

1 RONALD ABRAMSON (*Pro Hac Vice* forthcoming)
ron.abramson@listonabramson.com

2 DAVID G. LISTON (*Pro Hac Vice* forthcoming)
david.liston@listonabramson.com

3 ARI J. JAFFESS (*Pro Hac Vice* forthcoming)
ari.jaffess@listonabramson.com

4 ALEX G. PATCHEN (*Pro Hac Vice* forthcoming)
alex.patchen@listonabramson.com

5 LISTON ABRAMSON LLP
6 405 Lexington Avenue, 46th Floor
7 New York, New York 10174
8 Telephone: (212) 357-1630
9 Facsimile: (917) 999-9999
(Lead Counsel)

10 WILLIAM A. WHITE (State Bar No. 121681)
wwhite@hillfarrer.com

11 HILL, FARRER & BURRILL LLP
12 One California Plaza
13 300 South Grand Avenue, 37th Floor
14 Los Angeles, California 90071
15 Telephone: (213) 620-0460
16 Facsimile: (213) 624-4840
(Local Counsel)

Attorneys for Plaintiff
WAG Acquisition, L.L.C.

17 **IN THE UNITED STATES DISTRICT COURT FOR THE**
18 **CENTRAL DISTRICT OF CALIFORNIA**
19 **WESTERN DIVISION**

20 WAG ACQUISITION, L.L.C., a New
21 Jersey limited liability company,
22
23 Plaintiff,

24 v.

25 HULU LLC, a Delaware limited liability
26 company,
27
28 Defendant.

CASE NO. 2:21-cv-08242

**COMPLAINT FOR PATENT
INFRINGEMENT AND DEMAND
FOR JURY TRIAL**

HILL, FARRER & BURRILL LLP
A LIMITED LIABILITY PARTNERSHIP
ATTORNEYS AT LAW
ONE CALIFORNIA PLAZA
300 S. GRAND AVENUE, 37TH FLOOR
LOS ANGELES, CALIFORNIA 90071-3147

1 Plaintiff WAG Acquisition, L.L.C. (“WAG” or “Plaintiff”) alleges as follows,
2 for its complaint against Defendant:

3 **JURISDICTION AND VENUE**

4 1. The Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331
5 and 1338(a), in that this action arises under the patent laws of the United States, 35
6 U.S.C. §§ 1 *et seq.* This Court has general as well as specific personal jurisdiction
7 over Defendant because it is at home in this District and has engaged in systematic
8 and continuous business activities in this District, including acts of patent
9 infringement within this District giving rise to the claims asserted herein.

10 2. Defendant has established minimum contacts with this forum such that
11 the exercise of jurisdiction over Defendant would not offend traditional notions of
12 fair play and substantial justice. Defendant offers products and services in this
13 District and is headquartered in this district. On information and belief, a substantial
14 number of Defendant’s employees in this District are engineers who work on
15 streaming media development and related technology. On information and belief,
16 these technical employees within this District have committed acts of infringement
17 on behalf of Defendant in this District by conduct including configuring and
18 managing Defendant’s servers and software for media player devices, and testing
19 and/or using media player devices, to infringe the patents-in-suit as hereinafter
20 alleged. On information and belief, Defendants distribute streaming media over a
21 content distribution network (CDN) that utilizes servers in this District, over which
22 Defendant exercises control, through operation and configuration, in a manner that
23 causes the servers so controlled by Defendant to infringe.

24 3. Venue is proper in this District pursuant to 28 U.S.C. § 1400(b) because
25 Defendant has a significant place of business in this District (its headquarters), and,
26 as set forth in the preceding paragraph, commits acts of infringement in this District
27 by exercising control over Defendant’s servers in the U.S. (including servers in this
28 District), from facilities including without limitation facilities within this District.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

INTRODUCTION

4. 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 and 9,729,594 (the “patents-in-suit”).

5. Defendant has used the technology taught and claimed in the patents-in-suit to its substantial financial benefit, to achieve responsive and stable delivery of its media, including without limitation video-on-demand programming, which Defendant provides via the Internet in the United States and worldwide, for video streams delivered to desktop, tablet, smartphone, smart TV, streaming stick, and other streaming device and media player platforms, by way of its streaming video services (the “Hulu Video Services”).

6. Plaintiff alleges that Defendant’s Internet delivery of streaming video via the Hulu Video Services has infringed the patents-in-suit, as more particularly specified herein.

THE PARTIES

7. 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.

8. Defendant Hulu, LLC is a Delaware limited liability company with its principal place of business at 2500 Broadway, 2nd Floor, Santa Monica, California, 90404.

THE PATENTS-IN-SUIT

9. 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

HILL, FARRER & BURRILL LLP
A LIMITED LIABILITY PARTNERSHIP
ATTORNEYS AT LAW
ONE CALIFORNIA PLAZA
300 S. GRAND AVENUE, 37TH FLOOR
LOS ANGELES, CALIFORNIA 90071-3147

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

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.

10. The patents-in-suit were developed in the course of SurferNETWORK’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.

11. 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.

12. 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. 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 the program 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.

13. 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

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

5 14. The advances that the patents-in-suit assert improve over the prior art
6 include achieving the twin and simultaneous objects of (1) fast streaming startup after
7 a user requests a stream, and (2) avoiding interruptions once the streaming starts, for
8 the duration of the streamed program. The claims of the patents-in-suit spell out not
9 only these functional twin objectives, but also recite how to implement a process that
10 achieves both objectives—*i.e.*, making the data constituting the program stream
11 available as discrete chunks identified by serial ID, responding to client requests
12 made for the chunks by their serial IDs, and sending each requested chunk comprising
13 the entire stream at a higher-than-playback transmission rate. By doing these things,
14 the patented mechanism ensures that each chunk can be transferred to the client
15 before it is needed for playback, so the streaming client will have the latitude it needs
16 to control the timing of its chunk requests so as to maintain its input buffer at a desired
17 level for the entire transmission of the stream, thereby achieving the desired advance
18 over the prior art. The claims are thus directed at specific technological measures
19 that improve the speed and reliability of how the client and server computers
20 communicate. Those measures utilize the computer components in each such
21 computer to function in a different way than those components were used in prior
22 approaches, thereby improving how computers communicate.

23 15. Inventive concepts in the patents-in-suit lie in the ability to satisfy the
24 requirements for fast streaming startup and uninterrupted delivery by switching to a
25 “pull” model, where the flow is regulated by the pace of client requests, rather than
26 trying to have the server pace its own delivery, and in making the pull mechanism
27 workable, by (i) pre-collecting quantities of the program in time-sequenced chunks,
28 (ii) using serial identifiers to ensure proper ordering of the chunks (even if some

1 chunks are sent more quickly than others), (iii) making the server responsive to
2 requests for chunks by their serial identifiers, and (iv) ensuring that the server will
3 send each chunk faster than the playback rate.

4 16. With regard to the claims concerning receiving streams (as in the '594
5 patent), further inventive concepts lie in the client's ability to monitor the state of its
6 buffer and rate of consumption of media to determine when to request chunks, and
7 how many to request. The claims at issue make clear that not only the startup but the
8 entire duration of the program is streamed in this manner, and using this combination
9 of steps for sustained media streaming was not conventional at the time of the
10 invention.

11 17. Defendant's accused systems avoid the delays and stuttering that
12 characterized the prior art by using the technology claimed in Plaintiff's patents.

13 **COUNT I: INFRINGEMENT OF THE '824 PATENT**

14 18. Plaintiff repeats and realleges the averments of paragraphs 1-17 above
15 as if fully set forth at length herein.

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

20 20. In particular, the Hulu Video Services have taken advantage of
21 Plaintiff's improved technology as claimed in the '824 patent, throughout the term of
22 the '824 patent.

23 21. Defendant, through the Hulu Video Services, distributes (and, during the
24 entire term of the '824 patent, has distributed), pre-recorded ("video on demand"
25 (VOD)) video programs that are digitally stored in and read from their server systems,
26 located in, or controlled from, the United States.

27 22. With regard to claim 1, on information and belief, Defendant originates
28 streams for distribution through a content delivery network, and configure, and

1 manage, and control the corresponding streaming servers and services.

2 23. The VOD streams result from recorded programs stored under the
3 control of Defendant’s servers, in data structures under the control of the server
4 system. The programs are read from the storage when views thereof are requested
5 by Defendant’s customers.

6 24. The media data elements representing a program as distributed through
7 the Hulu Video Services each comprise a digitally encoded portion of the program,
8 for example, in video/mp4 or audio/mp4 encoding at a playback rate corresponding
9 to the encoding. This is shown in Exhibit C attached hereto, which shows requests
10 and responses captured in mid-stream during a user’s reception of Defendants’ video
11 programming.

12 25. As shown in Exhibit C, the media data elements are serially identified
13 by numeric identifiers, which indicate a time sequence of the media data elements.

14 26. Exhibit C shows requests for media data elements having identifiers
15 specified in the client request, ending at 12808453. The next following video
16 request/response is identical, except that the following request begins at 12808454, a
17 repetitive pattern with like incrementing request IDs, which continues until the end
18 of the program. (As shown, the elements of the video and audio portions of the
19 stream are interleaved and separately identified.)

20 27. The media data elements are stored in a data structure under the control
21 of the server system. The server system receives “GET” requests (as also shown in
22 Exhibit C) from user systems via data connections over the Internet, for media data
23 elements identified by numeric identifiers. Responsive to those requests, as shown
24 in the “Path” of the retrieval (the column in the center of the figure), the server system
25 sends to the requesting user system the media data elements (in this case, interleaved
26 audio and video elements) having those serial identifiers corresponding to the
27 request.

28 28. In observed streaming sessions, the data connection of the server to the

1 user system, used for so responding, has consistently had a data rate more rapid than
2 the playback rate of the media data elements that are being sent via that connection,
3 and each sending is at a transmission rate as fast as that data connection will allow.
4 The media data elements being sent are selected as requested, and thus without
5 depending on the server system maintaining a record of the last media data element
6 that had been sent to the requesting user system. Likewise, such observations also
7 reflect that all of the media data elements that are so sent by the server system to the
8 one or more user systems (*i.e.*, from the beginning to the end of the viewing session)
9 are sent solely in response to the user system requests, and all of the media data
10 elements that are sent by the server system to the requesting user systems are sent
11 from the data structure under the control of the server system as the media data
12 elements were first stored therein.

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

17 30. Defendant also makes and uses systems that incorporate and execute
18 instructions that carry out the foregoing streaming media distribution, as well as
19 computer-readable media (computer program products) that incorporate such
20 instructions.

21 31. Defendant, by performing the above-described processes, and making
22 and using the above-described systems and computer program products, has thereby
23 infringed one or more claims of the '824 patent during its term, in the United States.

24 32. The foregoing allegations encompass all servers used for distributing
25 Hulu Video Services in, or controlled from, the United States (regardless of where
26 the users were located).

27 33. Pursuant to 35 U.S.C. § 284, Plaintiff is entitled to not less than a
28 reasonable royalty for the use made by Defendant under the '824 patent, in an amount

1 subject to proof at trial, together with interest and costs as fixed by the Court.

2 **COUNT II: INFRINGEMENT OF THE '594 PATENT**

3 34. Plaintiff repeats and realleges the averments of paragraphs 1-33 above
4 as if fully set forth at length herein.

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

9 36. In particular, the Hulu Video Services have taken advantage of
10 Plaintiff's improved technology as claimed in the '594 patent, throughout the term of
11 the '594 patent.

12 37. With regard to claim 1, the Hulu Video Services utilizes software
13 provided by Defendant and put into the hands of the user, which executes on the
14 user's media consuming device (*e.g.*, computer, smartphone, tablet, smart TV,
15 streaming stick, or other streaming devices, referred to as the "media player"), and
16 causes that device to make requests for streaming media data elements that are
17 handled by Defendant's servers as described above in connection with the '824
18 patent.

19 38. The software described in the foregoing paragraph is embodied in
20 JavaScript files (named, *e.g.*, cadmium-playercore-[version].js), which Defendant
21 creates and maintains as electronic copies on computer-readable media on its server
22 systems, thereby making articles within the scope of the claims of the '594 patent.
23 During the term of the '594 patent, Defendant has used its copies of such software,
24 under the control of Defendant's servers, to read from such copies the contents of the
25 JavaScript software, to enable Defendant's servers to transmit the JavaScript files to
26 users, so that said software may then be operated on the user's media player device
27 to make the above-described requests to the servers deployed by the Hulu Video
28 Services and work correctly with those servers.

1 39. The *JavaScript* software instructions are executable to cause the user's
2 media player device (via its processor) to send requests (HTTP GET requests, as
3 addressed above with respect to the '824 patent) via an Internet connection for a
4 media data element that is part of a desired audio/video stream, identified by a serial
5 identifier. The requested media data elements have a playback rate.

6 40. Plaintiff states, on the same basis as it did with respect to the
7 corresponding allegations concerning the '824 patent, *i.e.*, based on direct
8 observation, that the JavaScript instructions also cause the media player to receive
9 the requested media data elements over a data connection having a data rate more
10 rapid than the playback rate, receiving the requested media data elements as fast as
11 the data connection allows.

12 41. Monitoring playback further shows that the instructions further cause
13 the media player to store the received media data elements in its memory, and play
14 the received media data elements back in series from the memory. Observing the
15 captures over time also reflects that the instructions are further executable to cause
16 the media player, as the received media data elements are played, to automatically
17 send additional requests for subsequent media data elements for storage in the
18 memory of the media player, as required to maintain about a predetermined number
19 of media data elements in the memory of the media player during playing.

20 42. Furthermore, with regard to the dependent claims, the instructions cause
21 the media player to maintain in its memory a record identifying the last media data
22 element received and stored by the media player. As reflected in the above example,
23 shown in paragraph 23, the serial identifiers, in addition to being serial, may also be
24 sequential. The media data elements are received via a reliable transmission protocol,
25 which may be TCP. In addition, as noted above, the JavaScript software is provided
26 as a software application for the media player.

27 43. Defendant, by making and using the systems and computer program
28 products described above, has thereby infringed one or more claims of the '594

1 patent, during its term, in the United States.

2 44. The foregoing allegations encompass all servers used for distributing
3 Hulu Video Services in, or controlled from, the United States (regardless of where
4 the users were located).

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

8 **DEMAND FOR JURY TRIAL**

9 Plaintiff demands trial by jury on all issues.

10 **PRAYER FOR RELIEF**

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

- 13 i. Declaring that Defendant has infringed one of more claims of United
14 States Patent Nos. 9,742,824, 9,729,594, and 9,762,636;
- 15 ii. Awarding to Plaintiff the damages arising out of said infringement of
16 United States Patent Nos. 9,742,824, 9,729,594, and 9,762,636;
- 17 iii. Awarding attorneys' fees, costs, or other damages pursuant to 35 U.S.C.
18 §§ 284 or 285 or as otherwise permitted by law, against Defendant;
- 19 iv. Awarding costs in this action to Plaintiff; and
- 20 v. For such other and further relief as the Court may deem just and proper.

21
22 DATED: October 18, 2021

HILL, FARRER & BURRILL LLP

23
24 By: /s/ William A. White
25 William A. White
26 Jeffrey B. Bell
27 Attorneys for Defendant
28 WAG ACQUISITION, L.L.C.

HILL, FARRER & BURRILL LLP
A LIMITED LIABILITY PARTNERSHIP
ATTORNEYS AT LAW
ONE CALIFORNIA PLAZA
300 S. GRAND AVENUE, 37TH FLOOR
LOS ANGELES, CALIFORNIA 90071-3147