United States District Court
Western District of Texas
Waco Division

WAG ACQUISITION, L.L.C.,	§	
Plaintiff,	§	
– against –	§	No. 6:21-cv-816
	§	Patent Case
GOOGLE LLC and YOUTUBE, INC.,	§	Jury Trial Demanded
Defendants.	§	

ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff WAG Acquisition, L.L.C., for its complaint against Defendants, alleges as follows:

INTRODUCTION

1. Plaintiff's predecessor, known as SurferNETWORK, developed technology to improve the process of delivering streaming media over the Internet, reflected in a family of United States patents including without limitation U.S. Patent Nos. 9,742,824; 9,729,594; and 9,762,636 (the "patents-in-suit").

2. Defendants have used the technology taught and claimed in the patents-in-suit to their substantial financial benefit, to achieve responsive and stable delivery of media, including without limitation video-on-demand and live streaming programming, which Defendants provide via the Internet in the United States and worldwide, for pre-recorded and live programming, delivered to desktop, tablet, smartphone, smart TV, streaming stick, and other streaming device and media player platforms, by way of their streaming services (the "YouTube Streaming Services").

3. Plaintiff alleges that Defendants' Internet delivery of streaming video via the YouTube Streaming Services have infringed the patents-in-suit, as more particularly specified herein.

THE PARTIES

4. WAG Acquisition, L.L.C. is a New Jersey limited liability company with its principal place of business at 275 Route 10 East, Suite 220-313, Succasunna, New Jersey 07876.

5. Defendant Google LLC ("Google") is a Delaware limited liability company with its principal place of business at 1600 Amphitheatre Parkway, Mountain View, California 94043, and an address in this District at 500 West 2nd Street, Austin, Texas 78701. On information and belief, based upon

YouTube's published terms of service, in recent years, Google has taken over the operation of the YouTube website.

6. Defendant YouTube, Inc. ("YouTube") is a Delaware corporation with its principal place of business at 901 Cherry Avenue, San Bruno, California 94066, and an address in this District at 500 West 2nd Street, Austin, Texas 78701. On information and belief, YouTube has been responsible for the operation of the YouTube website for some portion of the term of the patents-in-suit.

JURISDICTION AND VENUE

7. The Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a), in that this action arises under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.*

8. This Court has personal jurisdiction over Defendants because they have engaged in systematic and continuous business activities in this District, including acts of patent infringement within this District giving rise to the claims asserted herein.

9. Defendants have established minimum contacts with this forum such that the exercise of jurisdiction over Defendants would not offend traditional notions of fair play and substantial justice. Defendants offer products and services in this District. Defendant Google LLC is registered to do

business in the State of Texas. Defendants have a substantial number of technical employees at their facilities in Austin, Texas. On information and belief, a substantial portion of those employees in this District are engineers who work on streaming media development and related technology. On information and belief, Defendants' technical employees within this District have committed acts of infringement on behalf of Defendants in this District, by conduct including configuring and managing YouTube servers and software for media player devices, and testing and/or using media player devices, to infringe the patents-in-suit as hereinafter alleged.

10. Further as part of said activities, on information and belief, Defendants operate in this District, at locations including Midland, El Paso, Austin, and San Antonio, "edge" distribution servers known as Google Global Cache ("GGC") servers, which are operated by Defendants' employees and stream YouTube videos in a manner alleged to be infringing hereunder, and use and distribute media player software on computer-readable media also in a manner alleged to be infringing.

11. Venue is proper in this District pursuant to 28 U.S.C. § 1400(b) because Defendants have regular and established places of business in this District and have committed acts of infringement in this District by reason, *inter alia*, of having acted in this District to configure and manage YouTube servers

for distributing streaming video, and software for media player devices, and to test and/or use media player devices, in a manner that infringes the patents-in-suit as hereinafter alleged. Defendants have further committed acts of infringement in this District by reason on their making and using GGC servers situated in this District.

THE PATENTS-IN-SUIT

12. The patents-in-suit comprise the following United States patents, which were duly and legally issued on the dates indicated:

- U.S. Patent No. 9,742,824 (the "'824 patent"), Issue Date: August 22, 2017, Title: Streaming Media Delivery System. A copy of the '824 patent is attached hereto as **Exhibit A** and incorporated herein by reference.
- U.S. Patent No. 9,729,594 (the "'594 patent"), Issue Date: August 8, 2017, Title: Streaming Media Delivery System. A copy of the '594 patent is attached hereto as **Exhibit B** and incorporated herein by reference.
- U.S. Patent No. 9,762,636 (the "'636 patent"), Issue Date: September 12, 2017, Title: Streaming Media Delivery System. A copy of the '636 patent is attached hereto as **Exhibit C** and incorporated herein by reference.

13. The patents-in-suit were developed in the course of Surfer-NETWORK's business and were assigned by Harold Price (the inventor) to SurferNETWORK. Plaintiff now owns all rights to the patents-in-suit, including without limitation all rights to recover for infringement of the patents-in-suit.

14. Plaintiff has complied with the marking provisions of 35 U.S.C. § 287(a), and also required those persons authorized to operate for or under Plaintiff to comply therewith.

15. The patents-in-suit concern technological solutions to two problems that SurferNETWORK perceived in the early streaming media implementations that characterized the prior art. First, the beginning of playback, when a user clicked on a program, would entail a significant period of "buffering," during which the user would typically only see an hourglass.

16. During this period, the user would have to wait until the player accumulated sufficient content over its Internet connection for the program to start. Second, even after having been started, if the program stream became interrupted, a repeat of the long and frustrating "buffering"/hourglass sequence would be necessary, and this uneven stuttering behavior could occur repeatedly. These problems resulted in a poor user experience and greatly disadvantaged Internet streaming media as compared competitively against other forms of audio and/or video media, such as radio and TV.

17. SurferNETWORK sought a solution that would jump start Internet media playback to achieve the perception of "Instant On," so as to provide a user experience akin to what ordinarily happened when turning on a transistor radio. The patents-in-suit address the identified shortcomings in the prior art

by changing the manner of use of computer facilities and the sequence of operations by which streaming media is delivered over an Internet connection, to provide an Internet streaming user experience that would then be comparable to the immediacy and continuity that the user enjoyed with ordinary radio and television.

18. The advances that the patents-in-suit assert improve over the prior art include achieving the twin and simultaneous objects of (1) fast streaming startup after a user requests a stream, and (2) avoiding interruptions once the streaming starts, for the duration of the streamed program. The claims of the patents-in-suit spell out not only these functional twin objectives, but also recite how to implement a process that achieves both objectives—*i.e.*, making the data constituting the program stream available as discrete chunks identified by serial ID, responding to client requests made for the chunks by their serial IDs, and sending each requested chunk comprising the entire stream at a higher-than-playback transmission rate. By doing these things, the patented mechanism ensures that each chunk can be transferred to the client before it is needed for playback, so the streaming client will have the latitude it needs to control the timing of its chunk requests so as to maintain its input buffer at a desired level for the entire transmission of the stream, thereby achieving the desired advance over the prior art. The claims are thus directed

at specific technological measures that improve the speed and reliability of how the client and server computers communicate. They utilize the computer components in each such computer to function in a different way than those components were used in prior approaches, thereby improving how computers communicate.

19. Inventive concepts in the patents-in-suit lie in the ability to satisfy the requirements for fast streaming startup and uninterrupted delivery by switching to a "pull" model, where the flow is regulated by the pace of client requests, rather than trying to have the server pace its own delivery, and in making the pull mechanism workable, by (i) pre-collecting quantities of the program in time-sequenced chunks, (ii) using serial identifiers to ensure proper ordering of the chunks (even if some chunks are sent more quickly than others), (iii) making the server responsive to requests for chunks by their serial identifiers, and (iv) ensuring that the server will send each chunk faster than the playback rate.

20. With regard to the claims concerning receiving the streams (as in the '594 patent), further inventive concepts lie in the client's ability to monitor the state of its buffer and rate of consumption of media to determine when to request chunks, and how many to request. The claims at issue make clear that not only the startup but the entire duration of the program is streamed in this

manner, and using this combination of steps for sustained media streaming was not conventional at the time of the invention.

21. Defendants' accused systems avoid the delays and stuttering that characterized the prior art by using the technology claimed in Plaintiff's patents.

COUNT I: INFRINGEMENT OF THE '824 PATENT

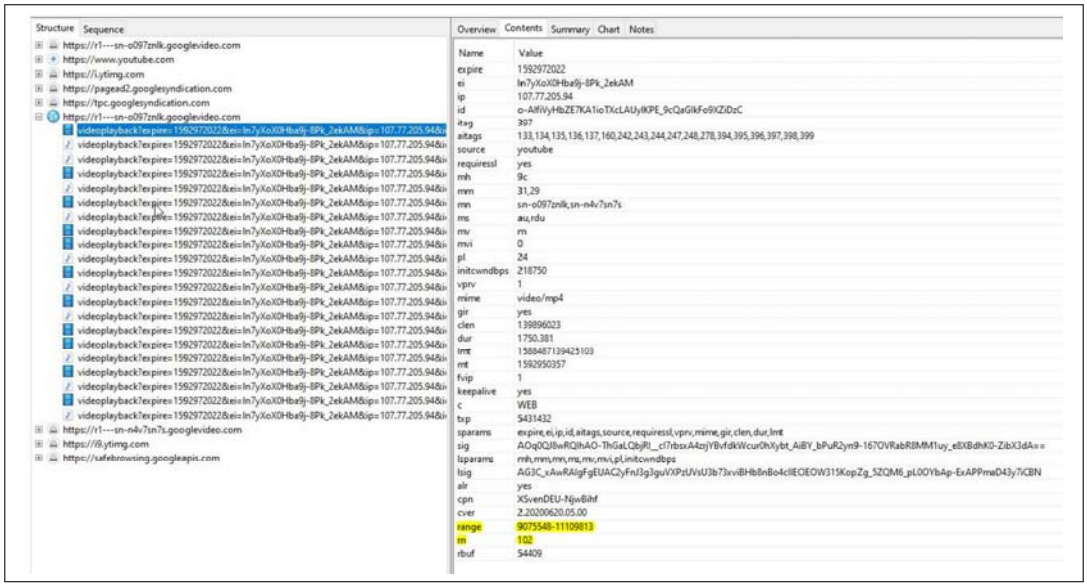
22. Plaintiff repeats and realleges the averments of paragraphs 1-21 above as if fully set forth at length herein.

23. Defendants have each infringed the '824 patent under 35 U.S.C. § 271(a) by making and using server systems in accordance with one or more claims thereof, without authorization and in the United States, by conduct as hereinafter more particularly alleged.

24. In particular, the YouTube Streaming Services have taken advantage of Plaintiff's improved technology as claimed in the '824 patent, from and before the date that patent issued through the remainder of its term.

25. With regard to claim 1, the YouTube Streaming Services distribute (and for a long time prior hereto and, during the term of the '824 patent, have distributed) pre-recorded video programs that are digitally stored in and read from its server systems, located in, or controlled from, the United States. Media data elements representing a program as distributed by the YouTube

Streaming Services each comprise a digitally encoded portion of the program, for example, in video/mp4 or audio/webm encoding at a playback rate corresponding to the encoding. The media data elements are serially identified, for example by "rn" identifiers, which indicate a time sequence of the media data elements:



YouTube streaming request/response, showing serial ID

The above shows a request captured in mid-stream for a video segment having the rn identifier 102 specified in the client request. The next following requests/responses are identical, except that the rn numbers are incremented for each request, with audio segments for the stream interleaved with video segments, in a repetitive pattern that continues until the end of the program.

26. The media data elements are stored in a data structure under the control of the server system. The server system receives "GET" requests (as

shown in the figure above) from user systems via data connections over the Internet, for media data elements identified by an rn number. Responsive to those requests, the server system sends to the requesting user system the media data elements having those serial identifiers corresponding to the request. The data connection of the server to the user system, used for so responding, has a data rate more rapid than the playback rate of the media data elements that are being sent via that connection, and each sending is at a transmission rate that is as fast as that data connection will allow. The media data elements being sent are selected without depending on the server system maintaining a record of the last media data element that had been sent to the requesting user system. All of the media data elements that are so sent by the server system to the one or more user systems are sent in response to the user system requests, and all of the media data elements that are sent by the server system to the requesting user systems are sent from the data structure under the control of the server system as the media data elements were first stored therein.

27. Furthermore, with regard to the dependent claims, as reflected in the above example, the aforementioned identifiers, in addition to being serial, may also be sequential, and the sending is via a reliable transmission protocol, which in many cases is TCP.

28. Defendants also make and use systems that incorporate and execute instructions that carry out the foregoing streaming media distribution, as well as computer-readable media (computer program products) that incorporate such

instructions.

29. Defendants, by performing the above-described processes, and making and using the above-described systems and computer program products, have each thereby infringed one or more claims of the '824 patent during its term, in the United States.

30. The foregoing allegations encompass all servers used for distributing YouTube Streaming Services in, or controlled from, the United States (regardless of where the users were located).

31. Pursuant to 35 U.S.C. § 284, Plaintiff is entitled to not less than a reasonable royalty for the use made by the Defendants under the '824 patent, in an amount subject to proof at trial, together with interest and costs as fixed by the Court.

COUNT II: INFRINGEMENT OF THE '594 PATENT

32. Plaintiff repeats and realleges the averments of paragraphs 1-31 above as if fully set forth at length herein.

33. Defendants have each infringed the '594 patent under 35 U.S.C. § 271(a) by making and using computer recorded media for a streaming media player in accordance with one or more claims thereof, without authorization and in the United States, by conduct as hereinafter more particularly alleged.

34. In particular, the YouTube Streaming Services have taken advantage of Plaintiff's improved technology as claimed in the '594 patent, from and before the date that patent issued through the remainder of its term.

35. With regard to claim 1, the YouTube Streaming Services utilize software provided by Defendants and put into the hands of the user, which causes the user's media consuming device (*e.g.*, computer, smartphone, tablet, smart TV, streaming stick, or other streaming devices, referred to as the "media player") to make requests for streaming media data elements that are handled by YouTube servers as described above in connection with the '824 patent. This software is embodied in JavaScript files, which Defendants create and maintain on computer-readable media on their server systems, and which they use (and have used for a long time prior hereto and during the term of the '594 patent), through servers located in and/or controlled from, the United States, by accessing such media to send users electronic copies of said software, so that said software may then be operated on the user's media player device to make

the above-described requests to the servers deployed by the YouTube Streaming Services and work correctly with those servers.

36. The JavaScript software instructions are executable to cause the media player (via its processor) to send requests (HTTP GET requests) via an Internet connection for a media data element that is part of a desired audio/video stream, identified by a serial identifier. The requested media data elements have a playback rate. The instructions also cause the media player to receive the requested media data elements over a data connection having a data rate more rapid than the playback rate, receiving the requested media data elements as fast as the data connection allows. The instructions further cause the media player to store the received media data elements in its memory, and play the received media data elements back in series from the memory. The instructions are further executable to cause the media player, as the received media data elements are played, to automatically send additional requests for subsequent media data elements for storage in the memory of the media player, as required to maintain about a predetermined number of media data elements in the memory of the media

player during playing.

37. Furthermore, with regard to the dependent claims, the instructions cause the media player to maintain in its memory a record identifying the last

media data element received and stored by the media player. As reflected in the above example, the serial identifiers, in addition to being serial, may also be sequential. The media data elements are received via a reliable transmission protocol, which in many cases is TCP. In addition, as noted above, the JavaScript software is provided as a software application for the media player.

38. Defendants, by making and using the systems and computer program products described above, have each thereby infringed one or more claims of the '594 patent, during its term, in the United States.

39. The foregoing allegations encompass all servers used for distributing YouTube Streaming Services in, or controlled from, the United States (regardless of where the users were located).

40. Pursuant to 35 U.S.C. § 284, Plaintiff is entitled to not less than a reasonable royalty for the use made by the Defendants under the '594 patent, in an amount subject to proof at trial, together with interest and costs as fixed by the Court.

COUNT III: INFRINGEMENT OF THE '636 PATENT

41. Plaintiff repeats and realleges the averments of paragraphs 1-40 above as if fully set forth at length herein.

42. Defendants have each infringed the '636 patent under 35 U.S.C. § 271(a) by making and using server systems in accordance with one or more

claims thereof, without authorization and in the United States, by conduct as hereinafter more particularly alleged.

43. In particular, the YouTube Streaming Services have taken advantage of Plaintiff's improved technology as claimed in the '636 patent, from and before the date that patent issued through the remainder of its term.

44. With regard to claim 1, the YouTube Streaming Services distribute (and for a long time prior hereto and during the term of the '636 patent have distributed) live video programs over the Internet, where each live program is transmitted to a plurality of user systems. To do this, Defendants receive at their server systems a continuous digitally encoded stream for the audio or video program, via a data connection from a live source, in real time. Upon receipt of the stream, the server supplies media data elements representing the program, in which each comprises a digitally encoded portion of the program, for example, in video/mp4 or audio/webm encoding, at a playback rate corresponding to the encoding. The media data elements are serially identified, for example by "sq" identifiers, which indicate a time sequence of the media data elements. The media data elements are stored in a data structure under the control of the server system. The server system receives "GET" requests from user systems via data connections over the Internet, for media data elements identified by an sq number. Responsive to those requests, the server

system sends to the requesting user systems the media data elements having those serial identifiers corresponding to the requests. In observed streaming sessions, the data connection of the server to the user system, used for so responding, has consistently had a data rate more rapid than the playback rate of the media data elements that are being sent via that connection, and each sending is at a transmission rate as fast as that data connection will allow. The media data elements being sent are selected without depending on the server system maintaining a record of the last media data element that had been sent to the requesting user system. Such observations also reflect that all of the media data elements that are so sent by the server system to the one or more user systems are sent in response to the user system requests, and all of the media data elements that are sent by the server system to the requesting user systems are sent from the data structure under the control of the server system as the media data elements were first stored therein.

45. Furthermore, with regard to the dependent claims, as reflected in the above example, the aforementioned serial identifiers, in addition to being serial, may also be sequential, and the sending is via a reliable transmission protocol, which in many cases is TCP.

46. Defendants also make and use systems that incorporate and execute instructions that carry out the foregoing streaming media distribution,

as well as computer-readable media (computer program products) that incorporate such instructions.

47. Defendants, by performing the above-described processes, and making and using the above-described systems and computer program products, have each thereby infringed one or more claims of the '636 patent during its term, in the United States.

48. The foregoing allegations encompass all servers used for distributing live video in, or controlled from, the United States (regardless of where the users were located).

49. Pursuant to 35 U.S.C. § 284, Plaintiff is entitled to not less than a reasonable royalty for the use made by the Defendants under the '636 patent, in an amount subject to proof at trial, together with interest and costs as fixed by the Court.

DEMAND FOR JURY TRIAL

Plaintiff demands trial by jury on all issues.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff WAG ACQUISITION, L.L.C. requests an entry of judgment in its favor and against Defendants as follows:

i. Declaring that each Defendant has infringed one of more claims of United States Patent Nos. 9,742,824; 9,729,594; and 9,762,636;

ii. Awarding to Plaintiff the damages arising out of said infringement of United States Patent Nos. 9,742,824; 9,729,594; and 9,762,636;

iii. Awarding attorneys' fees, costs, or other damages pursuant to 35 U.S.C. §§ 284 or 285 or as otherwise permitted by law, jointly and severally against the Defendants;

iv. Awarding costs in this action to Plaintiff; and

v. For such other and further relief as the Court may deem just and proper.

Dated: August 6, 2021

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