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9	Attorneys for Plaintiff						
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11	UNITED STATES DISTRICT COURT						
12	SOUTHERN DISTRICT OF CALIFORNIA						
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14							
15	James Hildebrandt, an individual,	Case No.: 24CV1437 RSH JLB					
16 17	Plaintiff,						
17	VS.	COMPLAINT FOR PATENT INFRINGEMENT					
19							
20	Google LLC, a Delaware limited	DEMAND FOR JURY TRIAL					
21	liability company,	DEMAIND FOR JUKT TRIAL					
22							
23	Defendants.						
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Plaintiff James Hildebrandt (hereinafter referred to as "*Hildebrandt*" or "*Plaintiff*") hereby complains of Google LLC (hereinafter collectively referred to as "*Google*" or "*Defendant*") and alleges as follows:

NATURE OF ACTION

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

THE PARTIES

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

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

JURISDICTION AND VENUE

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

5. This Court has personal jurisdiction over Google because it resides in this
District and has a continuous, systematic and substantial presence in this District,
because it regularly conducts business and/or solicits business within this District,
because it has committed and continues to commit patent infringement in this
District, including without limitation by using infringing products in this District,
by purposefully directing activities at residents of this District, and by placing
infringing products into the stream of commerce with the knowledge that such

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infringing products would be sold in California and this District, which acts form a substantial part of the events giving rise to Hildebrandt's claims.

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

FACTUAL BACKGROUND

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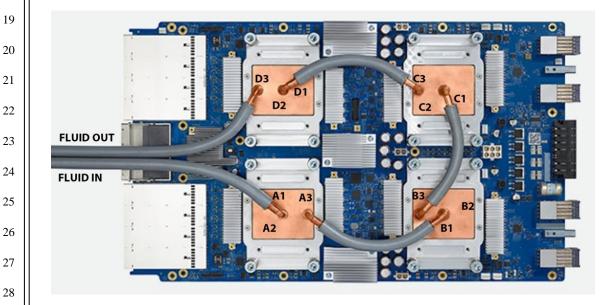
7. On April 22, 2003, the United States Patent and Trademark Office (PTO) 8 duly and lawfully issued United States Patent No. 6,552,901, entitled "Apparatus 9 and System for Cooling Electronic Circuitry, Heat Sinks, and Related Components" 10 ("the '901 patent"). Hildebrandt is the inventor and owner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

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

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



10. Plaintiff is informed and believes, and thereupon alleges, that Google achieves this improvement by bringing dialectric liquid to the four chips on each motherboard, each having a heat sink sitting atop each TPUv3 ASIC chip, allowing the coolant to circulate through the tubing and heat sinks to remove heat from the chips.



11. Where Google knew that its demand for AI-based user services far 1 exceeded its computing capabilities, Google implemented the same patented liquid-2 cooling process that had been patented by Hildebrandt. Google now operates at least 3 fourteen data centers/cloud servers in the United States for its TPU computers. The 4 Accused Devices are installed and operated by Google in one or more of Google's 5 data centers/cloud servers at: Berkeley County, South Carolina; Council Bluffs, 6 Iowa; The Dalles, Oregon; Douglas County, Georgia; Henderson, Nevada; Jackson 7 County, Alabama; Lenior, North Carolina; Loudoun County, Virginia; Mayes 8 County, Oklahoma; Midlothian, Texas; and Montgomery County, Tennessee; New 9 Albany, Ohio; Papillion, Nebraska; and Storey County, Nevada, with the possibility 10 of elsewhere. 11

12. Plaintiff is informed and believes, and thereupon alleges, that the 12 manufacture, use, and/or sale of the Accused Devices, has resulted in lost revenue 13 and otherwise deprives Plaintiff of the right to use and/or license the '901 patent, 14 all to Plaintiff's damage in an amount not yet fully determined. As a direct result of 15 Defendants' actions, Plaintiff has been damaged in an amount to be determined at 16 trial. Google's infringement of the '901 patent is willful. On information and belief, 17 Google knew or should have known of the '901 patent for over six years with at 18 least constructive notice through USPTO publication. 19

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23 24 13. Hildebrandt repeats, realleges, and incorporates by reference the preceding allegations above as though set forth fully herein.

FIRST CLAIM FOR RELIEF

(Direct Infringement – 35 U.S.C. § 271)

14. Defendant has infringed the '901 patent by making, using, selling,
offering for sale, importing, and/or exporting the Accused Devices, which embody
one or more claims set forth in the '901 patent.

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15. Claim 16 of the '901 patent recites the following limitations:

16. A system for cooling an electronic component comprising: 1 at least one electronic component; 2 a heat sink attached to said at least one electronic component; said heat sink having at least one interior passageway within said heat 3 sink and at least one secondary passageway in fluid communication with 4 said at least one interior passageway connecting said interior passageway to an exterior surface of said heat sink; 5 means for supplying cooling fluid capable of phase change to said 6 *interior passageway;* means for adjusting the rate at which said cooling fluid passes through 7 said interior passageway so that substantially no cooling fluid is 8 vaporized within said interior passageway; and 9 means for collecting and recycling said cooling fluid.

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Google has directly infringed, and continues to directly infringe, 16. 11 literally and/or by the doctrine of equivalents, at least claim 16 of the '901 patent 12 by making, using, testing, selling, offering for sale and/or importing Accused 13 Devices, which provides a significant market advantage to Google and its users. A 14 chart identifying specifically where each limitation of claim 16 is found in the 15 Google TPUv3 is attached hereto as **Exhibit 2**. This infringement chart is based on 16 Hildebrandt's current understanding of the TPUv3, which only considers publicly 17 available information. The chart does not set forth all of Hildebrandt's infringement 18 theories. The Google TPUv3, and later iterations, also embody other claims set forth 19 in the '901 patent. 20

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

18. Defendants' acts of infringement were undertaken without permission
 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.

20. Plaintiff is informed and believes and thereupon alleges that the 1 extensive scope and scale of commercial use and sale of the Accused Devices has 2 resulted in lost sales and license fees, reduced the business and profit of Plaintiff, 3 and greatly injured the general reputation of Plaintiff, all to Plaintiff's damage in an 4 amount not yet fully determined. The exact amount of profits realized by 5 Defendants as a result of its infringing activities, are presently unknown to Plaintiff, 6 as are the exact amount of damages suffered by Plaintiff as a result of said 7 activities. These profits and damages cannot be accurately ascertained without an 8 accounting. 9

Pursuant to 35 U.S.C. § 284, Plaintiff is also entitled to an increase of
 damages up to three times the amount found or assessed due to Defendants' willful
 and deliberate infringement.

13 22. In addition, Hildebrandt is entitled to reasonable attorneys' fees
14 incurred in this action under 35 U.S.C. § 285.

15 23. Because of the aforesaid infringing acts, Hildebrandt has suffered and
16 continues to suffer great and irreparable injury for which there is no adequate
17 remedy at law.

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- 19 20

SECOND CLAIM FOR RELIEF

(Indirect Infringement – 35 U.S.C. § 271)

21 24. Hildebrandt repeats, realleges, and incorporates by reference the
22 preceding allegations above as though set forth fully herein.

23 25. Hildebrandt is informed and believes, and based thereon, alleges that
Google actively induces customers to use its TPUv3 servers and server space, or AI
processing and cloud services, to their advantage, thus directly infringing the '901
patent. Hildebrandt is informed and believes, and based thereon, alleges that Google
sells or has sold the Accused Devices, services or space on the Accused Devices to
its customers, who then use the Accused Devices without authorization from

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

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

PRAYER FOR RELIEF

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

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

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

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

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

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

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(f) For such other and further relief as the Court deems just and proper.

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2	DATED: August 13, 202	24	WEEKS NELS	SON				
3			/s/ Gragory K	Nelson				
4			<u>/s/ Gregory K.</u> Gregory K. Ne	lson				
5			Attorney for Pl	laintiff				
6								
7	JURY DEMAND							
8 9								
10	Plaintiff hereby requests a trial by jury in this matter.							
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12	DATED: August 13, 202	24	WEEKS NELS	SON				
13			/s/ Gragom K	Nalson				
14			/s/ Gregory K. Gregory K. Ne					
15			Attorney for Pl	laintiff				
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