

1 Mayela C. Montenegro-Urch (SBN: 304471)
mmontenegro@shb.com
2 SHOOK, HARDY & BACON L.L.P.
Jamboree Center
3 5 Park Plaza, Suite 1600
Irvine, California 92614
4 Telephone: (949) 475-1500
Facsimile: (949) 475-0016
5

6 Robert H. Reckers (*pro hac*)
rreckers@shb.com
7 SHOOK, HARDY & BACON L.L.P.
600 Travis, Suite 3400
8 Houston, Texas 77002
Telephone: (713) 227 – 8008
9 Facsimile: (713) 227 - 9508

10 Attorneys for Plaintiff
11 Sandpiper CDN, LLC
12

13 IN THE UNITED STATES DISTRICT COURT
14 FOR THE CENTRAL DISTRICT OF CALIFORNIA
15

16 SANDPIPER CDN, LLC,

17 *Plaintiff,*

18
19 v.

20 GOOGLE LLC,

21 *Defendant.*
22

Civil Case No. 2:24-03951-AB-RAO

**FIRST AMENDED COMPLAINT
FOR PATENT INFRINGEMENT;
JURY TRIAL DEMANDED**

23 **FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT**

24 Plaintiff Sandpiper CDN, LLC (“Sandpiper CDN” or “Plaintiff”) hereby files
25 this First Amended Complaint for Patent Infringement against Google LLC
26 (“Google” or “Defendant”), alleging infringement of U.S. Patent Nos. 8,478,903;
27 8,645,517; 9,021,112; 10,924,573; and 10,057,322.
28

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

1 **JURISDICTION**

2 1. This action arises under the United States Patent Laws, Title 35 of the
3 United States Code. This Court has subject matter jurisdiction over this action under
4 28 U.S.C. §§ 1331 and 1338(a).

5 2. This Court has personal jurisdiction over Google in this action because
6 Google has committed acts within the Central District of California giving rise to this
7 action and has established minimum contacts with this forum such that the exercise
8 of jurisdiction over Google would not offend traditional notions of fair play and
9 substantial justice. Defendant Google, directly and/or through subsidiaries or
10 intermediaries, has committed and continues to commit acts of infringement in this
11 District by, among other things, using, offering to sell, and selling products and/or
12 services that infringe the Asserted Patents. Google maintains offices and facilities in
13 this District and actively directs its activities to customers located in the State of
14 California.

15 **PARTIES**

16 3. Plaintiff Sandpiper CDN is a Delaware limited liability company with
17 its principal place of business in Wilmington, Delaware.

18 4. Defendant Google LLC is a Delaware limited liability company with
19 its principal place of business at 1600 Amphitheatre Parkway, Mountain View,
20 California 94043. Google maintains a permanent physical presence within the
21 Central District of California, including at 340 Main Street, Los Angeles, California
22 90291; 12422 W. Bluff Creek Drive, Playa Vista, California 90094; and 5865 Campus
23 Center Drive, Playa Vista, California 90094.¹

24 **NATURE OF THE ACTION**

25 5. This is a civil action against Google for patent infringement arising
26 under the United States Patent Laws, 35 U.S.C. § 271, *et. seq.* for the infringement of

27 _____
28 ¹ https://about.google/intl/ALL_us/locations/?region=north-america.

1 United States Patent Nos. 8,478,903; 8,645,517; 9,021,112; 10,924,573; and
2 10,057,322 (collectively “the Asserted Patents”). A true and correct copy of each
3 Asserted Patent is attached to this Complaint as Exhibits A-E, respectively. Each of
4 the Asserted Patents is owned by Plaintiff Sandpiper CDN, and Plaintiff and/or its
5 predecessors-in-interest have satisfied all statutory obligations required to collect pre-
6 and post-filing damages for the full period allowed by law for infringement of the
7 Asserted Patents, including compliance with 35 U.S.C. § 287.

8 **VENUE**

9 6. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b) and
10 (c) and/or 1400(b). Defendant Google maintains a regular and established place of
11 business in the Central District of California and has committed and continues to
12 commit acts of patent infringement in the Central District of California.

13 7. Google maintains regular and established places of business in this
14 District, located at 340 Main Street, Los Angeles, California 90291; 12422 W. Bluff
15 Creek Drive, Playa Vista, California 90094; and 5865 Campus Center Drive, Playa
16 Vista, California 90094.

17 8. Google has conducted and conducts business in the State of California,
18 including in this District. Google, either directly or through subsidiaries and/or
19 intermediaries, makes, uses, offers for sale, sells, and/or advertises its infringing
20 products and/or services in the Central District of California. Google further directs
21 and encourages its customers to use its infringing products and/or services in the
22 United States and the Central District of California.

23 9. Google, either directly or through subsidiaries and/or intermediaries,
24 has voluntarily placed one or more of its infringing products and/or services into the
25 stream of commerce with the expectation that those products and/or services will be
26 purchased and used by customers in the Central District of California. These
27 infringing products and/or services have been and continue to be used, sold, offered
28

1 for sale, and/or purchased by customers and/or consumers in the Central District of
2 California.

3 **FACTUAL BACKGROUND**

4 **Content Delivery Networks**

5 10. Today, content delivery networks (“CDN”) provide the critical services
6 that enable content providers to quickly deliver online content to millions of
7 consumers simultaneously over the Internet. But this has not always been the case.

8 11. In the early 1990s, the World Wide Web saw increasing adoption,
9 becoming a household staple. This mass adoption led to data congestion issues due
10 to the ever-growing number of users seeking to simultaneously access Internet
11 content. A typical computer server in the 1990s, for example, could only handle a
12 limited number of simultaneous connections before becoming overloaded. Moreover,
13 signals take time to move through physical internet cables, and consumers living far
14 from the physical server(s) hosting content experienced sluggish load times and high
15 latency due to problems such as overloaded servers, congested network segments, and
16 geographic separation.

17 **Sandpiper Networks**

18 12. In the mid-1990s, Andrew Swart and David Farber were among the
19 first individuals to develop services that allowed content providers to distribute their
20 content over the Internet, while avoiding the common congestion and performance
21 issues that plagued Internet transmission at that time. One solution was to deploy
22 CDN servers around the world, replicate appropriate content from customers’ origin
23 servers to appropriate CDN servers, transparently rendezvous end users requesting
24 that content to the “best” CDN server to deliver that content, while providing their
25 customers with control over their content and user experience. This service and its
26 architecture was quickly imitated by many others in the industry.

13. Using solutions developed by Mr. Swart and Mr. Farber, consumers would connect to an edge server that was closer to them and that had available bandwidth. Distributing content across a network of servers alleviated data congestion issues and allowing consumers to connect to edge servers located near them reduced latency. Messrs. Swart and Farber developed and built systems and methods for propagating data from origin servers to edge servers (a process known as “caching”) based on network demand and for seamlessly routing users to the optimal edge server with the correct content.

14. In 1996, Mr. Swart and Mr. Farber founded Sandpiper Networks Inc. to further develop and commercialize their novel concept for a content delivery network. Sandpiper Networks was based in Thousand Oaks, California. Beginning in 1996, Sandpiper Networks designed and built a CDN referred to as “Footprint.” By at least May 24, 1996, the Sandpiper team had conceived techniques for delivering streaming resources, such as audio and video, using Sandpiper’s CDN.

15. Sandpiper Networks labored not only to build and implement its CDN, but also to protect their groundbreaking innovation through the patent system. Recognizing that its invention could revolutionize content delivery worldwide, Sandpiper Networks filed numerous patent applications directed to its foundational CDN technology, including U.S. Patent Application No. 09/021,506 (“the ‘506 application”), which was filed on February 10, 1998.

16. By at least May 1998, Sandpiper Networks was caching content and delivering cached content to end users of content providers using its CDN. Sandpiper Networks' first paying customer was the L.A. Times, which paid Sandpiper Networks to host the report of Independent Counsel Ken Starr on his investigation of President Bill Clinton ("the Starr Report") beginning on September 11, 1998. Sandpiper Networks's CDN was capable of caching, and used to cache and deliver Internet

resources including *inter alia*, pictures, text files, dynamic resources, and streaming multimedia resources.

17. By October 30, 1998, Sandpiper Networks had partnered with WebRadio to utilize Sandpiper Networks's CDN to deliver streaming audio from radio stations on behalf of WebRadio. This streaming audio was readily available to any Internet user.

18. On April 19, 1999, Sandpiper Networks used its CDN to broadcast a live concert by the band "Big Bad Voodoo Daddy."

19. In December 1999, Sandpiper Networks merged with Digital Island, Inc. ("Digital Island"), which filed additional patent applications directed to CDN technology. For example, patent application, U.S. Patent Application No. 09/612,598 ("the '598 application"), was filed as a continuation of the '506 application and eventually resulted in the '903 Patent, which issued on July 2, 2013.

20. Following a series of acquisitions, the assets of Sandpiper Networks and Digital Island, as well as their CDNs and patents, were acquired by Level 3 in January 2007.

Level 3 Enters the CDN Market

21. Following its acquisition of Sandpiper Networks's CDN, Level 3 understood the groundbreaking technologies pioneered by Sandpiper Networks. Level 3 continued building upon the foundation laid by Sandpiper, eventually becoming one of the foremost CDN operators in the United States.

22. Level 3 also continued innovating upon the CDN technologies developed by Sandpiper Networks. On March 21, 2009, Level 3 filed U.S. Patent Application No. 12/408,681 ("the '681 application").

23. A continuation of the '681 application issued as the '573 Patent on February 16, 2021. On March 14, 2013, Level 3 filed U.S. Patent Application No.

1 13/828,251 (“the ’251 application”) directed to improving the delivery of content in
2 a CDN. A division of the ’251 application issued as the ’451 Patent on October 8,
3 2018.

4 24. On August 14, 2018, Level 3 filed U.S. Patent Application 16/103,575,
5 which issued as the ’579 Patent on February 16, 2021.

6 25. On April 27, 2020, Level 3 filed U.S. Patent Application No.
7 16/859,918 (“the ’918 application”) directed to improving storage of content in
8 CDNs. The ’918 application issued as the ’520 Patent on October 4, 2022.

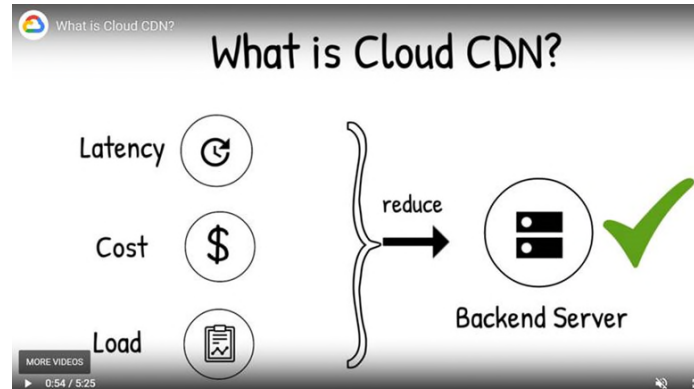
9 **Industry Infringement**

10 26. In the early-to-mid 2000s, demand for CDNs exploded. This increased
11 demand prompted a slew of companies to enter the CDN market. These companies
12 commercialized their own CDNs that incorporated the foundational CDN technology
13 pioneered and patented by Sandpiper Networks and Level 3. In doing so, these
14 companies capitalized on the investment made into CDN research and development
15 made by Level 3 and/or its predecessors, misappropriating years of research and
16 investments.

17 **Google’s Infringing Services**

18 27. One such company is Google. Google built its own in-house CDN,
19 which uses technology described and claimed by the Asserted Patents. For example,
20 YouTube, which Google purchased in 2006, relies upon CDN technology to meet its
21 enormous data streaming needs, as well as Google’s video search results (powered by
22 YouTube). Google uses and provides content delivery network(s) (“Google CDN”),
23 including Google’s internal services and services Google offers to third parties that
24 are used to provide content, such as webpages and/or video streams, over a network.
25 On its website, Google touts the benefits of its infringing CDN services, noting the
26 cost savings and improved performance achieved by using this technology.²

27 _____
28 ² <https://cloud.google.com/cdn>



28. Google CDN is used and sold by Google in connection with services such as Google Cloud CDN, Google Media CDN, Google Cloud DNS, YouTube, and YouTube TV.

29. Google did not license this patented technology from Sandpiper CDN, Level 3 and/or its predecessors. After implementing its in-house CDN using technology described and claimed by the Asserted Patents, Google began directly competing with Level 3 by offering CDN services to third parties.

Sandpiper CDN

30. Given the rampant infringement of its patents, which depressed its revenue and profit, Level 3 decided to exit the CDN market in 2023 and began selling off its CDN assets. Level 3 sold the Asserted Patents to Plaintiff Sandpiper CDN in 2024. As such, Sandpiper CDN is presently the owner in right, title, and interest in and to each of the Asserted Patents.

31. Named after, and in homage to, the company that originally pioneered and developed CDN technologies in the 1990's, Sandpiper CDN now brings this suit to address Google's longstanding infringement of the patented technology claimed by the Asserted Patents. The Asserted Patents are valid and enforceable, and the

1 inventions claimed in the Asserted Patents were novel, non-obvious, unconventional,
2 and non-routine at least as of their respective filing dates.

3 **ASSERTED PATENTS**

4 32. Patent Number 8,478,903 (“the ’903 Patent”) is entitled “Shared
5 Content Delivery Infrastructure,” and it claims priority to U.S. Patent Application No.
6 09/021,506, filed on February 10, 1998.

7 33. One issue related to using CDN technology is delivering resources
8 associated with more than one content provider. The inventors of the ’903 Patent
9 understood that website owners and other content providers want to have their own
10 internet domain shown in end users’ browsers, even when the content providers are
11 using a CDN to serve their content.

12 34. The ’903 Patent is directed to CDN technology and to solving issues
13 related to delivering resources from more than one content provider. In some
14 embodiments, this involves replicating content from a source associated with a client
15 of a CDN network onto CDN servers. End user requests are then directed to the CDN
16 servers instead of to the client’s source servers (generally referred to as “origin”
17 servers), in some cases. Embodiments of the ’903 Patent address issues such as load
18 balancing and reducing traffic to client origin servers. When an origin server receives
19 and must reply to multiple requests, delivery of content from a content provider can
20 be slow. Methods of using CDN servers to deliver content as described in the ’903
21 Patent help to solve this issue.

22 35. The inventors devised the concrete solutions recited in the ’903 Patent
23 to address unique problems related to providing content from various content
24 providers using CDN technology. For instance, the inventors conceived of approaches
25 to content delivery in a network for delivering resources associated with more than
26 one content provider, embodiments of which involve a shared CDN server and alias
27 names in order to provide resources in response to requests. The solutions recited in
28

1 the claims of the '903 Patent include specific combinations that were not conventional
2 at the time of the invention of the '903 Patent. The '903 Patent describes how such
3 solutions are implemented. As one example, the '903 Patent describes using a second
4 alias name in association with a second resource and a second content provider, and
5 a table that can be consulted to determine a content provider associated with a
6 particular resource. Specific innovations by the inventors enable CDN customers to
7 use their own name while using a provider's CDN services to serve content to end
8 users.

9 36. Patent Number 8,645,517 (the '517 Patent) is entitled "Policy-Based
10 Content Delivery Network Selection." The '517 Patent claims priority to U.S. Patent
11 Application Number 10/259,497, filed on September 20, 2002.

12 37. When using CDN technology, challenges arise related to network
13 traffic associated with requests for content. For example, companies that want to
14 provide their content to end users using a CDN face issues regarding directing
15 network traffic to serve end users' requests. As one example, issues arise when trying
16 to deliver content from multiple servers at geographically-separated locations with
17 suitable end-user experiences under high traffic loads.

18 38. The inventors of the '517 Patent understood these challenges faced by
19 CDN providers and their customers relating to directing network traffic and end-user
20 requests for content. The inventors devised solutions utilizing Domain Name Server
21 (DNS) technology and allowing for the resolution of requests to multiple CDNs based
22 on various policies. Embodiments of the disclosed invention solve network traffic
23 issues such as server failure, and controlling the distribution of requests according to
24 economic or contractual parameters, by providing a network distribution
25 infrastructure that can be configured with network traffic rules. These rules can
26 account for factors like server availability, geolocation, load, and latency. The '517
27 Patent address specific needs in the art via specific combinations, which were not
28

1 conventional at the time of the invention of the '517 Patent, and the '517 Patent
2 describes how specific technical solutions are achieved. For instance, content
3 providers must address how to handle requests from end users, in some cases in
4 accordance with policy constraints faced by the content providers, even as network
5 conditions affecting the Internet are subject to change. The inventors of the '517
6 Patent developed methods to address these issues, including methods in which a
7 server network implements policy-based traffic direction. For example, embodiments
8 of the invention in the '517 Patent provide a specific graphical user interface for
9 obtaining at least one policy for the direction of network traffic, such as using a
10 decision tree with resource and branch nodes. The various criteria that can be used
11 may relate to IP addresses or geographic zones, with answers consisting of IP
12 addresses and CNAMEs, for example.

13 39. Patent Number 9,021,112 ("the '112 Patent") is entitled "Content
14 Request Routing and Load Balancing For Content Distribution Networks." The '112
15 Patent is a divisional application of U.S. Patent Application No. 09/982,721, filed on
16 October 18, 2001.

17 40. When offering CDN services, there is a need for responding to requests
18 by providing content quickly and without unnecessary network traffic to more distant
19 sources. Providers of CDN services face challenges relating to serving content in a
20 timely manner from multiple servers while maintaining a positive user experience.

21 41. The inventors of the '112 Patent solved these issues as described in the
22 '112 Patent. For example, the '112 Patent includes solutions using DNS technology
23 and anycast addresses in a CDN where the DNS infrastructure routes the content
24 request to the server that is closest in terms of network distance to the user. The
25 described solutions improve upon anycast DNS. The solutions in the '112 Patent
26 address issues relating to bandwidth and latency, which users may experience as
27 unacceptable delays. The inventors of the '112 Patent recognized the impact on users'

1 experiences due to these problems. The inventors devised methods for delivering
2 content in a network involving using multiple servers to serve requests. For example,
3 the inventors provided methods of causing servers to respond to requests, including
4 by using certain hostnames in association with certain servers to retrieve content for
5 users. The solutions recited in the claims of the '112 Patent include specific
6 combinations that were not conventional at the time of the invention of the '112
7 Patent. The '112 Patent describes how the solutions are implemented. For instance,
8 the claimed solutions in the '112 Patent can improve localization for DNS, where
9 servers as close as possible may be desirable but may provide too many options, while
10 the use of anycast as recited in the '112 Patent can be used to leverage servers closest
11 in the network and to leverage the Border Gateway Protocol and provide for co-
12 location of servers, for example.

13 42. Patent Number 10,924,573 ("the '573 Patent") is entitled "Handling
14 Long-Tail Content in a Content Delivery Network (CDN)," and it claims priority to
15 Provisional Patent Application No. 61/042,412, filed on April 4, 2008.

16 43. CDN technology generally includes multiple servers used to serve
17 content, which can create problems relating to responding to requests for content. For
18 example, technical issues arise in the context of content delivery using a network and
19 multiple servers, relating to handling requests for resources and timely providing
20 resources to requesting devices.

21 44. The inventors of the '573 Patent described solutions to these problems
22 in the '573 Patent. The '573 Patent describes a CDN including a tiered server system.
23 In some embodiments, a first tier server attempts to respond to a user request for
24 content. If the first tier server does not have the content, and the content is popular,
25 that server will request the content from higher tier server and subsequently cache the
26 content for future delivery, for example. The disclosed invention addresses the reality
27 of storage limitations by setting forth a framework that automatically caches only
28

1 popular content, thus both speeding up content delivery and preserving memory space
2 for popular content, in some cases. The inventors devised solutions as shown in the
3 embodiments claimed by the '573 Patent, for example methods for using tiers of
4 servers and specific processes for obtaining content for a requesting device. The
5 solutions recited in the claims of the '573 Patent include particular combinations that
6 were not conventional at the time of the invention of the '573 Patent, such as specific
7 technical improvements to content delivery networks, and the '573 Patent describes
8 how the solutions are implemented.

9 45. Patent Number 10,057,322 ("the '322 Patent") is entitled "Network
10 Address Resolution," and it claims priority to Provisional Patent Application No.
11 62/098,930 ("the '930 Application"), filed on December 31, 2014.

12 46. The '322 Patent is directed to novel techniques for improving the
13 performance of content delivery networks (CDNs), in some cases using an application
14 programming interface (API) "to embed link resolution information within an HTML
15 document or other content returned to a requesting client." *See* '322 Patent, 1:16-18.
16 Aspects of the '322 Patent "involve an alternative to using conventional domain name
17 system (DNS) servers for edge selection by instead calling an API or otherwise
18 querying the CDN when constructing a uniform resource locator (URL) for the
19 resource to be delivered from the CDN." *See id.* at 3:10-14. The solutions described
20 in the '322 Patent were unconventional at the time of the invention of the '322 Patent
21 and continue to offer numerous technical benefits.

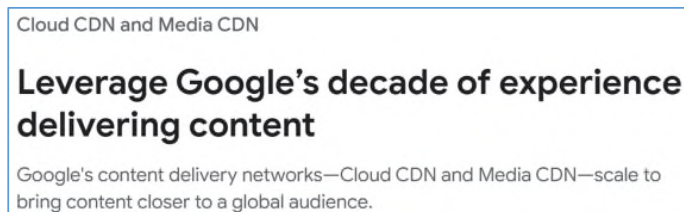
22 47. For example, as users were able to access more content (e.g., television,
23 movies, news, software updates) on networks, the network providers sought
24 alternatives to routing requests through DNS to select an edge server. *See id.* at 1:39-
25 50. The inventors of the '322 Patent devised techniques for bypassing DNS, thereby
26 reducing the number of components involved in servicing requests while improving
27 response speeds while delivering content.

1 48. As stated during prosecution of the application that resulted in the '322
2 Patent, the claims provide “specific, discrete implementation[s] . . . and do[] not
3 preempt all uses of such an idea(s).” See Amendment and Response to Non-Final
4 Office Action dated March 15, 2018, p. 9 (quotes omitted). For example, the inventors
5 developed a novel technique to “providing, at a content delivery network, an
6 application programming interface (API); at the API, receiving, from an origin system
7 that is separate from the content delivery network, an embedded resource and at least
8 one parameter associated with the embedded resource; generating a modified
9 embedded resource providing a direct link to a node within the content delivery
10 network for obtaining content associated with the embedded resource; delivering, by
11 the content delivery network, the modified embedded resource to the origin system;
12 receiving, at the node, a request from a client device to obtain the content; and
13 providing the content to the client device.” See *id.* at claim 15.

14 49. The solutions described and claimed in the '322 Patent improve the
15 functioning of a CDN, including, for example, offloading computational resource
16 consumption away from a client-side DNS infrastructure, and instead having content
17 retrieved from an optimal node instead of another suboptimal node that would cause
18 errors in the network or a longer request service time.

19 **THE ACCUSED GOOGLE CDN FUNCTIONALITIES**

20 50. The accused Google functionalities comprise Google CDN. For
21 example, Google uses and sells CDN services via its Cloud CDN and Media CDN
22 offerings, as shown by the below excerpts from Google’s website.



<https://cloud.google.com/cdn?hl=en>

Cache hits and cache misses

A cache is a group of servers that stores and manages content so that future requests for that content can be served faster. The cached content is a copy of cacheable content that is stored on origin servers.

<https://cloud.google.com/cdn/docs/overview>

IP addressing

Each Edge Cache service that you configure has dedicated, anycast IPv4 and IPv6 addresses, which are associated with each Edge Cache service that you create and are not shared with other customers.

<https://cloud.google.com/media-cdn/docs/client-connectivity>

Media CDN lets you easily fetch content from publicly accessible HTTP endpoints. You can use Media CDN with your existing origin infrastructure, whether the content is hosted within Cloud Storage, in another cloud, or within your on-premises infrastructure.

<https://cloud.google.com/media-cdn/docs/overview#certificate-support>

- Cache fill between the origin and Google's own edge infrastructure is entirely over Google's global private backbone network, which reduces cache fill latency and improves reliability—both are active benefits for live streaming workloads.
- Caches cross-fill from each other where advantageous to do so, further driving down cache fill rates.

<https://cloud.google.com/media-cdn/docs/origins#origin-requirements>

Advanced routing features

Media CDN provides advanced HTTP routing capabilities that let you map traffic to specific edge configurations and origins at a fine-grained level.

For more information, see [Advanced routing](#).

<https://cloud.google.com/media-cdn/docs/overview#certificate-support>

1
2 51. Google CDN leverages Google’s “Cloud DNS,” which provides a
3 plurality of Domain Name System (DNS) servers (*e.g.*, via providing “anycast name
4 servers”).

5
6 Use Google’s infrastructure for
7 production quality and high-
8 volume authoritative DNS serving.
9 Your users will have reliable, low-
10 latency access from anywhere in
11 the world using our anycast name
12 servers.

Cloud DNS can scale to large
numbers of DNS zones and
records. You can reliably create
and update millions of DNS
records. Our name servers
automatically scale to handle
query volume.

13 <https://cloud.google.com/dns?hl=en>

14 **Fast anycast name servers**

15 Cloud DNS uses our global network of anycast name servers
16 to serve your DNS zones from redundant locations around the
17 world, providing high availability and lower latency for your
18 users.

19 <https://cloud.google.com/dns?hl=en>

20 Google Cloud DNS is a scalable, reliable and managed authoritative Domain
21 Name System (DNS) service running on the same infrastructure as Google. It
22 has low latency, high availability and is a cost-effective way to make your
23 applications and services available to your users.

24 [https://console.cloud.google.com/marketplace/product/google-cloud-
platform/cloud-dns](https://console.cloud.google.com/marketplace/product/google-cloud-platform/cloud-dns)

25 **YouTube**

26 52. Google CDN is also used in connection with Google’s YouTube
27 platform, enabling delivery of YouTube’s video content across the globe for YouTube
28

viewers and advertisers. YouTube provides embedded resources including links to nodes in a CDN for delivering content, for example, such as a link to specific cache server for serving video content and/or advertisements.

YouTube Live is an easy way for Creators to reach their community in real time. Whether streaming an event, teaching a class, or hosting a workshop, YouTube has tools that will help manage live streams and interact with viewers in real time.

Creators can live stream on YouTube via [webcam](#), [mobile](#), and [encoder streaming](#). Webcam

<https://www.youtube.com/howyoutubeworks/product-features/live/#youtube-live>

For Creators to monetize their live stream or Premiere, their channel needs to be part of the [YouTube Partner Program \(YPP\)](#). Creators have several ways to earn money from live streams and Premieres: Ads, Super Chat and Super Stickers, and Channel Memberships.

<https://www.youtube.com/howyoutubeworks/product-features/live/#monetization>

Monetize your live stream

Latest updates

- More flexibility added to the mid-roll ad settings for live streams:
 - 'Let YouTube insert mid-rolls' during natural ad breaks, but choose between 3 frequency options for how often ads surface.

<https://support.google.com/youtube/answer/7385599?sjid=2366353019137992062-NC>

Ad personalization

Google makes your ads more useful on Google services such as Search and YouTube (including portions of YouTube TV). You can control what info we use to show you ads by [visiting your ad settings](#) .

<https://support.google.com/youtubetv/answer/7126139?hl=en#zippy=%2Clive-tv%2Cad-personalization>

Delay a mid-roll ad

If you choose to let YouTube insert mid-roll ads for you, you can delay mid-roll ads during important moments when you don't want viewers interrupted.

In the Live Control Room, go to the top right and click Delay ads . Mid-roll ads are delayed from displaying for viewers for 10 minutes. A 5-second countdown will surface in the LCR for you before ads resume.

<https://support.google.com/youtube/answer/7385599?sjid=2366353019137992062-NC#YTinsertmid>

Channel level settings for mid-roll ads

Monetized channels without rights management can set mid-roll ad defaults for future live streams at the channel level. Channel level settings let you choose monetization settings that will be the default for any newly created live streams.

To choose your channel level settings: Open the Live Control Room > In the bottom-left corner, click Settings .

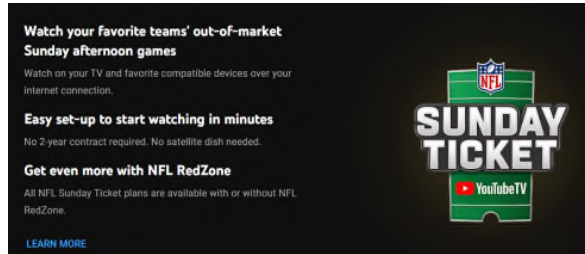
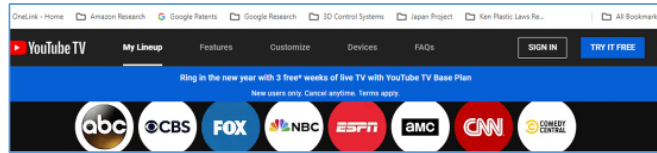
Live stream ad revenue

You can view a breakout of your ad revenue from live streams and live replays in YouTube Analytics. To view your ad revenue breakout for live streams, select the **Live** filter.

https://support.google.com/youtube/answer/7385599?sjid=2366353019137992062-NC#channel_settings_midroll

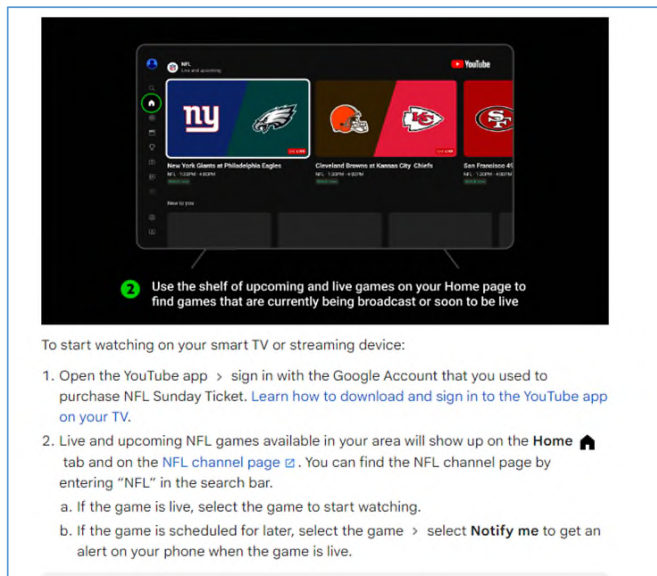
YouTube TV

53. Google CDN also is used to deliver Google's YouTube TV service. YouTube TV provides resources including links for delivering video content such as Ads. To use YouTube TV, users enter credential information to access video streams, and some content requires users to subscribe to access an associated video stream.



<https://tv.youtube.com/welcome/>

54. YouTube TV receives a request from an end user for delivery of a video stream across a network and provides controls for said end user to request delivery of a video stream by, for example, selecting a specific event to stream.



<https://support.google.com/youtube/answer/13821595?hl=en>

snippet.resourceId	object The id object contains information about the channel that the user subscribed to.
snippet.resourceId.kind	string The type of the API resource.
snippet.resourceId.channelId	string The value that YouTube uses to uniquely identify the channel that the user subscribed to.
snippet.channelId	string The ID that YouTube uses to uniquely identify the subscriber's channel. The resource_id object identifies the channel that the user subscribed to.

<https://developers.google.com/youtube/v3/docs/subscriptions>

Google Cloud provides an intelligent, open, and unified [data and AI cloud](#) built from the same underlying architecture that powers Google's most popular, global products, like YouTube, Search, and Maps. Revolutionize customer experiences with operational databases you know and love, in virtually any environment whether in the cloud or on-premises.

<https://cloud.google.com/solutions/databases?hl=en>

COUNT I: INFRINGEMENT OF THE '903 PATENT

55. Plaintiff hereby incorporates by reference each of the allegations in the foregoing paragraphs as though fully set forth herein and further alleges as follows:

56. Google directly infringed at least claim 28 of the '903 Patent by making, using, selling, offering for sale, importing, exporting, suppling, or distributing within the United States its Google CDN offering, both for the distribution of content via its own platforms and to provide CDN services to Google customers.

57. As further set forth in Exhibit F, Google provided and continued to provide a method in a content delivery system operative in a computer network for delivering content to client machines, the computer network comprising a plurality of origin servers, each of said origin servers having resources associated therewith, and the content delivery system comprising at least one shared repeater server operable to replicate resources associated with the plurality of origin servers. Google associates at least one repeater server with a first alias name, wherein requests for a first

1 resource, located on a first origin server, are directed based at least in part on the first
2 alias name. Google also associates the at least one repeater server with a second alias
3 name, wherein requests for a second resource located on a second origin server are
4 directed to the at least one repeater server for delivery of the second resource. Google
5 provides a table listing origin servers having content located thereon, wherein said
6 content is authorized for delivery to client machines via the at least one shared
7 repeater server wherein the origin servers comprise a first and second origin server.
8 Finally the at least one repeater server utilized by Google is constructed and adapted
9 to analyze, using the table and the alias name received with a client request to
10 determine the origin server associated with the requested resource.

11 **COUNT II: INFRINGEMENT OF THE '778 PATENT**

12 **(DISMISSED BY THE COURT'S SEPTEMBER 16, 2024 ORDER)**

13 58. The Court's Order of September 16, 2024 granted Google's motion to
14 dismiss Sandpiper CDN's claim Google infringed U.S. Patent No. 8,595,778 . See
15 Dkt. No. 28 at 6-11. Sandpiper CDN reserves its right to appeal the Court's Order.

16 **COUNT III: INFRINGEMENT OF THE '517 PATENT**

17 59. Plaintiff hereby incorporates by reference each of the allegations in the
18 foregoing paragraphs as though fully set forth herein and further alleges as follows:

19 60. Google directly infringed at least claim 1 of the '517 Patent by making,
20 using, selling, offering for sale, importing, exporting, suppling, or distributing within
21 the United States its Google CDN, both for the distribution of content via its own
22 platforms and to provide CDN services to Google customers. As further set forth in
23 Exhibit G, Google provided and continues to provide a method that is operable in a
24 framework in which an adaptive traffic control name server network implements
25 policy-based traffic direction, the name server network comprising at least one
26 domain name server comprising hardware in combination with software and
27 constructed and adapted to provide adaptive policy-based domain name service.

1 Google further provides a graphical user interface (GUI). Google also uses said GUI
2 to obtain at least one policy for direction of network traffic, wherein the GUI supports
3 the setting of said at least one policy using a decision tree representing rules. Google
4 provides this at least one policy to a name server network, wherein the decision tree
5 comprises one or more resource nodes, and one or more branch nodes, wherein the
6 one or more resource nodes specifies one or more answers to be provided in response
7 to a DNS request, and wherein the one or more branch nodes specify one or more
8 decision criteria to be applies, and wherein the GUI supports the specification of one
9 or more answers for the one or more resource nodes and one or more decision criteria
10 for the one or more branch nodes, wherein the one or more criteria are selected from
11 criteria related to world zones, countries, states, time zones, etc.

12 **COUNT IV: INFRINGEMENT OF THE '886 PATENT**

13 **(DISMISSED BY THE COURT'S SEPTEMBER 16, 2024 ORDER)**

14 61. The Court's Order of September 16, 2024 granted Google's motion to
15 dismiss Sandpiper CDN's claim Google infringed U.S. Patent No. 8,719,886. See
16 Dkt. No. 28 at 12–15. Sandpiper CDN reserves its right to appeal the Court's Order.

17 **COUNT V: INFRINGEMENT OF THE '112 PATENT**

18 62. Plaintiff hereby incorporates by reference each of the allegations in the
19 foregoing paragraphs as though fully set forth herein and further alleges as follows:

20 63. Google directly infringed at least claim 1 of the '112 Patent by making,
21 using, selling, offering for sale, importing, exporting, suppling, or distributing within
22 the United States its Google CDN, both for the distribution of content via its own
23 platforms and to provide CDN services to Google customers. As further set forth in
24 Exhibit H, Google provided and continues to provide a method of content delivery in
25 a network. Google provides a plurality of DNS servers associated with a CDN, said
26 plurality of CDN DNS servers sharing a common anycast address wherein each CDN
27 DNS server is associated with a respective plurality of content servers. Google also
28

1 causes said plurality of CDN DNS servers to be authoritative for a hostname
2 associated with a content provider by causing said common anycast address to be
3 associated with said hostname. In response to a request for content associated with
4 the content provider and issued by a client, said request including at least a hostname,
5 Google causes the hostname to be resolved to a common anycast address by an ISP
6 DNS server and then one of Google's CDN DNS servers resolves the hostname to
7 identify an IP address for use by the client to retrieve the content from a content
8 server.

9 **COUNT VI: INFRINGEMENT OF THE '573 PATENT**

10 64. Plaintiff hereby incorporates by reference each of the allegations in the
11 foregoing paragraphs as though fully set forth herein and further alleges as follows:

12 65. Google directly infringes at least claim 1 of the '573 Patent by making,
13 using, selling, offering for sale, importing, exporting, supplying, or distributing within
14 the United States its Google CDN, both for the distribution of content via its own
15 platforms and to provide CDN services to Google customers. As further set forth in
16 Exhibit I, Google provides a method of content delivery in a content delivery network.
17 Google receives, at a first server of a first tier of servers, a request from a requesting
18 device for a resource available from Google's CDN, Next, Google accesses a
19 popularity service associated with its CDN to determine a popularity designation
20 associated with the requested resource and requests the resource from a second server
21 of the CDN. Google then processes, at a first server of the first tier servers, a redirect
22 instruction from the second server of the CDN to obtain the resource from a content
23 server of the CDN. Google's CDN receives an instruction to not cache a portion of
24 the resource at the first server when that portion of the resource is obtained from the
25 content server of the CDN.

COUNT VII: INFRINGEMENT OF THE '322 PATENT

66. Plaintiff hereby incorporates by reference each of the allegations in the foregoing paragraphs as though fully set forth herein and further alleges as follows:

67. Google directly infringed at least claim 15 of the '322 Patent by making, using, selling, offering for sale, importing, exporting, supplying, or distributing within the United States its Google CDN, both for the distribution of content via its own platforms and to provide CDN services to Google customers. As further set forth in Exhibit J, Google provided and continues to provide a method of content delivery in a network with an application programming interface (API). At the API, Google receives, from an origin system that is separate from the content delivery network, an embedded resource and at least one parameter associated with the embedded resource. Google generates a modified embedded resource providing a direct link to a node within the content delivery network for obtaining content associated with the embedded resource, and Google then delivers, with the content delivery network, the modified embedded resource to the origin system. At the node, Google receives a request from a client device to obtain the content and provides the content to the client device.

PRAYER FOR RELIEF

Wherefore, Plaintiff requests entry of judgment in its favor and against Google as follows:

A. Judgment that Google has directly infringed one or more claims of the Asserted Patents;

B. An award of damages to compensate Plaintiff for Google's infringement, including damages pursuant to 35 U.S.C. § 284, as well as prejudgment and post-judgment interest;

C. An award of costs and expenses in this action, including an award of Plaintiff's reasonable attorneys' fees pursuant to 35 U.S.C. § 285;

1 D. A permanent injunction restraining and enjoining Google, and its
2 respective officers, agents, servants, employees, attorneys, and those persons in active
3 concert or participation with Google who receive actual notice of the order by
4 personal service or otherwise, from any further sales or use of their infringing
5 products and/or services and any other infringement of the Asserted Patents;

6 E. A finding that this is an exceptional case and ordering Google to pay
7 Plaintiff's costs of suit and attorneys' fees; and

8 F. Any such other and further relief as the Court may deem just, proper,
9 and equitable under the circumstances.

10 **JURY DEMAND**

11 Plaintiff respectfully demands a trial by jury on all claims and issues so triable.
12
13
14

15 Dated: January 10, 2025

Respectfully submitted,

17 /s/Mayela C. Montenegro-Urch
18

19 Mayela C. Montenegro-Urch
20 Robert H. Reckers
Attorneys for Plaintiff
Sandpiper CDN, LLC
21
22
23
24
25
26
27
28