

EXHIBIT 4

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12 UNITED STATES DISTRICT COURT

13 NORTHERN DISTRICT OF CALIFORNIA

14 SAN JOSE DIVISION

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

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

16
17 PERSONALWEB TECHNOLOGIES, LLC, a
18 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,

21 v.

22 TWITCH INTERACTIVE, INC., a Delaware
corporation,

23 Defendants.

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

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

I. PRELIMINARY STATEMENT

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

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

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
 29 Twitch to control the distribution of its webpage file content to other computers connected thereto and
 30 each other via the Internet, such as intermediate cache servers and computers running web browsers.

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

- (a) Cache busting Twitch’s webpage base files¹ with content-based ETag values generated and served from Twitch’s web server system used in conjunction with conditional HTTP GET requests with IF-NONE-MATCH headers (Category 1);
 - (b) Cache busting Twitch’s webpage asset files with content-based ETag values generated and served with the asset file content from Twitch’s web server system, including to CDNs for re-service, used in conjunction with conditional HTTP GET requests with IF-NONE-MATCH headers (Category 2);
 - (c) Cache busting Twitch’s webpage asset files with content-based ETag values generated and served with the asset file content from Amazon
 - (d) Web Services (“AWS”) Simple Storage Service (“S3”) (“S3 website file host servers”), used in conjunction with conditional HTTP GET requests with IF-NONE-MATCH headers (Category 3).
 - (e) Cache busting Twitch’s webpage asset files using content-based fingerprints generated and inserted into the filenames and URI’s of Twitch’s asset files by Twitch’s web server system, and serving such asset files with fingerprinted URIs from CDNs for re-service, (Category 4);
 - (f) Cache busting Twitch’s webpage asset files using fingerprinted URIs in conjunction with conditional HTTP GET requests, including conditional HTTP GET requests with IF-NONE-MATCH headers and content-based ETags for Twitch’s webpage base files (‘544 infringement).

¹ “Webpage base file” refers to the initial file served by a web server in response to a request 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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