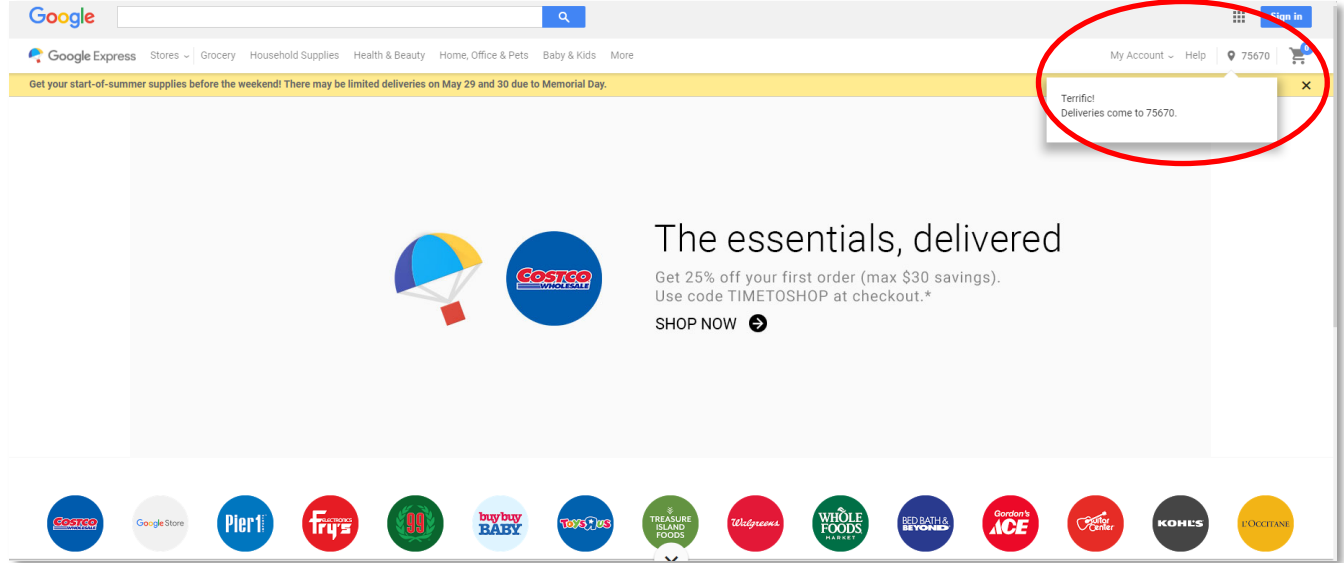

Source: https://www.google.com/express/

59.   Googles provides its Google Express business and services to the residents of this District by advertising and inviting the residents of this District, then Defendant arranges for a delivery company to bring the goods and products purchased through the Google Express website to the residents of this District.[16]   This service uses fixed geographical stores in this District. They are "regular" and "established" because they operate in a "steady, uniform, orderly, and methodical manner" and are sufficiently permanent. They are "of the defendant" because Google ratifies the stores (and select products of the stores) through its website. Only information provided by Google through its service can be purchased although the store may have other items for sale.

60.   Google previously leased office space in this District for about 50 people through its Frisco, TX office.

61.   Google also provides services to business and schools in this District including email services, word processing software, electronic file storage services, and video conferencing

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[16] See https://support.google.com/express/answer/4561693?hl=en

services.   Google brands such services as "G Suite" services. Non-limiting examples of such

business and schools include the Frisco Independent School District, as shown below.[17]
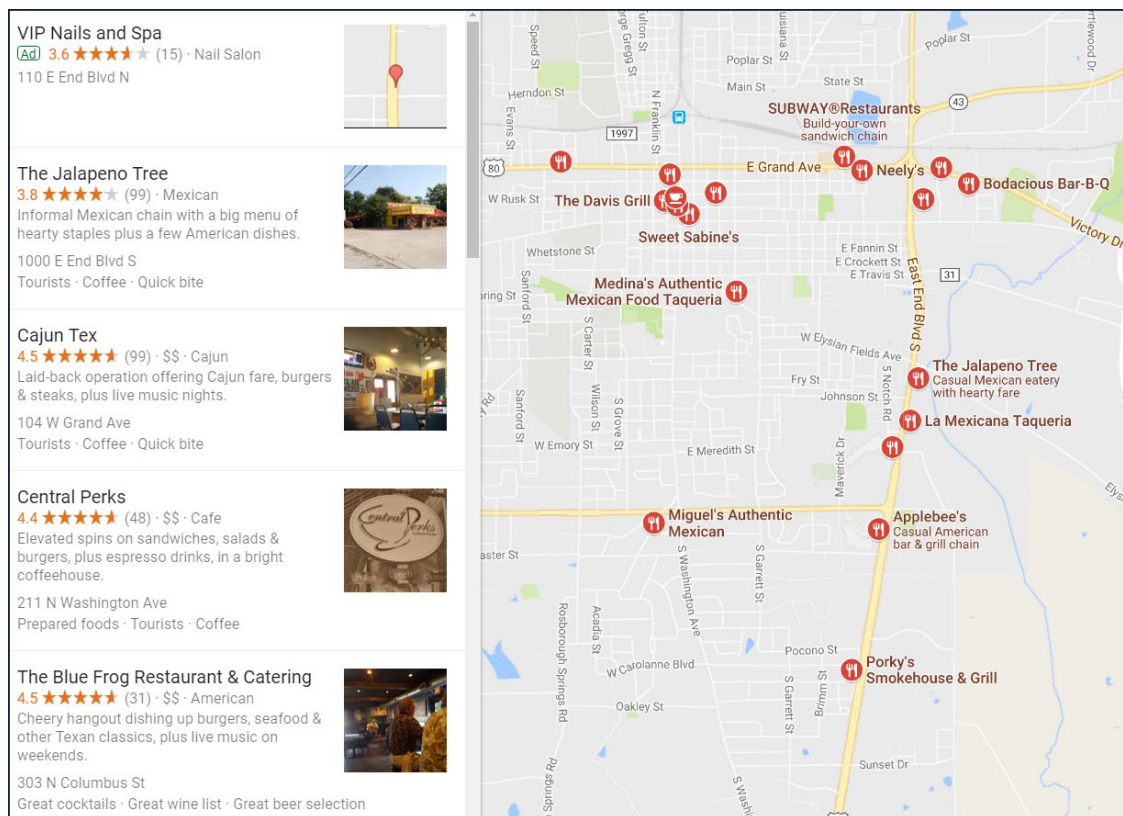

Source: http://schools.friscoisd.org/ms/vandeventer/site/resources/accessing-google-applications

62.   Google also provides advertising services to businesses in this District, including

soliciting reviews of patrons that have visited a business in the Eastern District of Texas, as shown

below.

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[17] See http://schools.friscoisd.org/ms/vandeventer/site/resources/accessing-google-applications

Source: product testing through www.maps.google.com

63.   Google also monitors traffic conditions in this District.   For example, traffic conditions between a McDonalds and the Federal Courthouse in Marshall, as shown below.
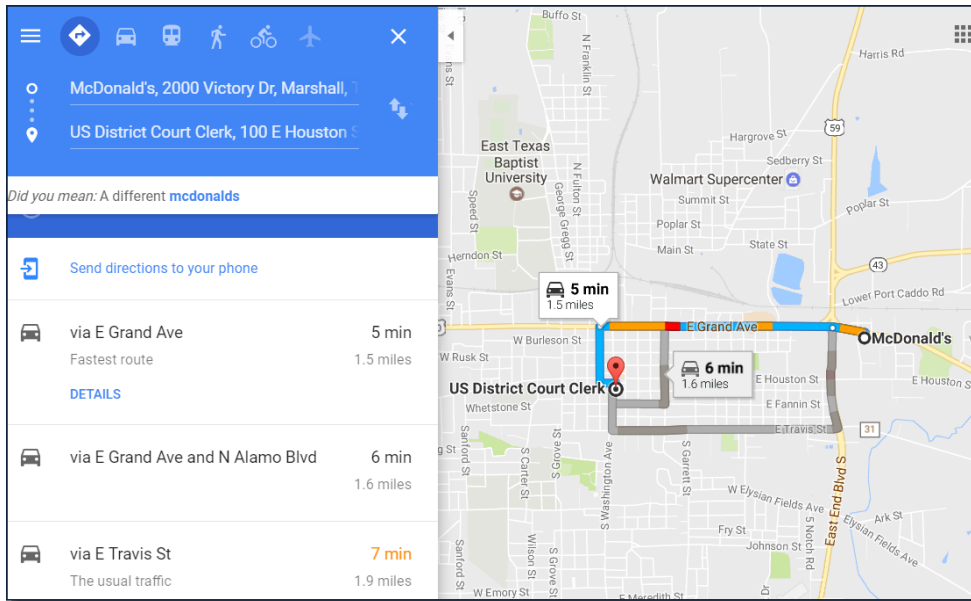
Source: Product testing at www.maps.google.com

64.   Separate and apart from its Google Fi mobile service, Google also provides telephone services to residents in this District through a product it calls Google Voice.[18] A user of Google voice can select local numbers, for example, in Marshall, TX.

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[18] See http://www.wikihow.com/Get-a-Google-Voice-Phone-Number

Source: Product testing at https://voice.google.com/signup
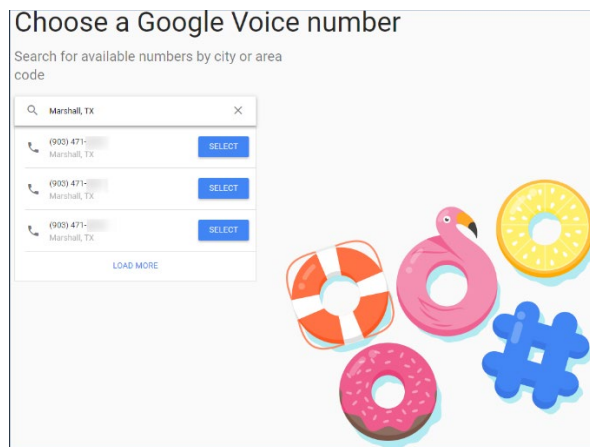
65.   Google provides Software-as-a-Service applications, including email and server space, to Texas public universities. Non-limiting examples of such universities are Texas A&M University (which has facilities in this District) and Texas A&M Commerce (located in this District), as shown below.

Source: http://google.tamu.edu/

Source: http://mailman.tamuc.edu/pipermail/students/2012-May/004325.html

Other Google Presence in the State

1.   Google also has pervasive connection to the state of Texas through multiple commercial activities.

2.   Google has purchased land in Midlothian, TX where it plans to build a half-a-billion dollar data center.[19]

3.   Since 2007, Google has employed "hundreds" of employees in Texas, including in Austin, Texas.[20]

4.   Google has at least one current office located in Austin, on North MoPac Expressway,[21] and additional office locations at University Park and Austin's Children Museum.[22]

5.   Google has leased over 200,000 square feet of office space in Austin, Texas, at 500 West 2nd Street.[23]

6.   Google has, as of September 2018, job postings for Addison, TX; Dallas, TX; Midlothian, TX; and Austin, TX (38 postings) including positions such as:[24]

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[19] *See* https://www.datacenterknowledge.com/google-alphabet/google-buys-property-build-data-center-near-dallas

[20] According to Gerardo Interiano, Google's public affairs and government relations manager, in a statement. *See* http://www.statesman.com/business/google-lease-200-000-square-feet-new-downtown-austin-tower/SANZSa3du8QQ4k8ytOC2rJ/

[21] *See* https://www.google.com/intl/en/about/locations/?region=north-america

[22] *See* http://www.statesman.com/business/google-lease-200-000-square-feet-new-downtown-austin-tower/SANZSa3du8QQ4k8ytOC2rJ/

[23] *See* http://www.statesman.com/business/google-lease-200-000-square-feet-new-downtown-austin-tower/SANZSa3du8QQ4k8ytOC2rJ/

[24] *See* https://careers.google.com/jobs#t=sq&q=j&li=20&l=false&jl=32.7766642%3A-96.79698789999998%3ADallas%2C+TX%2C+USA%3AUS%3A%3A25.77719109274963%3ALOCALITY&jld=20&&jcoid=7c8c6665-81cf-4e11-8fc9-ec1d6a69120c&jcoid=e43afd0d-d215-45db-a154-5386c9036525& and
https://careers.google.com/jobs#t=sq&q=j&li=20&l=false&jlo=en-US&jcoid=7c8c6665-81cf-4e11-8fc9-ec1d6a69120c&jcoid=e43afd0d-d215-45db-a154-5386c9036525&jl=30.267153%3A-97.74306079999997%3AAustin%2C+TX%2C+USA%3AUS%3A%3A20.13709231046343%3ALOCALITY%3A%3A%3A%3A%3A%3A%3A%3A%3A%3A%3A%3A%3A%3A&jld=20&

- Network Transport Engineer (Midlothian)

- Project Controls Group Lead, Google Data Centers (Dallas)

- Network Engineer, Tools (Addison)

- Cluster Security Manager (Austin)

7.   Upon information and belief, Defendant has at least eleven (11) entities registered in Texas, including:

- GOOGLE LLC

- GOOGLE ACQUISITION HOLDINC, INC.

- GOOGLE COMPARE AUTO INSURANCE SERVICES INC.

- GOOGLE COMPARE CREDIT CARDS INC.

- GOOGLE COMPARE MORTGAGES INC.

- GOOGLE FIBER INC.

- GOOGLE FIBER NORTH AMERICA INC.

- GOOGLE FIBER TEXAS, LLC

- GOOGLE INC.

- GOOGLE NORTH AMERICA INC.

- GOOGLE PAYMENT CORP.

8.   Google has provided, currently provides, and is currently offering to provide its Google Fiber services to the residents of Austin, Texas and San Antonio, Texas.[25]

9.   Google has invested $200,000,000 in the Spinning Spur wind farm project in Oldham County, Texas.[26]

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[25] See https://fiber.google.com/cities/austin/ and https://fiber.google.com/cities/sanantonio/
[26] See https://www.chooseenergy.com/blog/energy-news/google-invests-200m-in-west-texas-wind-farm/

10.   Google has massively scanned books from Texas public universities.

Source: https://www.lib.utexas.edu/google/faqs.html

11.   Google provides the State of Texas with aerial imagery.[27]

12.   Google acquired Waze in 2013,[28] and Google's Waze traffic app partners with cities and business in Texas, non-limiting examples include the Waze partnership with the city of Forth Worth to provide constant traffic data to the city.[29]   Another non-limiting example includes the Waze partnership with the Genesis Group in Tyler, to decrease emergency response times.[30]

COUNT I
(INFRINGEMENT OF U.S. PATENT NO. 6,622,018)

13.   Uniloc incorporates the preceding paragraphs above by reference.

14.   U.S. Patent No. 6,622,018 ("the '018 Patent"), entitled PORTABLE DEVICE CONTROL CONSOLE WITH WIRELESS CONNECTION issued on September 16, 2003. The '018 lists Rich Erekson as inventor. A true and correct copy of the '018 Patent is attached as Exhibit A hereto.

15.   Pursuant to 35 U.S.C. § 282, the '018 Patent is presumed valid. More than 112 references have cited the '018 Patent, including references from Hewlett-Packard, Samsung,

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[27] See http://www.bisconsultants.com/affordable-imagery-for-texas-government-entities-from-google/
[28] See https://techcrunch.com/2013/06/11/its-official-google-buys-waze-giving-a-social-data-boost-to-its-location-and-mapping-business/
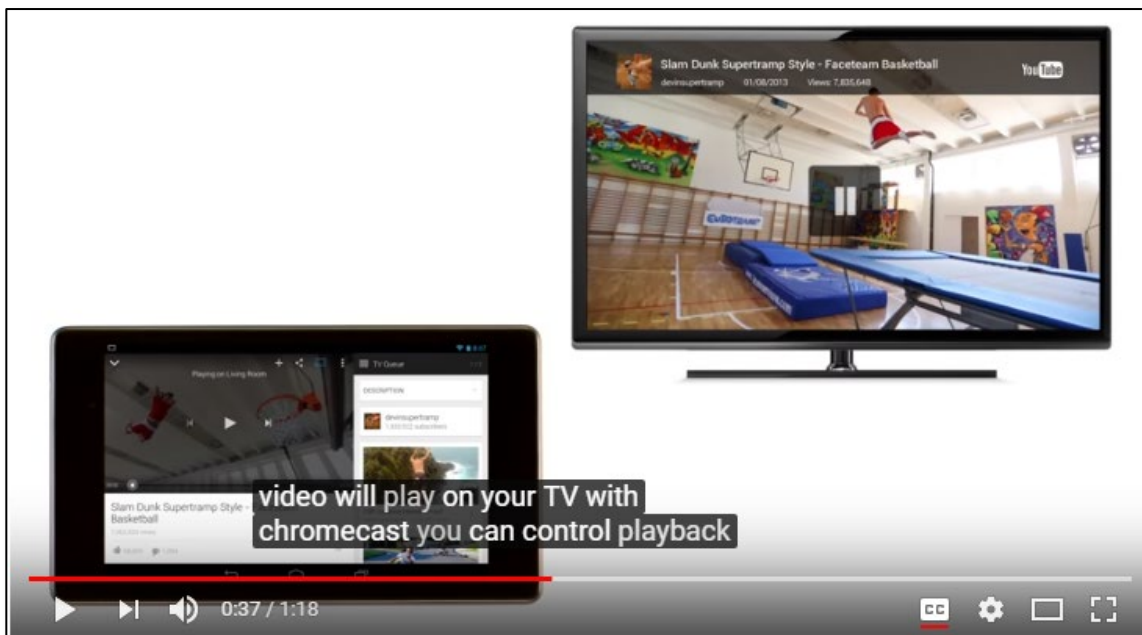[29] See http://dfw.cbslocal.com/2016/12/14/forth-worth-partners-with-waze-traffic-app/
[30] See https://genesispulse.com/2015/10/06/the-genesis-group-joins-waze-connected-citizens-program/
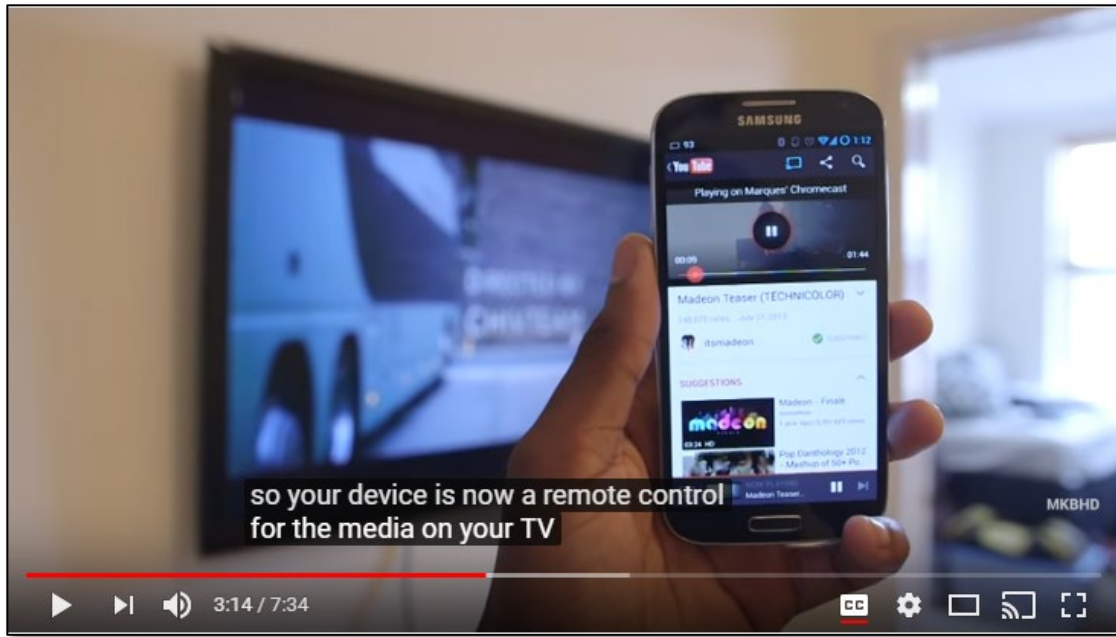
Motorola, and IBM.

16.   The '018 Patent describes inventive features that are not well-understood, routine, and conventional.

17.   Google makes, uses, offers for sale, sells and/or imports into the United States a product referred to a under the trade name "Google Cast." Google Cast enables the Android, iOS, or Chrome app to direct its streaming video and audio to a TV or sound system. The app becomes the remote control to play, pause, seek, rewind, stop, and otherwise control the media. Various cast devices like Chromecast, Chromecast Ultra, etc. uses this for casting features. The Google Cast SDK also allows developers to integrate the cast feature in different mobile applications. Collectively, such a system is referred to as the "Accused Infringing Devices."

18.   Google provides a method for controlling remote casting devices such as Chromecast, by a mobile device via wireless connection. The mobile device allows a user to cast media to the Chromecast device and provides the controls for the media like Play, Pause, etc.

Source: https://www.youtube.com/watch?v=RKjUPQCXnsM

Source: https://www.youtube.com/watch?v=TK4u6wm-HIk

19.   The media apps (e.g. YouTube) use Google Cast for casting media content to the devices like Chromecast. Once the cast starts, the media application becomes the remote control with options for play, pause, stop, etc.

Source: https://developers.google.com/cast/

20.   The sender applications operate as media applications (e.g. YouTube) running on the mobile device. The receiver device operates as remote device (e.g., Chromecast), used to cast media content via sender applications. The sender device (or mobile device) is allowed to control media content playing to the remote device (e.g. Chromecast) by sending respective messages, as

shown. A number of various control commands are allowed using the media applications.

> Google Cast sender applications control the playback on the receiver device by sending messages in JSON format to the receiver application. Likewise, the receiver sends messages back to the sender, also in JSON. The messages may be commands from the sender that change the player state, responses to those commands from the receiver, or data structures that describe the media for the receiver application.

Source: https://developers.google.com/cast/docs/reference/messages

supportedMediaCommands	flags	Flags describing which media commands the media player supports:
		• 1 Pause
		• 2 Seek
		• 4 Stream volume
		• 8 Stream mute
		• 16 Skip forward
		• 32 Skip backward
		Combinations are described as summations; for example, Pause+Seek+StreamVolume+Mute == 15.

Source: https://developers.google.com/cast/docs/reference/messages

21.   Google's Cast framework is used for media cast to remote devices (e.g. Chromecast) via media applications running over mobile device (or, transceiver). The Cast framework allows discovery of nearby cast devices prior to media casting. When the mobile device is connected to the same Wi-Fi network, it starts discovering the nearby cast devices (or, remote devices) by broadcasting a message. The cast devices (or, remote device) respond to the broadcasting message from the mobile device. The list of the discovered cast devices (or, remote devices) can be obtained by tapping the Cast button. When the user taps on a particular cast device (or, remote device), a wireless connection is established between both the devices (i.e. Chromecast and mobile device).

App flow

The following steps describe the typical high-level execution flow for a sender Android app:

- The Cast framework automatically starts MediaRouter device discovery based on the Activity lifecycle.

- When the user clicks on the Cast button, the framework presents the Cast dialog with the list of discovered Cast devices.

Source: https://developers.google.com/cast/docs/android_sender/integrate

Cast Button: The cast button is visible when a receiver is discovered that supports your app. When the user first clicks on the cast button, a cast dialog is displayed which lists the discovered devices. When the user clicks on the cast button while the device is connected, it displays the current media metadata (such as title, name of the recording studio and a thumbnail image) or allows the user to disconnect from the cast device.

Source: https://developers.google.com/cast/docs/android_sender/integrate

Source: https://www.youtube.com/watch?v=68jKxTvub7Y
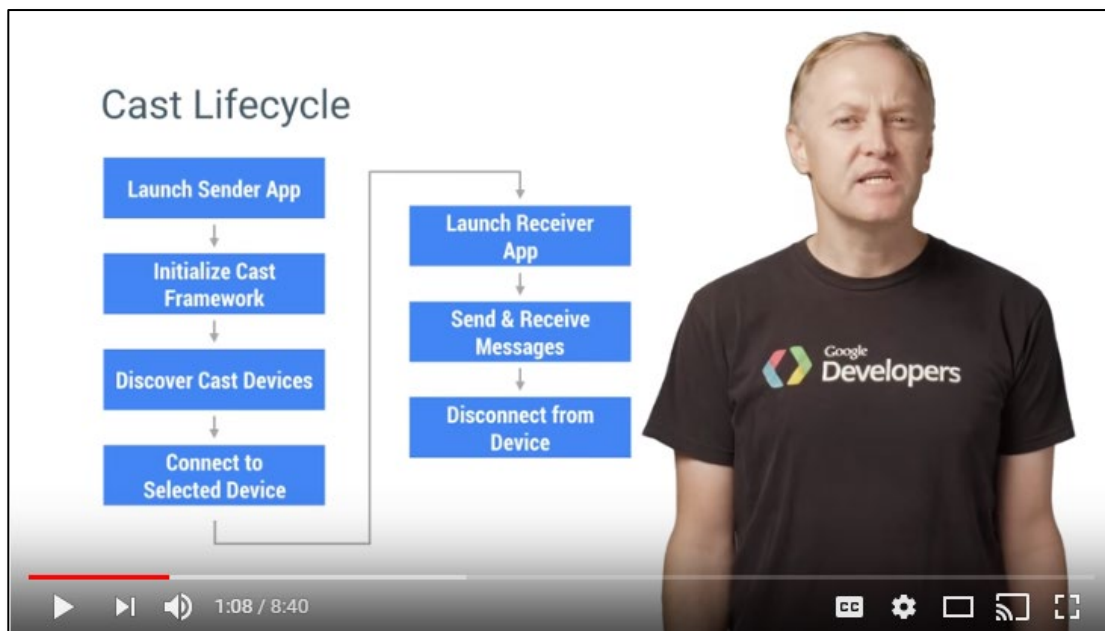
22.   Chromecast operates on the mDNS protocol for discovery. The mobile device (or,

transceiver) running media cast applications (e.g. YouTube) broadcast PTR requests (or, messages)

for locating the cast devices in the network range. The cast devices (or, remote devices e.g.

Chromecast) respond to these requests and make themselves discoverable.

Source: https://github.com/jloutsenhizer/CR-Cast/wiki/Chromecast-Implementation-Documentation-WIP#dialssdp

23.   The following illustrates an operation with Chromecast.   As soon as a media

application (Google's YouTube app in this case) was launched, the "_googlecast._tcp.local" PTR

requests were observed from the mobile device (IP address: 192.168.137.94). When the cast button

was tapped on the mobile device, the list of nearby cast devices could be seen. The Chromecast

device (IP address: 192.168.137.234) sent response to the cast query. This shows that when the mDNS

requests are broadcasted by the mobile device, the cast device responds to the requests and is discovered

consequently.

24.   When the media cast to the Chromecast is started, the media application displays (or, manifests) the name and controls of Chromecast (or, remote device) on the mobile device. The media application on the mobile device displays the control notification on the mobile device. This control notification includes the various controls like play, pause, etc.

Fig. 1

Source: https://www.youtube.com/watch?v=TK4u6wm-HIk
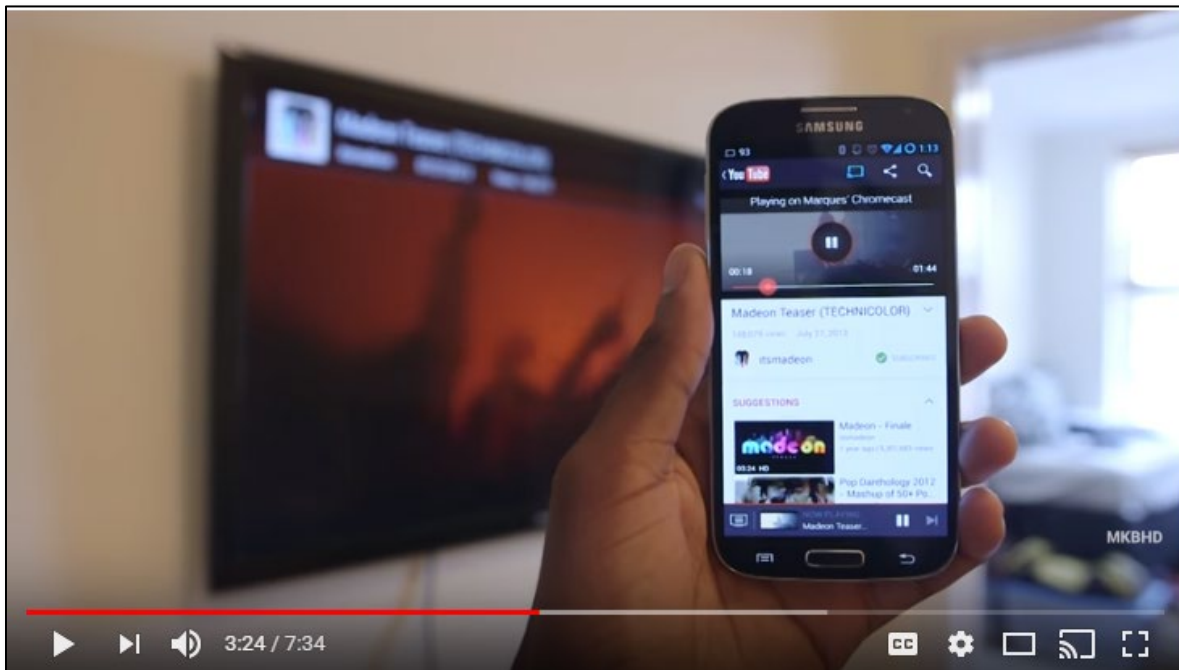
25.   Once the media cast is started on the cast device (or, remote device), the mobile

device's media application screen is used to input media controls. Different areas on the media

control screen on the mobile device provides different control features like pause, stop, etc.

> Google Cast sender applications control the playback on the receiver
> device by sending messages in JSON format to the receiver application.
> Likewise, the receiver sends messages back to the sender, also in JSON.
> The messages may be commands from the sender that change the
> player state, responses to those commands from the receiver, or data
> structures that describe the media for the receiver application.

Source: https://developers.google.com/cast/docs/reference/messages

supportedMediaCommands	flags	Flags describing which media commands the media player supports:
		• 1 Pause
		• 2 Seek
		• 4 Stream volume
		• 8 Stream mute
		• 16 Skip forward
		• 32 Skip backward
		Combinations are described as summations; for example, Pause+Seek+StreamVolume+Mute == 15.

Fig. 2

Source: https://developers.google.com/cast/docs/reference/messages

26.   when a media control icon (e.g., play button, pause button, etc.) is tapped on a

particular position over the control screen, the mobile device converts this tap (or, input) into a

command. This command is related to a particular control of the remote device (e.g., Chromecast).

Source: https://support.apple.com/en-us/HT204974
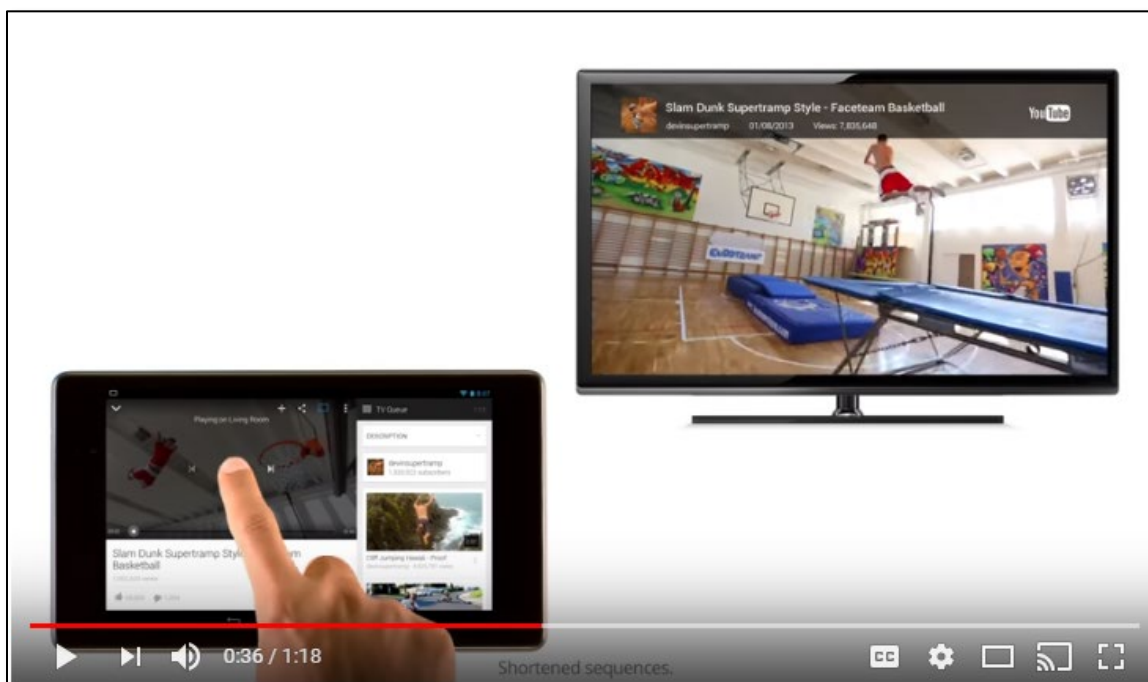
27.   The media control icons tapped on the mobile device are converted to various control commands for the remote device (e.g. Chromecast). These commands are sent to the remote device (e.g. Chromecast) as messages and change the media player state. For instance, both the devices are connected to the same wireless network to enable this feature thus, these commands are carried over the wireless connection established between the devices.

Google Cast sender applications control the playback on the receiver device by sending messages in JSON format to the receiver application. Likewise, the receiver sends messages back to the sender, also in JSON. The messages may be commands from the sender that change the player state, responses to those commands from the receiver, or data structures that describe the media for the receiver application.

Source: https://developers.google.com/cast/docs/reference/messages

28.   Google has directly infringed and continues to directly infringe one or more claims of the '018 Patent in the United States during the pendency of the '018 Patent, including at least claim 1 literally and/or under the doctrine of equivalents, by or through making, using, offering for sale

and/or selling the Accused Infringing Devices that operate as described above.

29.   In addition, should the Accused Infringing Devices be found to not literally infringe claims of the '018 Patent, use of the devices would nevertheless infringe one or more claims of the '018 Patent. More specifically, the devices perform substantially the same function (a first device remotely controlling a second device over a wireless connection) in substantially the same way (using wireless commands to cause the second device to perform a selected function) to yield substantially the same result (performance of a function by the second device that cannot be performed on the first device). Google would thus be liable for direct infringement under the doctrine of equivalents.

30.   Google has indirectly infringed and continues to indirectly infringe at least claim 1 of the '018 Patent in this judicial district and elsewhere in the United States by, among other things, actively inducing the using, offering for sale or sell1ing the Accused Infringing Devices. Google's customers who use such devices in accordance with Google's instructions directly infringe one or more of claims of the '018 Patent in violation of 35 U.S.C. § 271. Google directly and/or indirectly intentionally instructs its customers to infringe through training videos, demonstrations, brochures, installation and/or user guides such as those located at one or more of the following:

- https://www.youtube.com/watch?v=RKjUPQCXnsM
- https://www.youtube.com/watch?v=TK4u6wm-HIk
- https://developers.google.com/cast/
- https://developers.google.com/cast/docs/reference/messages
- https://developers.google.com/cast/docs/android_sender/integrate
- https://www.youtube.com/watch?v=68jKxTvub7Y

31.   Google has indirectly infringed and continues to indirectly infringe at least claim 1 of the '018 Patent by, among other things, contributing to the direct infringement by others including, without limitation customers using the Accused Infringing Devices, by making, offering to sell, selling and/or importing into the United States, a component of a patented machine,

manufacture or combination, or an apparatus for use in practicing a patented process, constituting a material part of the invention, knowing the same to be especially made or especially adapted for use in infringing the '018 Patent and not a staple article or commodity of commerce suitable for substantial non-infringing use.

32.   Google will have been on notice of the '018 Patent since, at the latest, the service of this complaint upon Google. By the time of trial, Google will have known and intended (since receiving such notice) that its continued actions would actively induce and contribute to the infringement of one or more of claims of the '018 Patent.

33.   Google may have infringed the '018 Patent through other devices, systems, and software utilizing the same or reasonably similar functionality as described above. Uniloc reserves the right to discover and pursue all such additional infringing software and devices.

34.   Uniloc has been damaged by Google's infringement of the '018 Patent.

<u>PRAYER FOR RELIEF</u>

Uniloc requests that the Court enter judgment against Google as follows:

(A)   declaring that Google has infringed the '018 Patent;

(B)   awarding Uniloc its damages suffered as a result of Google's infringement of the '018 Patent pursuant to 35 U.S.C. § 284;

(C)   awarding Uniloc its costs, attorneys' fees, expenses and interest; and

(D)   granting Uniloc such further relief as the Court may deem just and proper.

DEMAND FOR JURY TRIAL

Uniloc hereby demands trial by jury on all issues so triable pursuant to Fed. R. Civ. P. 38.

Dated: December 30, 2018

Respectfully submitted,

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