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11 Attorneys for Plaintiff

12 UNITED STATES DISTRICT COURT
 13 SOUTHERN DISTRICT OF CALIFORNIA

14 James Hildebrandt, an individual,

15 Plaintiff,

16 vs.

17 Google LLC, a Delaware limited
18 liability company,

19 Defendants.

20 Case No.: '24CV1437 RSH JLB

21 COMPLAINT FOR PATENT
22 INFRINGEMENT

23 DEMAND FOR JURY TRIAL

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1 Plaintiff James Hildebrandt (hereinafter referred to as "*Hildebrandt*" or
2 "*Plaintiff*") hereby complains of Google LLC (hereinafter collectively referred to
3 as "*Google*" or "*Defendant*") and alleges as follows:

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5 **NATURE OF ACTION**

6 1. This is an action for patent infringement under the laws of the United States
7 of America, 35 U.S.C. § 271 *et seq.*

8
9 **THE PARTIES**

10 2. Plaintiff James Hildebrandt is an individual residing in San Diego County,
11 and the inventor and owner of the patent asserted herein.

12 3. Google LLC, a subsidiary of Alphabet Inc., is a Delaware limited liability
13 company, registered and licensed to do business in California, and having its
14 corporate offices at 1600 Amphitheatre Parkway, Mountain View, California and
15 other offices and office space within this judicial district.

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17 **JURISDICTION AND VENUE**

18 4. This Court has original and exclusive subject matter jurisdiction over this
19 action under 28 U.S.C. §§ 1331 and 1338(a) because Hildebrandt's claim for patent
20 infringement arises under the laws of the United States, 35 U.S.C. § 271, *et seq.*

21 5. This Court has personal jurisdiction over Google because it resides in this
22 District and has a continuous, systematic and substantial presence in this District,
23 because it regularly conducts business and/or solicits business within this District,
24 because it has committed and continues to commit patent infringement in this
25 District, including without limitation by using infringing products in this District,
26 by purposefully directing activities at residents of this District, and by placing
27 infringing products into the stream of commerce with the knowledge that such
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1 infringing products would be sold in California and this District, which acts form a
2 substantial part of the events giving rise to Hildebrandt’s claims.

3 6. Venue is proper in this District under 28 U.S.C. § 1400(b) because Google
4 has a regular and established place of business in this District and has committed
5 and continues to commit acts of patent infringement in this District.

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7 **FACTUAL BACKGROUND**

8 7. On April 22, 2003, the United States Patent and Trademark Office (PTO)
9 duly and lawfully issued United States Patent No. 6,552,901, entitled “Apparatus
10 and System for Cooling Electronic Circuitry, Heat Sinks, and Related Components”
11 (“the ‘901 patent”). Hildebrandt is the inventor and owner of all rights, title and
12 interest in and to the ‘901 patent, and holds all substantial rights therein, including
13 the right to grant licenses, to exclude others, and to enforce and recover past
14 damages for infringement. A copy of the ‘901 patent is attached hereto as **Exhibit**
15 **1** and made part of this Complaint.

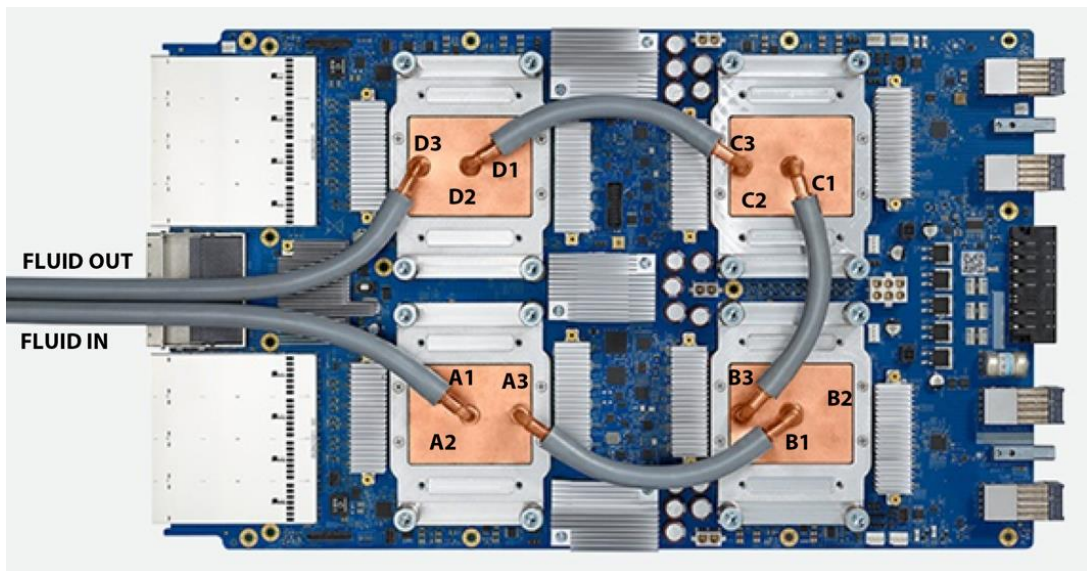
16 8. Defendant is and has been making, using, selling, offering for sale, importing
17 and/or exporting servers that infringe the ‘901 patent, including without limitation
18 the Google version 3 Tensor Processing Units (“TPU” or “TPUv3”) featuring server
19 motherboards with tubing connected to chip heat sinks to facilitate liquid cooling
20 of Google data centers and cloud servers (the “Accused Devices”). Google
21 eventually recognized the limitations of its conventional server architecture to
22 facilitate the power of AI computing. This was a daunting situation for Google
23 because new AI programs required far more computational power per period of
24 time, requiring increased computing power. This increased computation power
25 required faster, more powerful chips which generated more heat. Thus, Google
26 finally realized the need to introduce liquid cooling to its TPU servers.
27 (<https://cloud.google.com/tpu/docs/system-architecture-tpu-vm>)

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1 9. In or about May 2018, Google began using eight-rack pods of liquid-cooled
2 TPU servers for artificial intelligence workloads. Each of these pods is eight times
3 more powerful than previous versions because of the use of liquid cooling as
4 enabled by the '901 patent. Further, the liquid cooling allows Google to run its
5 processors at 100% capacity versus 50 capacity for AI processing.



13 10. Plaintiff is informed and believes, and thereupon alleges, that Google
14 achieves this improvement by bringing dielectric liquid to the four chips on each
15 motherboard, each having a heat sink sitting atop each TPUv3 ASIC chip, allowing
16 the coolant to circulate through the tubing and heat sinks to remove heat from the
17 chips.
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1 *16. A system for cooling an electronic component comprising:*
2 *at least one electronic component;*
3 *a heat sink attached to said at least one electronic component;*
4 *said heat sink having at least one interior passageway within said heat*
5 *sink and at least one secondary passageway in fluid communication with*
6 *said at least one interior passageway connecting said interior*
7 *passageway to an exterior surface of said heat sink;*
8 *means for supplying cooling fluid capable of phase change to said*
9 *interior passageway;*
10 *means for adjusting the rate at which said cooling fluid passes through*
11 *said interior passageway so that substantially no cooling fluid is*
12 *vaporized within said interior passageway; and*
13 *means for collecting and recycling said cooling fluid.*

14 16. Google has directly infringed, and continues to directly infringe,
15 literally and/or by the doctrine of equivalents, at least claim 16 of the ‘901 patent
16 by making, using, testing, selling, offering for sale and/or importing Accused
17 Devices, which provides a significant market advantage to Google and its users. A
18 chart identifying specifically where each limitation of claim 16 is found in the
19 Google TPUv3 is attached hereto as **Exhibit 2**. This infringement chart is based on
20 Hildebrandt’s current understanding of the TPUv3, which only considers publicly
21 available information. The chart does not set forth all of Hildebrandt’s infringement
22 theories. The Google TPUv3, and later iterations, also embody other claims set forth
23 in the ‘901 patent.

24 17. Hildebrandt reserves the right to amend or supplement its infringement
25 theories upon more information becoming available through formal discovery
26 and/or this Court completing its claim construction proceedings.

27 18. Defendants’ acts of infringement were undertaken without permission
28 or license from Hildebrandt.

 19. Hildebrandt is informed and believes and based thereon alleges that
 Google’s infringement of the ‘901 patent will continue unless enjoined by this
 Court.

1 Hildebrandt. Google knew or should have known that these actions would result in
2 its customer's infringement.

3 26. By reason of the foregoing acts of indirect infringement, Hildebrandt
4 has been damaged, continues to be damaged, and is entitled to no less than a
5 reasonable royalty in accordance with 35 U.S.C. § 284 in an amount to be
6 determined at trial. In addition, Hildebrandt is entitled to reasonable attorneys' fees
7 incurred in this action under 35 U.S.C. § 285.

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9 **PRAYER FOR RELIEF**

10 WHEREFORE, Hildebrandt prays for judgment against Defendant as
11 follows:

12 (a) An order adjudging Google to have directly infringed the '901 patent
13 under 35 U.S.C. § 271;

14 (b) That Defendant be required to account to Hildebrandt for any and all
15 profits derived by them associated with their use and/or sale of the Accused
16 Devices, and all damages sustained by Hildebrandt by reason of Defendant's patent
17 infringement;

18 (c) For an assessment and award of patent damages against Defendants in
19 an amount no less than lost profits or a reasonable royalty, pursuant to 35 U.S.C. §
20 284;

21 (d) That an award of reasonable costs, expenses, and attorneys' fees be
22 awarded against Defendant pursuant to 35 U.S.C. § 285;

23 (e) An award of pre-judgment and post-judgment interest and costs of this
24 action against Defendants; and

25 (f) For such other and further relief as the Court deems just and proper.
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DATED: August 13, 2024

WEEKS NELSON

/s/ Gregory K. Nelson
Gregory K. Nelson
Attorney for Plaintiff

JURY DEMAND

Plaintiff hereby requests a trial by jury in this matter.

DATED: August 13, 2024

WEEKS NELSON

/s/ Gregory K. Nelson
Gregory K. Nelson
Attorney for Plaintiff