

# EXHIBIT 4

1 Michael A. Sherman (SBN 94783)  
 masherman@stubbsalderton.com  
 2 Jeffrey F. Gersh (SBN 87124)  
 jgersh@stubbsalderton.com  
 3 Sandeep Seth (SBN 195914)  
 sseth@stubbsalderton.com  
 4 Wesley W. Monroe (SBN 149211)  
 wmonroe@stubbsalderton.com  
 5 Stanley H. Thompson, Jr. (SBN 198825)  
 sthompson@stubbsalderton.com  
 6 Viviana Boero Hedrick (SBN 239359)  
 vhedrick@stubbsalderton.com  
 7 STUBBS, ALDERTON & MARKILES, LLP  
 15260 Ventura Blvd., 20<sup>th</sup> Floor  
 8 Sherman Oaks, CA 91403  
 Telephone: (818) 444-4500  
 9 Facsimile: (818) 444-4520

10 **Attorneys for PersonalWeb Technologies, LLC**  
 11 **and Level 3 Communications, LLC**

[Additional Attorneys listed below]

12 UNITED STATES DISTRICT COURT

13 NORTHERN DISTRICT OF CALIFORNIA

14 SAN JOSE DIVISION

15 IN RE PERSONALWEB TECHNOLOGIES,  
 16 LLC, ET AL., PATENT LITIGATION

**CASE NO.: 5:18-md-02834-BLF**

17  
 18 PERSONALWEB TECHNOLOGIES, LLC, a  
 Texas limited liability company, and  
 19 LEVEL 3 COMMUNICATIONS, LLC, a  
 Delaware limited liability company

**PERSONALWEB’S DISCLOSURES  
 PURSUANT TO PATENT LOCAL RULES  
 3-1 AND 3-2**

20 Plaintiffs,

**Case No.: 5:18-cv-05619-BLF**

21 v.

22 TWITCH INTERACTIVE, INC., a Delaware  
 corporation,

23 Defendants.

24  
 25  
 26  
 27  
 28

1 Pursuant to Patent Local Rules 3-1 and 3-2, Plaintiff PersonalWeb Technologies, LLC  
2 (“Plaintiff” or “PersonalWeb”) hereby makes the following Disclosure of Asserted Claims and  
3 Infringement Contentions to Defendant Twitch Interactive, Inc. (“Twitch” or “Defendant”). These  
4 disclosures are preliminary and subject to change based upon discovery and the Court’s claim  
5 construction rulings:

6 **I. PRELIMINARY STATEMENT**

7 In making these contentions, Plaintiff has not yet received any discovery from Defendant  
8 regarding their infringing methods and systems and has not had access to the source code of the  
9 accused methods and systems. Plaintiff has, however researched available information, including (1)  
10 Defendant website(s), (2) publicly available information published by Defendants’ about their accused  
11 products and services, and (3) publicly available statements and information describing Defendants’  
12 accused products and services. PersonalWeb therefore reserves the right to amend its Infringement  
13 Contentions under Patent L.R. 3-6(c).

14 Defendants engage in the allegedly infringing conduct through computer systems operating  
15 proprietary software. Defendants do not publicly disclose the precise operation of their computer  
16 systems and do not publicly disclose their source code. Because Defendants have not publicly  
17 disclosed the specific operation of their accused products and services and do not publicly disclose  
18 their source code for those products and services, PersonalWeb is inherently limited in the degree of  
19 specificity it can provide in the preliminary infringement contentions. Under these circumstances, the  
20 Northern District of California recognizes that the plaintiff will not be able to provide highly specified  
21 infringement contentions and should be permitted further discovery to supplement initial contentions  
22 with additional information. *SpeedTrack, Inc. v. Amazon.com, Inc.*, No. 4:09-cv-04479-JSW (KAW),  
23 2018 U.S. Dist. LEXIS 112885, at \*16 (N.D. Cal. July 6, 2018). Similarly, Patent Local Rule 3-1  
24 “does not require [the patent owner] to produce evidence of infringement”, but rather requires that the  
25 patent owner merely provide the accused infringer “with notice of infringement beyond that which is  
26 provided by the mere language of the patents themselves.” *Network Caching Technology, LLC v.*  
27 *Novell, Inc.*, 2003 U.S. Dist. LEXIS 9881, 2003 WL 21699799, \*4 (N.D. Cal. 2003).

28

1 Accordingly, PersonalWeb reserves the right to amend its disclosures, including the identity  
2 of the claims being asserted, upon receiving discovery from Defendant.

3 **II. DISCLOSURES UNDER PATENT LOCAL 3-1**

4 **(a) 3-1(a): Asserted Claims**

5 The following claims of each patent in suit are allegedly infringed by the Amazon Parties, the  
6 applicable statutory subsections of 35 U.S.C. §271 asserted.

7 Asserted Patent	8 Asserted Claims	9 Statutory Provision
10 '310	11 20, 69	12 35 U.S.C. § 271(a)
13 '420	14 25, 26, 27, 29, 30, 32, 34, 35, 15 36, 166	16 35 U.S.C. § 271(a)
17 '442	18 10, 11	19 35 U.S.C. § 271(a)
20 '544	21 46, 48, 52, 55	22 35 U.S.C. § 271(a)

23 **(b) 3-1(b): Accused Instrumentality**

24 The accused method operates in a system that includes Twitch's website file host servers  
25 operating with Twitch's website development system ("Twitch's web server system") when used by  
26 Twitch to control the distribution of Twitch's webpage file content to other computers connected  
27 thereto via the Internet, such as intermediate cache servers and computers running web browsers.

28 The accused method operates in a system that includes content delivery networks used by  
Twitch to control the distribution of its webpage file content to other computers connected thereto and  
each other via the Internet, such as intermediate cache servers and computers running web browsers.

The accused systems and methods include certain accused functionalities when combined in  
the manner specified by the asserted claims. Inclusion in the list below does not imply that the  
functionality is an element of any particular patent claim. These functionalities include, but are not  
necessarily limited to:

- 1 (a) Cache busting Twitch’s webpage base files<sup>1</sup> with content-based ETag values generated and  
2 served from Twitch’s web server system used in conjunction with conditional HTTP GET  
3 requests with IF-NONE-MATCH headers (Category 1);  
4  
5 (b) Cache busting Twitch’s webpage asset files with content-based ETag values generated and  
6 served with the asset file content from Twitch’s web server system, including to CDNs for  
7 re-service, used in conjunction with conditional HTTP GET requests with IF-NONE-  
8 MATCH headers (Category 2);  
9  
10 (c) Cache busting Twitch’s webpage asset files with content-based ETag values generated and  
11 served with the asset file content from Amazon  
12  
13 (d) Web Services (“AWS”) Simple Storage Service (“S3”) (“S3 website file host servers”),  
14 used in conjunction with conditional HTTP GET requests with IF-NONE-MATCH headers  
15 (Category 3).  
16  
17 (e) Cache busting Twitch’s webpage asset files using content-based fingerprints generated and  
18 inserted into the filenames and URI’s of Twitch’s asset files by Twitch’s web server  
19 system, and serving such asset files with fingerprinted URIs from CDNs for re-service,  
20 (Category 4);  
21  
22 (f) Cache busting Twitch’s webpage asset files using fingerprinted URIs in conjunction with  
23 conditional HTTP GET requests, including conditional HTTP GET requests with IF-  
24 NONE-MATCH headers and content-based ETags for Twitch’s webpage base files (‘544  
25 infringement).

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26  
27 <sup>1</sup> “Webpage base file” refers to the initial file served by a web server in response to a request  
28 for a webpage. Usually, but not always, this is an HTML file. A webpage base file is sometimes  
referred to as an “index file,” but this term is underinclusive of what is typically contained in a  
webpage base file.

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