UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS

WIESBLATT LICENSING LLC, **Plaintiff,** **v.** **RAZER USA LTD.,** **Defendant.**	**Case No. 6:22-cv-990** **Jury Trial Demanded**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Wiesblatt Licensing LLC ("Plaintiff") hereby files this First Amended Complaint for Patent Infringement against Razer USA Ltd. ("Razer" or "Defendant"), and alleges, upon information and belief, as follows:

THE PARTIES

1. Wiesblatt Licensing LLC is a limited liability company organized and existing under the laws of the State of Texas with its principal place of business at 6001 West Parmer Lane, Suite 370-1165, Austin, Texas 78727.

2. Defendant is a corporation organized and existing under the laws of the State of Delaware with a place of business in this District at: The Domain, 11401 Century Oaks Terrace, Austin, Texas 78758. Defendant may be served through its registered agent Harvard Business Services, Inc. at 16192 Coastal Highway, Lewes, Delaware 19958.

JURISDICTION AND VENUE

3. This Court has subject matter jurisdiction over this case under 28 U.S.C. §§ 1331 and 1338.

4. This Court has personal jurisdiction over Defendant. Defendant has continuous and systematic business contacts with the State of Texas. Defendant transacts business within this District and elsewhere in the State of Texas. Further, this Court has personal jurisdiction over Defendant based on its commission of one or more acts of infringement of Wiesblatt's Patents in this District and elsewhere in the State of Texas.

5. Defendant directly conducts business extensively throughout the State of Texas, by distributing, making, using, offering for sale, selling, and advertising its products and services in the State of Texas and in this District. Defendant has purposefully and voluntarily made its business services, including the infringing systems and services, available to residents of this District and into the stream of commerce with the intention and expectation that they will be purchased and/or used by consumers in this District.

6. Defendant maintains physical brick-and-mortar business locations in the State of Texas and within this District, retains employees specifically in this District for the purpose of servicing customers in this District, and generates substantial revenues from its business activities in this District.

7. Venue is proper in the Western District of Texas as to Defendant pursuant to at least 28 U.S.C. §§ 1391(c)(2) and 1400(b). As noted above, Defendant maintains a regular and established business presence in this District.

PATENTS-IN-SUIT

8. Plaintiff is the sole and exclusive owner, by assignment, of U.S. Patent 8,396,112 (the "'112 Patent"), titled "Circuitry and Method For Transferring Data, and Circuitry and Method Utilizing Clock Pulses" (hereinafter collectively referred to as "the Wiesblatt Patents").

9. By written instruments duly filed with the United States Patent and Trademark Office, Wiesblatt is assigned all rights, title, and interest in the Wiesblatt Patents. As such, Plaintiff Wiesblatt Systems, LLC has sole and exclusive standing to assert the Wiesblatt Patents and to bring these causes of action.

10. The Wiesblatt Patents are valid, enforceable, and were duly issued in full compliance with Title 35 of the United States Code.

11. Kesatoshi Takeuchi is the sole named inventor for the Wiesblatt Patents, originally assigned to international industry power, Seiko Epson Corporation.

12. Kesatoshi Takeuchi is the named inventor on 674 U.S. Patents that were also originally assigned to international industry giant, Seiko Epson Corporation.

13. Indeed, the Wiesblatt Patents have been cited in patents issued to well-known industry leaders, including Honeywell International Inc., which led to the issuance of its own patent titled "Quarter Cycle Waveform Detector."

14. The Wiesblatt Patents each include numerous claims defining distinct inventions. No single claim is representative of any other.

15. The priority date of each of the Wiesblatt Patents is at least as early as November 28, 2006. As of the priority date, the inventions as claimed were novel, non-obvious, unconventional, and non-routine. Indeed, the Wiesblatt Patents overcame a number of specific technological problems in the industry, and provided specific technological solutions.

16. The claims of the Wiesblatt Patents are patent eligible under 35 U.S.C. § 101, 102, 103, and 112, as reflected by the fact that three different Patent Examiners all agreed and allowed the Wiesblatt Patents over extensive prior art as disclosed and of record during the prosecution of the Wiesblatt Patents. *See Stone Basket Innov. v. Cook Medical,* 892 F.3d 1175, 1179 (Fed. Cir. 2018) ("when prior art is listed on the face of a patent, the examiner is presumed to have considered it") (citing *Shire LLC v. Amneal Pharm., LLC,* 802 F.3d 1301, 1307 (Fed. Cir. 2015)); *Exmark Mfg. v. Briggs & Stratton,* 879 F.3d 1332, 1342 (Fed. Cir. 2018).

17. After giving full proper credit to the prior art and having conducted a thorough search for all relevant art and having fully considered the most relevant art known at the time, the United States Patent Examiners allowed all of the claims of the Wiesblatt Patents to issue. In so doing, it is presumed that Examiners used their knowledge of the art when examining the claims. *See K/S Himpp v. Hear-Wear Techs., LLC,* 751 F.3d 1362, 1369 (Fed. Cir. 2014). It is further presumed that Patent Examiners had experience in the field of the invention, and that the Patent Examiners properly acted in accordance with a person of ordinary skill. *In re Sang Su Lee,* 277 F.3d 1338, 1345 (Fed. Cir. 2002).

18. The claims of the Wiesblatt Patents are novel and non-obvious, including over all non-cited art that is merely cumulative with the referenced and cited prior art. *See* 37 C.F.R. § 1.56(b) (information is material to patentability when it is not cumulative to information already of record in the application); *see also AbbVie Deutschland GmbH v. Janssen Biotech,* 759 F.3d 1285, 1304 (Fed. Cir. 2014); *In re DBC,* 545 F.3d 1373, 1382 (Fed. Cir. 2008). Likewise, the claims of the Wiesblatt Patents are novel and non-obvious, including over all non-cited contemporaneous state of the art systems and methods, all of which would have been known to a person of ordinary skill in the art, and which were therefore presumptively also known

and considered by the Examiners. *See, e.g., St. Clair I.P. Consultants v. Canon, Inc.,* 2011 WL 66166 at *6 (Fed. Cir. 2011); *In re Sang Su Lee,* 277 F.3d 1338, 1345 (Fed. Cir. 2002); *In re Koninklijke Philips Patent Litigation,* 2020 WL 7392868 at *19 (N.D. Cal. 2020); *Standard Oil v. American Cyanamid,* 774 F.2d 448, 454 (Fed. Cir. 1985) (persons of ordinary skill are presumed to be aware of all pertinent prior art).

THE ACCUSED INSTRUMENTALITIES

19. Upon information and belief, Defendant makes, sells, advertises, offers for sale, uses, or otherwise provides a plurality of electronics with circuitry for transferring data covered by the Wiesblatt Patents, including the Razer Blade 15, Razer Edge Wi-Fi, Razer Edge Founders Edition, and the Razer Edge 5G, as represented below, including all augmentations to these platforms or descriptions of platforms. Collectively, all the foregoing is referred to herein as the "Accused instrumentalities."

***See* Screenshot of Defendant's webpage for the Razer Blade 15 located at** https://www.razer.com/gaming-laptops/razer-blade?utm_source=google&utm_medium=search-brand&utm_campaign=220118;_RS_SYS_BTM_US_EGR-Blade-15_TR&gclid=CjwKCAjw1ICZBhAzEiwAFfvFhDiGDPWdB1uZrhAWGORfrtgqYlqWTEzCbMSkgU_nC__M_IIA8eV0XhoCZesQAvD_BwE.

***See* Screenshot of Defendant's webpage for the Razer Edge located at https://www.razer.com/mobile-handhelds/razer-edge.**

COUNT I
Infringement of U.S. Patent No. 8,396,112

20. Plaintiff incorporates the above paragraphs by reference.

21. Defendant has been on actual notice of the '112 Patent at least as early as the date it received service of the Original Complaint in this litigation.

22. The damages period begins at least as early as six years prior to the date of service of the Original Complaint in this litigation.

23. Defendant manufactures, sells, offers for sale, owns, directs, and/or controls the operation of the Accused Instrumentalities and generates substantial financial revenues and benefits therefrom.

24. Defendant has directly infringed and continues to directly infringe the claims of the '112 Patent. As exemplary, Claim 1 is by making, using, importing, selling, and/or offering for sale the Accused Instrumentalities. Defendant directly makes and sells the infringing

Accused Instrumentalities at least because it is solely responsible for putting the infringing systems into service by directing or controlling the systems as a whole and by obtaining the benefits therefrom. More specifically, and on information and belief, with respect to the Accused Instrumentalities, Defendant:

- provides a circuitry for transmitting data between a host and a memory (e.g., LPDDR5 RAM);

	RAZER EDGE Wi-Fi	RAZER EDGE FOUNDERS EDITION	RAZER EDGE 5G
MSRP	$399.99	$499.99	Coming Soon
CHIPSET	Qualcomm Snapdragon G3x Gen 1	Qualcomm Snapdragon G3x Gen 1	Qualcomm Snapdragon G3x Gen 1
SCREEN	6.8" FHD+ (2400x1080) AMOLED 144Hz	6.8" FHD+ (2400x1080) AMOLED 144Hz	6.8" FHD+ (2400x1080) AMOLED 144Hz
RAM	8GB LPDDR5	8GB LPDDR5	8GB LPDDR5

***See* Screenshot of Defendant's webpage for the Razer Edge listing LPDDR5 RAM located at https://www.razer.com/mobile-handhelds/razer-edge.**

- (ii) provides a variable power supply voltage generator (e.g., PMIC) for generating a variable power supply voltage (e.g., VDDQ and/or VDD2 from min to max voltage);

There are two major power domains for the LPDDR5 memory, one is VDDQ or final stage driver/ receiver power domain and the other is VDD2 or DRAM core stage power domain. The system designers need to meet the JEDEC specifications for these domains discussed in the next section

Power Delivery

Table 2 shows LPDDR memory voltage requirements and termination scheme for the final stage.

	LPDDR2	LPDDR3	LPDDR4	LPDDR4x	LPDDR5*
Final stage voltage (V)	1.2	1.2	1.1	0.6	< 0.6
DRAM Vdd2 core voltage (V)	1.2	1.2	1.1	1.1	< 1.1
DRAM Vdd1 voltage	1.8	1.8	1.8	1.8	1.8
Final stage termination scheme	Unterminated	Unterminated/ power terminated	Ground termination	Ground termination	Ground termination*
Speed (MTPS)	1033	2133	4267	4267	5400-6400*

Table 2 LPDDR Specifications for different generations

See https://docplayer.net/158110952-Electrical-integrity-for-lpddr5-memory-technology.html.

As shown in the graph the VDDQ min to max voltage is decreasing generation over generation (LPDDR3 to LPDDR4x) to save the power. LPDDR5 Vmin-Vmax voltage estimates are projected based on the trend. In order to meet these specification for LPDDR5 carefully design for different components including PMIC, PCB and DIMM card needs to be done.

PMIC/regulator DC accuracy, ripple:

The voltage set point at the regulator is depends on DC and AC components and the DC component further comprises of DC losses on board and package in addition to the DC accuracy of the voltage regulator. Since the regulation point can change with process, voltage and temperature, choosing a regulator with low DC variation has a direct impact on the ability to meet the JEDEC spec at the memory ball and lowering power by setting it as low as possible.

PMIC/regulator load transient response:

The inherent nature of DDR loads is bursty and hence there is a corresponding load transient that the voltage regulator/PMIC will have to support. Understanding the worst case load transient possible is the first step in determining how to deal with it. The voltage budget assigned to transient dip and overshoot must be planned so that the final JEDEC specification is still met. In order to lower the voltage excursion due to a load transient there are several voltage regulator techniques popular in the industry today and it is usually a trade-off between transient performance, spectral content and amount of board capacitance used.

See https://docplayer.net/158110952-Electrical-integrity-for-lpddr5-memory-technology.html.

> LPDDR5 DRAMs offer additional power-savings using the dynamic voltage scaling (DVS) feature, in which the memory controller can reduce both the DRAM frequency and voltage during channel idle times. LPDDR DRAM channels are typically 16- or 32-bits wide, in contrast to the typical standard DDR DRAM channels which are 64-bit wide. As with the DRAM generations in the other two categories, every successive LPDDR generation (LPDDR5, LPDDR4/4X, LPDDR3, LPDDR2, LPDDR) targets a higher performance and lower power than its predecessor. Additionally, no two LPDDR generations are compatible with one another.

See https://www.synopsys.com/designware-ip/technical-bulletin/key-features-about-lpddr5.html.

> LPDDR5 DRAMs can support two core and I/O voltages through DVS: 1.05V and 0.5V, respectively, while operating at higher frequencies and 0.9V and 0.3V, respectively, while operating at lower frequencies. Hence, LPDDR5 DRAMs support DVS for both core and I/O voltages.

See https://www.synopsys.com/designware-ip/technical-bulletin/key-features-about-lpddr5.html.

> While moving from LPDDR4 to LPDDR4x, the output VDDQ voltage – that is needed to drive signals between RAM and your phone's chipset – was reduced from 1.1v to 0.6v. This voltage reduction was what primarily brought in the improvements in power efficiency.
>
> Voltages have been reduced with LPDDR4x to LPDDR5 (not the VDDQ, though), but this time the power efficiency gains are driven by many different factors and holistic design refinements. These factors include the use of variable voltage (up to 1.1V), improved clocking inspired by GDDR5 memory used in graphics cards, and – primarily – the **new deep sleep mode** which ensures that LPDDR5 DRAM consumes 50% lesser power in idle mode as compared to LPDDR4x.

See https://www.smartprix.com/bytes/lpddr5-ram-phones/.

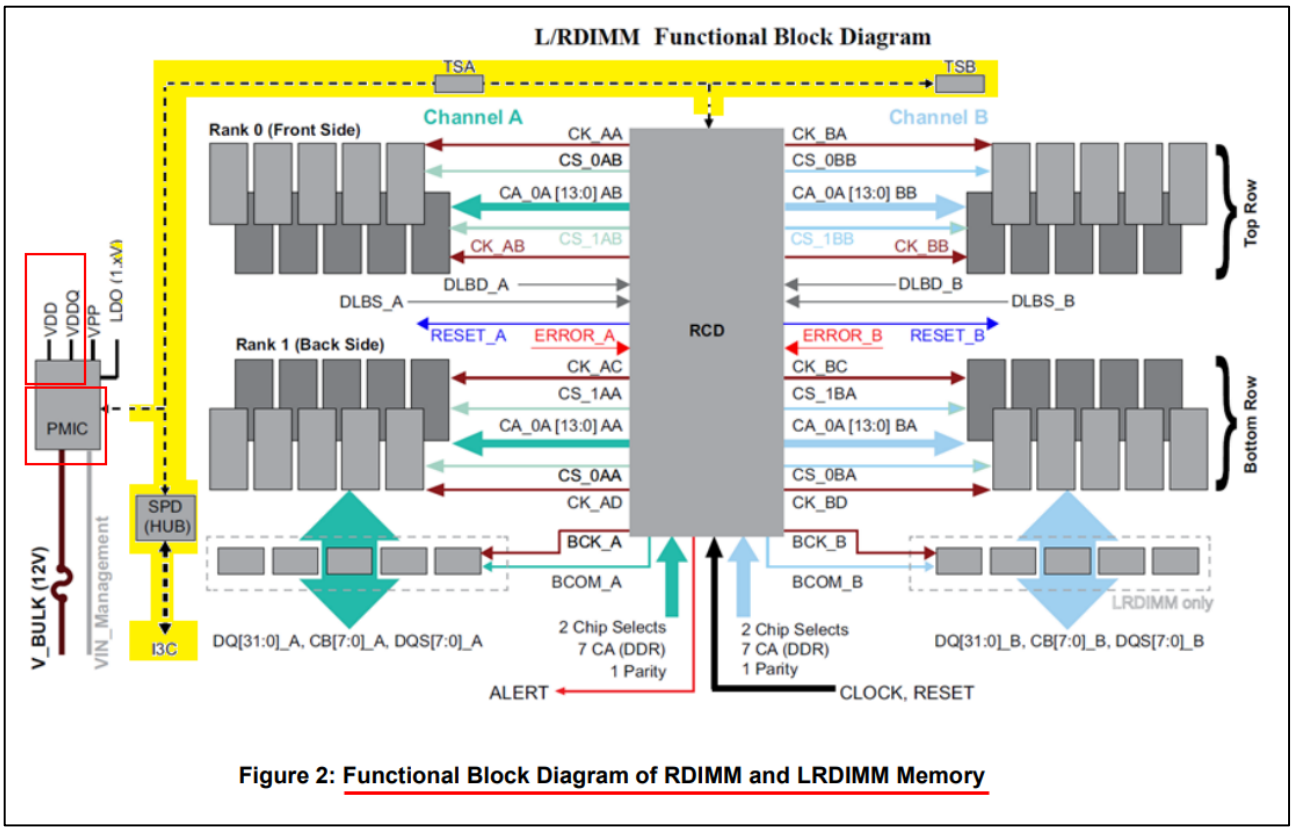

Figure 2: Functional Block Diagram of RDIMM and LRDIMM Memory

See https://media-www.micron.com/-/media/client/global/documents/products/technical-marketing-brief/ddr5_key_module_features_tech_brief.pdf?la=en&rev=f3ca96bed7d9427ba72b4c192dfacb56.

- As shown from the above figures, the Defendant also:
- (iii) provides a transmitting circuit (e.g., circuit for the transmitter) operative at the variable power supply voltage (e.g., variable voltages of VDDQ and VDD2) for generating a multi-value analog signal (e.g., multiple analog waveforms generated by the variable supply voltages) and transmitting the multi-value analog signal to other circuits (e.g., circuits of the receiver);
- (iv) provides a receiving circuit (e.g., circuit for the receiver) operative at the variable power supply voltage for receiving the multi-value analog signal (e.g., multiple analog waveforms) and performing A/D conversion to re-generate a multi-value

digital signal, where the receiver utilizes DFE which performs A/D conversion to generate digital signals.; and

- (v) provides a threshold voltage generator for generating threshold voltages (e.g., VrefDQ) used for the A/D conversion (e.g., A/D conversion of the DFE system) and supplying the threshold voltages (e.g., VrefDQ) to the receiving circuit (e.g., the receiver), the threshold voltages (e.g., VrefDQ) being generated from the variable power supply voltage (e.g., VDDQ) or from a signal having a voltage value proportional to the variable power supply voltage (e.g., VrefDQ is usually ½ of VDDQ), where A circuit onboard each DRAM generates V_{refDQ} from VDDQ. The objective is to have V_{refDQ} vary with VDDQ. The threshold voltage V_{refDQ} is derived from VDDQ such that it is generated from the variable power supply voltage VDDQ, and where the threshold voltage V_{refDQ} is used by the DFE system of the receiver indicating that the threshold voltage V_{refDQ} is used for the A/D conversion illustrated above;

25. Further on information and belief, Defendant directly uses the infringing Accused Instrumentalities at least because it assembled the combined infringing elements and makes them collectively available in the United States, including via its Internet domain web pages and/or software applications, as well as via its internal systems and interfaces. Further, and on information and belief, Defendant has directly infringed by using the infringing Accused Instrumentalities as part of its ongoing and regular testing and/or internal legal compliance activities. Such testing and/or legal compliance necessarily requires Defendant to make and use the Accused Instrumentalities in an infringing manner. Still further, Defendant is a direct

infringer by virtue of its branding and marketing activities, which collectively comprise the sale and offering for sale of the infringing Accused Instrumentalities.

26. As shown above, Defendant is making, using, and offering for sale the Accused Instrumentalities.

27. Additionally, upon information and belief, Defendant owns, directs, and/or controls the infringing method operation of the Accused Instrumentalities.

28. On information and belief, the infringement of the Wiesblatt Patents by Defendant will now be willful through the filing and service of this Complaint.

29. In addition or in the alternative, Defendant now has knowledge and continues these actions and it indirectly infringes by way of inducing direct infringement by others and/or contributing to the infringement by others of the ’112 Patent in the State of Texas, in this judicial district, and elsewhere in the United States, by, among other things, making, using, importing, offering for sale, and/or selling, without license or authority, infringing services for use in systems that fall within the scope of the claims of the ’112 Patent. This includes without limitation, one or more of the Accused Instrumentalities by making, using, importing offering for sale, and/or selling such services, Defendant injured Wiesblatt and is thus liable to Wiesblatt for infringement of the ’112 Patent under 35 U.S.C. § 271.

30. Now with knowledge of the Wiesblatt Patents, Defendant induces infringement under Title 35 U.S.C. § 271(b). Defendant will have performed actions that induced infringing acts that Defendant knew or should have known would induce actual infringements. *See Manville Sales Corp. v. Paramount Sys., Inc*., 917 F.2d 544, 553 (Fed.Cir.1990), quoted in *DSU Med. Corp. v. JMS Co*., 471 F.3d 1293, 1306 (Fed.Cir.2006) (*en banc* in relevant part). “[A] finding of inducement requires a threshold finding of direct infringement—either a finding of

specific instances of direct infringement or a finding that the accused products necessarily infringe." *Ricoh,* 550 F.3d at 1341 (citing *ACCO Brands, Inc. v. ABA Locks Manufacturer Co*., 501 F.3d 1307, 1313, (Fed. Cir. 2007).

31. Plaintiff will rely on direct and/or circumstantial evidence to prove the intent element. *See Fuji Photo Film Co. v. Jazz Photo Corp.*, 394 F.3d 1368, 1377 (Fed. Cir. 2005) ("A patentee may prove intent through circumstantial evidence."); *Water Techs. Corp. v. Calco, Ltd*., 850 F.2d 660, 668 (Fed. Cir. 1988) ("While proof of intent is necessary, direct evidence is not required; rather, circumstantial evidence may suffice.").

32. Defendant has taken active steps to induce infringement, such as advertising an infringing use, which supports a finding of an intention for the accused product to be used in an infringing manner. *See Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd*., 545 U.S. 913, 932, 125 S. Ct. 2764, 162 L. Ed. 2d 781 (2005) (explaining that the contributory infringement doctrine "was devised to identify instances in which it may be presumed from distribution of an article in commerce that the distributor intended the article to be used to infringe another's patent, and so may justly be held liable for that infringement").

33. The Original Complaint—and the service thereof—provided Defendant the requisite notice of the Wiesblatt Patents to support a claim of indirect infringement at least as of the time the Complaint was filed. *BillJCo, LLC v. Cisco Sys., Inc.*, No. 2:21-cv-183, 2021 WL 6618529, at *6 (E.D. Tex. Nov. 30, 2021).

34. In addition, on information and belief, and based in part upon the clear infringement by the Accused Instrumentalities, Defendant has a practice of not performing a review of the patent rights of others first for clearance or to assess infringement thereof prior to launching products and services. Defendant has a policy or practice of not reviewing the patents of

others (including instructing its employees to not review the patents of others), and thus has been willfully blind of Wiesblatt's patent rights. As such, Defendant has been willfully blind to the patent rights of Plaintiff.

35. The foregoing infringement on the part of Defendant has caused past and ongoing injury to Plaintiff. The specific dollar amount of damages adequate to compensate for the infringement shall be determined at trial but is in no event less than a reasonable royalty from the date of first infringement to the expiration of the Wiesblatt Patents.

36. Each of Defendant's aforesaid activities have been without authority and/or license from Plaintiff.

PRAYER FOR RELIEF

WHEREFORE, Wiesblatt Systems, LLC respectfully requests the Court enter judgment against Defendant as follows:

1. Declaring that Defendant has infringed each of the Wiesblatt Patents;
2. Awarding Wiesblatt Systems, LLC its damages suffered because of Defendant's infringement of the Wiesblatt Patents;
3. Enter a judgment awarding treble damages pursuant to 35 U.S.C. §284 for Defendant's willful infringement of one or more of the Wiesblatt Patents;
4. Awarding Wiesblatt Systems, LLC its costs, reasonable attorneys' fees, expenses, and interest; and
5. Granting Wiesblatt Systems, LLC such further relief as the Court finds appropriate.

JURY DEMAND

Wiesblatt Systems, LLC demands trial by jury, under Fed. R. Civ. P. 38.

Respectfully Submitted

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