Paper No. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.,

Petitioner,

v.

NETLIST, INC.,

Patent Owner

IPR2022-00615
Patent No. 7,619,912

PETITIONER'S AUTHORIZED
REPLY TO PATENT OWNER'S PRELIMINARY RESPONSE

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EXHIBIT LIST

No.	Exhibit Description
1001	U.S. Patent No. 7,619,912 with *Inter Partes* Reexamination Certificate
1002	File History of U.S. Patent No. 7,619,912
1003	Declaration of Dr. Wolfe
1004	Curriculum Vitae of Dr. Wolfe
1005	U.S. Provisional Application No. 60/588,244
1006	U.S. Provisional Application No. 60/550,668
1007	U.S. Provisional Application No. 60/575,595
1008	U.S. Patent No. 7,289,386
1009	U.S. Patent No. 7,286,436
1010	Prosecution History for *Inter Partes* Reexamination No. 95/000,578 of the 912 Patent
1011	Decisions by the PTAB in *Inter Partes* Reexamination Nos. 95/000,578; 95/000,579; and 95/001,339 of the 912 Patent
1012	*Inter Partes* Reexamination Certificate for the 912 Patent (Feb. 8, 2021)
1013	Affirmance of the Examiner's Decision on Reexamination of '386 Patent (Feb. 25, 2015)
1014	Reexamination Certificate for '386 Patent (Aug. 19, 2016)
1015	U.S. Patent No. 7,636,274
1016	Appeal 2017-007075 Affirmance of the Examiner's Decision on Reexamination of '274 Patent (May 9, 2017)
1017	Reexamination Certificate for '274 Patent (Nov. 5, 2018)
1018	U.S. Patent No. 7,881,150
1019	IPR2014-00882 Final Written Decision on Remand ('150 patent) (March 29, 2018)
1020	IPR2014-01011 Final Written Decision on Remand ('150 patent) (March 29, 2018)
1021	U.S. Patent No. 8,081,536
1022	IPR2014-00883 Final Written Decision on Remand ('536 patent) (March 29, 2018)

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No.	Exhibit Description
1023	IPR2015-01021 Final Written Decision ('536 patent) (Sept. 28, 2016)
1024	U.S. Patent No. 8,756,364
1025	IPR2017-00549 Final Written Decision ('364 patent) (May 3, 2018)
1026	U.S. Patent No. 7,532,537
1027	IPR2017-00667 Final Written Decision ('537 patent) (July 18, 2018)
1028	IPR2017-00668 Final Written Decision ('537 patent) (July 18, 2018)
1029	JEDEC JESD79-2 standard for DDR2 SDRAM (Sept. 2003)
1030	JEDEC JESD79 standard for DDR SDRAM (June 2000)
1031	Carlson Declaration for JESD79
1032	JEDEC JESD21-C design specification for DDR SDRAM Registered DIMM (January 2002)
1033	Bruce Jacob et al., Memory Systems: Cache, DRAM, Disk (2008)
1034	Bruce Jacob, *Synchronous DRAM Architectures, Organizations, and Alternative Technologies* (Dec. 10, 2002)
1035	U.S. Patent No. 7,363,422 to Perego et al.
1036	U.S. Patent Pub. No. 2006/0117152 to Amidi et al.
1037	U.S. Patent Pub. No. 2006/0277355 to Ellsberry et al.
1038	IPR2018-00362 Final Written Decision (Patent 9,606,907) (June 27, 2019)
1039	Carlson Declaration for JESD79-2
1040	Carlson Declaration for JESD21-C
1041	U.S. Patent. No. 5,513,135 to Dell et al.
1042	J.P. 2002-184176 to Masashi
1043	Harold S. Stone, Microcomputer Interfacing (1982)
1044	U.S. Patent No. 6,209,074 to Dell et al.
1045	Google's Motion to Strike Netlist's New Assertion of Claim 16 of the 912 Patent, *Netlist, Inc. v. Google LLC*, No. 4:09-cv-05718 (N.D. Cal. filed July 30, 2021)
1046	Order Staying Discovery and Other Deadlines Pending Resolution of Motions, *Netlist, Inc. v. Google LLC*, No. 4:09-cv-05718 (N.D. Cal. filed Sept. 3, 2021)

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No.	Exhibit Description
1047	Order Continuing Hearing on Motions, *Netlist, Inc. v. Google LLC*, No. 4:09-cv-05718 (N.D. Cal. filed Nov. 9, 2021)
1048	Notice Setting Hearing on Motions, *Netlist, Inc. v. Google LLC*, No. 4:09-cv-05718 (N.D. Cal. filed Jan. 27, 2022)
1049	Complaint for Declaratory Judgment of Non-Infringement and Unenforceability; Breach of Contract, *Samsung Electronics Co., Ltd. et al. v. Netlist, Inc.*, No. 1:21-cv-01453 (D. Del. filed Oct. 15, 2021)
1050	Stipulation extending response to amended complaint to February 16, 2022, *Samsung Electronics Co., Ltd. et al. v. Netlist, Inc.*, No. 1:21-cv-01453 (D. Del. filed Dec. 30, 2021)
1051	First Amended Complaint for Declaratory Judgment of Non-Infringement and Unenforceability; Breach of Contract, *Samsung Electronics Co., Ltd. et al. v. Netlist, Inc.*, No. 1:21-cv-01453 (D. Del. filed Jan. 18, 2022)
1052	Netlist's motion to dismiss the First Amended Complaint, *Samsung Electronics Co., Ltd. et al. v. Netlist, Inc.*, No. 1:21-cv-01453 (D. Del. filed Feb. 16, 2022)
1053	Order allowing Netlist to assert claim 16 of the 912 Patent against Google, and granting Google's motion for summary judgment of intervening rights with respect to all other claims, *Netlist, Inc. v. Google LLC*, No. 4:09-cv-05718 (N.D. Cal. filed May 5, 2022)
1054	Order granting Google's motion to stay in light of litigation between Samsung and Netlist, *Netlist, Inc. v. Google LLC*, No. 4:09-cv-05718 (N.D. Cal. filed July 13, 2022)
1055	Order in Delaware declining jurisdiction over Samsung's declaratory judgment action on the 912 Patent in favor of allowing Samsung to intervene in the Google action in California, *Samsung Electronics Co., Ltd. et al. v. Netlist, Inc.*, No. 1:21-cv-01453 (D. Del. filed Aug. 1, 2022)
1056	Netlist's complaint against Samsung in Texas for infringement of the 912 Patent, *Netlist, Inc. v. Samsung Electronics Co., Ltd. et al.*, No. 2:22-cv-00293 (E.D. Tex. filed Aug. 1, 2022) (filed shortly after EX1055 was issued)

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No.	Exhibit Description
1057	Netlist's complaint against Micron in Texas for infringement of the 912 Patent, *Netlist, Inc. v. Samsung Electronics Co., Ltd. et al.*, No. 2:22-cv-00294 (E.D. Tex. filed Aug. 1, 2022) (filed shortly after EX1055 was issued)
1058	Netlist's amended complaint against Samsung in Texas for infringement of the 912 Patent and related patents, *Netlist, Inc. v. Samsung Electronics Co., Ltd. et al.*, No. 2:22-cv-00293 (E.D. Tex. filed Aug. 15, 2022)
1059	Netlist's infringement contentions for the 912 Patent against Inphi, *Netlist, Inc. v. Inphi Corp*., No. 2:09-cv-06900 (C.D. Cal. Filed August 9, 2021)
1060	Joint stipulation dismissing Inphi case, *Netlist, Inc. v. Inphi Corp*., No. 2:09-cv-06900 (C.D. Cal. Filed August 18, 2021)
1061	U.S. Patent No. 7,356,639 to Perego et al.
2001	Complaint for Patent Infringement and Summons in *Netlist, Inc., v. Google, Inc.*, Case No. 4:09-cv-05718 ("Google Action"), filed December 4, 2009
2002	Complaint for Patent Infringement and Summons in *Netlist Inc. v. Inphi Corp.*, Case No. 2:09-cv-06900, filed September 22, 2009
2003	Google's Reply In Support of Its Motion to Strike Netlist, Inc.'s New Assertion of Claim 16 (Redacted), Google Action, filed August 27, 2021
2004	Google's Notice of Motion and Motion to Stay (Redacted), Google Action, filed June 3, 2022
2005	Samsung's Answering Brief in Opposition to Netlist's Motion to Dismiss Plaintiff's First Amended Complaint, Case No. 1:21-cv-01453-RGA ("Delaware Action") filed March 2, 2022
2006	Samsung's Reply Brief In Support of Its Motion for Leave To File Second Amended Complaint, Delaware Action, filed February 14, 2022
2007	Declaration of Michael C. Brogioli, Ph.D.
2008	Sumit Adhikari, *[Update: Video] Samsung & Google Launch Ad Campaign Highlighting Their Partnership*, Android Headlines (July 5, 2022)

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No.	Exhibit Description
2009	David Curry, *Android Statistics (2022)*, Business of Apps (Updated: May 4, 2022)
2010	Dieter Bohn, *Sundar Pichai And Rick Osterloh Think The Pixel 6 Is Google's Breakout Phone*, The Verge (October 19, 2021)
2011	*A Decade in the Making: How Samsung Foldables Are Defining the Future of Smartphone Innovation*, Samsung Newsroom (December 31, 2021)
2012	*Samsung Galaxy Watches to Incorporate Wear OS*, Business Korea Daily News (May 20, 2021)
2013	*Samsung And Google Introduce The World's First Chromebook - Samsung Series 5 Samsung Creates Another*, Business Wire (May 11, 2021)
2014	*Samsung and Google Sign Global Patent License Agreement*, Samsung Global Newsroom (January 27, 2014)
2015	Netlist Inc.'s Amended Disclosure of Asserted Claims and Infringement Contentions, Google Action, as filed August 20, 2021
2016	Inphi's Corrected Request for Reexamination, filed May 7, 2010, Reexamination Control No. 95/001,339
2017	Netlist Inc.'s First Amended Complaint for Patent Infringement, Case No. 09-cv-6900, filed December 23, 2009
2018	Samsung DDR3 SDRAM Memory Product Guide (October 2016)
2019	Samsung DDR4 SDRAM Memory Product Guide (May 2018)
2020	Inphi Corporation, 2010 Form 10-K (March 4, 2011)
2021	*Inphi to Partner With Samsung Semiconductor to Showcase LRDIMM Technology at VMworld 2012*, GlobeNewswire (August 21, 2012)
2022	Inphi Corporation, 2015 Form 10-K (February 29, 2016)
2023	ORDER Re: Motions for Summary Judgement and Related Applications, in *Netlist Inc. v. Samsung Electronics Co., Ltd.*, Case No. 8:20-cv-00993, filed October 14, 2021
2024	Samsung's Reply In Support of Its Motion for Leave to File Sur-Reply Brief (D.I. 29), Delaware Action, filed April 13, 2022
2025	Redline Comparison of EX1035 (U.S. Patent No. 7,363,422 to Perego) With Related U.S. Patent No. 7,356,639

No.	Exhibit Description
2026	Joint Claim Construction and Prehearing Statement Under Patent Local Rule 4-3, Google Action, filed June 25, 2010
2027	*Why Samsung Needs To Move Beyond Android – And Google*, ComputerWorld (July 11, 2014)
2028	Smart Global Holdings, Inc. 2020 Form 10-K (October 22, 2020)
2029	Inphi's Feb. 13, 2012 Comments in Reexamination, Reexamination Control No. 95/001,339
2030	Samsung Electronics Co., Ltd. 2021 Half-year Business Report
2031	Xilinx, Programmable Logic Design Quick Start Handbook, (August 2003)
2032	*Samsung Electronics Co., Ltd. v. Netlist, Inc.*, IPR2022-00063, Paper 13 (P.T.A.B. May 5, 2022)
2033	*High-Speed Samsung LRDIMMs with Inphi Isolation Memory Buffer*, Principled Technologies (August 2012)
2034	Smart Modular Technologies (WWH), Inc., 2010 Form 10-K (November 3, 2010)

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CLAIM LISTING

Ref. #	Listing of Challenged Claims
[16.pre]	A memory module connectable to a computer system, the memory module comprising:
[16.a]	a printed circuit board;
[16.b]	a plurality of double-data-rate (DDR) memory devices coupled to the printed circuit board,
[16.b.i]	the plurality of DDR memory devices having a first number of DDR memory devices arranged in a first number of ranks;
[16.c]	a circuit coupled to the printed circuit board, the circuit comprising a logic element and a register,
[16.c.i]	the logic element receiving a set of input signals from the computer system, the set of input signals comprising at least one row/column address signal, bank address signals, and at least one chip-select signal,
[16.c.ii]	the set of input signals configured to control a second number of DDR memory devices arranged in a second number of ranks, the second number of DDR memory devices smaller than the first number of DDR memory devices and the second number of ranks less than the first number of ranks,
[16.c.iii]	the circuit generating a set of output signals in response to the set of input signals, the set of output signals configured to control the first number of DDR memory devices arranged in the first number of ranks,
[16.c.iv]	wherein the circuit further responds to a command signal and the set of input signals from the computer system by selecting one or two ranks of the first number of ranks and transmitting the command signal to at least one DDR memory device of the selected one or two ranks of the first number of ranks; and
[16.d]	a phase-lock loop device coupled to the printed circuit board,

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Ref. #	Listing of Challenged Claims
[16.d.i]	the phase-lock loop device operatively coupled to the plurality of DDR memory devices, the logic element, and the register,
[16.e]	wherein the command signal is transmitted to only one DDR memory device at a time.

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1. Google Is Not A Real Party In Interest Or Privy (POPR 2–16)

Netlist makes the remarkable argument that Samsung should be time-barred based on a complaint Netlist filed ***13 years ago*** against Google (EX2001) that did ***not*** involve Samsung or the only claim challenged here. In response, Google filed a successful reexam lasting 10 years — without any involvement of Samsung — that resulted in all of the asserted claims being either canceled or amended. Pet. at 10–11, 115–17. Thus, Netlist ***lost*** its case against Google, because intervening rights precluded infringement before 2021, and the accused products from 2009 were no longer being used. EX1053 at 44:5–:10; EX1054 at 10:4–:10.

That should have ended the case against Google, but instead Netlist recently ***changed*** the case by amending its infringement contentions to add claim 16 (the only claim challenged here) and to change the accused products to newly released "DDR4" products made by ***Samsung*** — which did not exist when the complaint against Google was filed in 2009. EX1053 at 9:17–15:27; EX1054 at 13:5–:15.

Around the same time, Netlist began threatening Samsung of infringement (arguing Samsung's paid-up license had terminated), causing Samsung to file a declaratory judgment action seeking a ruling its products do not infringe Netlist's patents, including the 912 Patent. EX1049; EX1051, ¶¶21–37. In response, Netlist dropped its charade and asserted the 912 Patent directly against Samsung. EX1055 at 5–6; EX1056. Netlist's assertion here that it "has never accused [Samsung] of

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infringing the '912 patent" is false and deliberately misleading. POPR at 5.

The judge in the Google case stayed that case in light of Samsung's declaratory judgment action, EX1054 at 13:4–18:2, while noting that Netlist's infringement theory against Google is flimsy, EX1053 at 11:3–:12.

These facts do not make Google a real party in interest or privy of Samsung. Indeed, the facts here are the ***opposite*** of *RPX Corp. v. Applications in Internet Time, LLC*, IPR2015-01750, Paper 128 (PTAB Oct. 2, 2020) (precedential), where the Board found that "[m]ost critically, Salesforce [who the Board found to be a real party in interest to RPX] paid RPX [who filed the later IPR] to reduce Salesforce's patent litigation exposure, and RPX filed these IPRs despite having no apparent risk of infringement liability itself," *id.* at 31. Here, Google did not pay Samsung to "reduce" its "exposure," and Samsung is the party with the "apparent risk of infringement liability," not Google as explained above. *See also Glenayre Elecs., Inc. v. Jackson*, 443 F.3d 851, 864 (Fed. Cir. 2006) ("[A] party [Netlist] is precluded from suing to collect damages for direct infringement by a buyer and user of a product [Google] when actual damages covering that very use have already been collected from the maker and seller of that product [Samsung].").

Netlist has the burden of producing "*some* evidence" that Google is a real party in interest or privy. *Worlds Inc. v. Bungie, Inc.*, 903 F.3d 1237, 1244 (Fed. Cir. 2018). Netlist has not done so. In similar fact patterns, the Federal Circuit has

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held there is no bar under § 315, even if the "interests [of the manufacturer filing the later IPR] as to the issue of infringement were generally aligned with those of its customers [who were previously sued], and [the manufacturer] had indemnity agreements with … the [customer] defendants." *Wi-Fi One, LLC v. Broadcom Corp.*, 887 F.3d 1329, 1341 (Fed. Cir. 2018); *see also WesternGeco LLC v. ION Geophysical Corp.*, 889 F.3d 1308, 1320 (Fed. Cir. 2018) ("The Board reasonably found that ION [who was time barred] did not control or direct the [later filed] IPR petitions."); *Glob. Equity Mgmt. (SA) Pty. Ltd. v. eBay Inc.*, 798 Fed. App'x 616, 620 (Fed. Cir. Jan. 14, 2020) (finding no evidence that Amazon "actually wrote the IPR [petitions] or controlled the IPR [proceedings]").

Netlist's exhibits (EX2001 to EX2034) merely show arms-length transactions between Samsung and Google unrelated to Netlist's litigation, which is insufficient under the cases above. And contrary to Netlist's argument (POPR at 13–14), the Board has found that transactions between Google and Samsung related to Android phones are insufficient. *Google LLC v. Cywee Grp. Ltd.*, IPR2018-01257, Paper 87, at 11–12, 24–29, 33–35, 38–40 (PTAB Jan. 9, 2020).

Netlist's allegation that "Samsung and Google have both admitted [privity]" fares no better. POPR at 15. A customer relationship does not trigger "privity." *See, e.g.*, *Wi-Fi One*, 887 F.3d at 1340–41. Netlist has produced no evidence showing privity under the *Taylor* factors, *see WesternGeco*, 889 F.3d at 1319

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(citing *Taylor v. Sturgell*, 553 U.S. 880, 893–95 (2008)), and thus the default rule controls: Samsung "should have [its] own day in court." *Taylor*, 553 U.S. at 893.

Finally, as a practical and equitable matter, it would be deeply unfair to allow Netlist to manufacture a time bar against Samsung by adding new Samsung products to an old lawsuit against Google, instead of suing Samsung directly.

2. The Prior Reexam Does Not Preclude Samsung's IPR (POPR 16–25)

Netlist's POPR fails to address any of the cases in the Petition showing why the prior reexam against the 912 Patent does not preclude this IPR under *General Plastic* (or *Valve*). *See* Pet. at 115–17. And Netlist's POPR fails to show that a prior reexam is even a basis for discretionary denial under *General Plastic*. *See Toshiba Memory Corp. v. Anza Tech., Inc.*, IPR2018-01597, Paper 12, at 45 (PTAB Mar. 12, 2018) (refusing to extend *General Plastic* to a prior reexam). Netlist cites *In re: Vivint Inc.*, 14 F.4th 1342, 1353 (Fed. Cir. 2021), *see* POPR at 17, but that case merely held that if an IPR is not instituted, then a later reexam raising the exact same arguments as the failed IPR should be rejected under § 325(d). 14 F.4th at 1352–54. Here, there was no prior IPR, and this IPR raises new arguments, so neither *General Plastic* nor *In re Vivint* applies.

Netlist also argues that Inphi's involvement in the prior reexam should preclude Samsung under *General Plastic*, *see* POPR at 18–21, but Samsung had no involvement in the prior Inphi litigation. That litigation did not involve claim 16

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or Samsung's products, EX1059, and Netlist dismissed the case after losing the reexam, EX1060. Netlist's arguments based on Inphi are even weaker than those based on Google addressed above. *See also* Pet. at 115–17.

3. A "Rank" Can Include Only One Memory Device (POPR 25–34)

On the merits, Netlist's entire validity argument hinges on an overly narrow construction of "rank" that requires "***more than one***" memory device in a rank, POPR at 28–34, as opposed to "***one*** or more," EX1033 at 413; Pet. at 12–14.

But Netlist admitted in a related patent (which shares the disclosure of 11/173,175 resulting in the 912 Patent) that a "rank" just requires "***at least one*** … memory integrated circuit." EX1058 at 152, 187 (3:33–:35), 204 (37:35–:38). Nothing in the 912 Patent requires a narrower construction for "rank" than that plain and ordinary meaning, *see, e.g.*, EX1001 at 2:16–:22, 6:16–:19; Pet. at 12–14, and "[a]bsent disclaimer or lexicography, the plain meaning of the claim controls," *Toshiba Corp. v. Imation Corp.*, 681 F.3d 1358, 1369 (Fed. Cir. 2012).

Furthermore, Netlist's proposed construction would exclude the only disclosed embodiment for claim 16, *see* Pet. at 13–14, which is "rarely, if ever correct." *Kaufman v. Microsoft Corp.*, 34 F.4th 1360, 1372 (Fed. Cir. 2022). Limitation [16.e] requires that "the command signal is transmitted to ***only one*** DDR memory device at a time." The only disclosed embodiment satisfying [16.e] is when ***each*** of the plurality of ranks has only ***one*** memory device. Pet. at 13–14.

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If there is ***more than one*** memory device in a "rank" (as required by Netlist's construction) then the command signal is transmitted to ***all*** the memory devices at the ***same*** time (rather than to "***only one***…at a time") given that the very definition of a "rank" is that ***all*** of the memory devices in the rank "operate in lockstep in response to a given command," EX1033 at 413; Pet. at 12–13, as even Netlist concedes, POPR at 34. In fact, this is the reason claim 16 survived the reexam, because the cited prior art only disclosed a rank with ***multiple*** memory devices. Pet. at 11; EX1011 at 79 ("Amidi…teach[es]…the command signal is transmitted to…*multiple* memory devices at a time."); EX1010 at 3904, ¶169 ("RAS and CAS signals are transmitted to all devices"); EX1036, ¶¶[0034, 0062], Figs. 3–4A, 6A–6B (Amidi disclosing ***nine*** memory devices, labeled U1 to U9, in "Rank 0," all receiving RAS, CAS, WE command signals). The figures that Netlist cites in the 912 Patent, which show ***multiple*** memory devices in a rank all receiving the same RAS/CAS/WE command signals, POPR at 31, are just like the Amidi prior art that the Board found does ***not*** satisfy [16.e]. The figures cited by Netlist do not embody claim 16 for the same reasons. Contrary to Netlist's argument, POPR at 28–30, the Board did not construe "rank" to ***require*** a "plurality" of memory devices; it found that "***when*** there is a plurality of memory devices in a rank," that does ***not*** satisfy [16.e], consistent with Samsung's construction, Pet. at 12–14.

Netlist points to Google's agreed construction for rank ("group of memory

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devices…"), POPR at 30, but claim 16 was not at issue then, EX1053 at 9:17–15:27. Netlist argues "'operat[ing] in lockstep' makes no sense for a single-device rank," POPR at 34, but the book Netlist cites says a rank is "***one*** or more DRAM devices that ***operate in lockstep*** in response to a given command," EX1033 at 413.

4. There Is No Support for Claim 16 Before July 1, 2005 (POPR 43–62)

The '244 provisional and '436 Patent do not establish priority for claim 16. Pet. at 63–69. Netlist's arguments to the contrary (POPR 43–62) are wrong because "a description that merely renders the invention ***obvious*** does not satisfy the [written description] requirement[.]" *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) (en banc); *Rivera v. ITC*, 857 F.3d 1315, 1322 (Fed. Cir. 2017). Netlist's argument that the solution to the BBARX problem (disclosed July 1, 2005, *see* Pet. at 65–67) would have been ***obvious*** before July 1, 2005, *see* POPR at 58–62, is thus legally insufficient. It is also contrary to Netlist's assertion in a related patent that the solution to the BBARX problem disclosed July 1, 2005, is patentable (i.e., ***not*** obvious). EX1058 at 205 (39:1–:14).

Netlist also argues that "*bank address*" signals were obvious in light of the prior-art JEDEC standard, POPR at 46–52, 56–58, but nowhere does the '244 provisional or '436 Patent disclose ***how*** "*bank address*" signals could be used to practice claim 16; that was not disclosed until the Verilog source code was added on July 1, 2005. Pet. at 63–64; EX1001 at 14:17–19:52. This is not a trivial issue;

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use of the "*bank address*" by the "*logic*" is how Netlist distinguished the prior art during reexam. Pet. at 10; EX1010 at 1502–06, 1646–50, 4003 ¶12. Figures 10A–11B of the 436 Patent (EX1009) are also insufficient because they do not disclose the claimed "*register*," POPR 50–53, or the claimed rank multiplication (e.g., "*logic*" converting ***two*** CS signals into ***four*** CS signals based on the "*bank address*"), *id.* at 55–58. Netlist's arguments require ***obviousness*** combinations.

5. The Cite to Perego-639 Does Not Warrant § 325(d) Denial (POPR 70–81)

The Examiner did not consider the combinations presented here, so *Advanced Bionics* does not apply. Pet. at 112–13. Netlist points to Perego-639, POPR at 71–73, but the Examiner did not substantively consider Perego-639 (EX1061), which was filed after the 912 Patent's earliest date and was buried in an IDS with over 100 references, EX1002 at 125. *Advanced Bionics* also does not apply because the Examiner clearly erred in allowing claim 16. *See Solvay USA Inc. v. WorldSource Enters., LLC*, IPR2020-00768, Paper 30, at 6–8 (PTAB Mar. 1, 2021). Netlist's arguments to the contrary confuse obviousness with written description (POPR at 74–75) as discussed above (pp.7–8), and rely on an overly narrow construction of "*rank*" (POPR at 75–81) as discussed above (pp.5–7) to try to exclude references like Perego that disclose a "rank" with just "***one***" memory device, thus satisfying claim 16, *see* Pet. at 30 (quoting EX1035 at 6:15–:24).

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CERTIFICATE OF COMPLIANCE

I hereby certify that this Petitioner's Authorized Reply to Patent Owner's Preliminary Response, excluding the parts of the brief exempted by 37 C.F.R. § 42.24, complies with the page limits provided by the Board in Paper No. 10 (Aug. 19, 2022), which stated: "Any preliminary reply filed by Petitioner will be limited to 8 pages and will be due to be filed by August 26, 2022."

Dated: August 26, 2022

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), I certify that on this 26th day of August, 2022, **Petitioner's Authorized Reply to Patent Owner's Preliminary Response** was served by email on the following counsel for Patent Owner:

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