

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD. AND
SAMSUNG ELECTRONICS AMERICA, INC.

Petitioners

v.

RESONANT SYSTEMS, INC.,

Patent Owner

Case IPR2023-00993

U.S. Patent No. 9,941,830

**PETITIONERS' PRELIMINARY REPLY
TO PATENT OWNER'S PRELIMINARY RESPONSE**

PETITIONERS' UPDATED EXHIBIT LIST

Exhibit No.	Description
1001	U.S. Patent 9,941,830 B2 (“’830Pat.”)
1002	File History of U.S. Patent 9,941,830 (“’830FH”)
1003	Declaration of Andrew Wolfe, Ph.D.
1004	Curriculum Vitae of Andrew Wolfe, Ph.D.
1005	U.S. Patent 7,292,227 B2 (“Fukumoto”)
1006	U.S. Patent Application Publication 2006/0284849A1 (“Grant”)
1007	U.S. Patent Application Publication 2006/0248183A1 (“Barton”)
1008	U.S. Patent Application Publication 2004/0169480A1 (“Ueda”)
1009	U.S. Patent Application Publication 2008/0174187A1 (“Erixon”)
1010	U.S. Patent Application Publication 2008/0001484A1 (“Fuller”)
1011	China Patent Application Publication 101488697A (“Dong”)
1012	Certified Declaration of Dong Translation
1013	U.S. Patent 7,006,641 (“Saiki”)
1014	U.S. Patent 8,917,486 (“Masahiko”)
1015	Japan Patent Application Publication JPH08196053A (“Ogusu”)
1016	Certified Declaration of Ogusu Translation
1017	Complaint in <i>Resonant Systems, Inc. v. Samsung Elecs. Co., Ltd.</i> , 2:22-cv-00423 (E.D. Tex. October 26, 2022)
1018	Docket Control Order in <i>Resonant Systems, Inc. v. Samsung Elecs. Co., Ltd.</i> , 2:22-cv-00423 (E.D. Tex.)
1019	Discovery Order in <i>Resonant Systems, Inc. v. Samsung Elecs. Co., Ltd.</i> , 2:22-cv-00423 (E.D. Tex.)
1020	Joint Motion for Entry of Agreed Docket Control Order in <i>Resonant Systems, Inc. v. Samsung Elecs. Co., Ltd.</i> , 2:22-cv-00423 (E.D. Tex.)
1021	Joint Motion for Entry of Agreed Discovery Order in <i>Resonant Systems, Inc. v. Samsung Elecs. Co., Ltd.</i> , 2:22-cv-00423 (E.D. Tex.)
1022	Amended Infringement Contentions in <i>Resonant Systems, Inc. v. Samsung Elecs. Co., Ltd.</i> , 2:22-cv-00423 (E.D. Tex.)
1023	U.S. Patent 9,369,081 B2 (“’081Pat.”)
1024	File History of U.S. Patent 9,369,081 (“’081FH”)

Exhibit No.	Description
1025	U.S. Patent 8,860,337B2 (“’337Pat.”)
1026	File History of U.S. Patent 8,860,337B2 (“’337FH”)
1027	U.S. Patent 8,093,767B2 (“’767Pat.”)
1028	File History of U.S. Patent 8,093,767B2 (“’767FH”)
1029	File History of Provisional Patent Application 61/179,109
1030	U.S. Patent Application Publication 2011/0144426A1 (“Blenk”)
1031	U.S. Patent Application Publication 2011/0248817A1 (“Houston”)
1032	U.S. Patent Application Publication 2007/0261185A1 (“Guney”)
1033	U.S. Patent No. 3,919,616 (“Allison”)
1034	U.S. Patent Application Publication 2009/0295739A1 (“Nagara”)
1035	U.S. Patent Application Publication 2008/0153554A1 (“Yoon ’554”)
1036	U.S. Patent Application Publication 2008/0155415A1 (“Yoon ’415”)
1037	Exar Databook, <i>XR-8038: Precision Waveform Generator</i> , Chapter1 at 213–214 (1985), (“Exar”)
1038	Herbert Friedman, <i>99 Electronic Projects</i> , Lafayette Radio Electronics, at 126 (1971), (“Friedman”)
1039	Paul Horowitz and Winfield Hill, <i>The Art of Electronics, 2nd Edition</i> , Cambridge University Press, at 153–293 (1980), (“Horowitz”)
1040	Water G. Jung, <i>IC Op-Amp Cookbook, Second Edition, The Art of Electronics, 2nd Edition</i> , Howard W. Sams & Co., Inc., at 360–362 (1974), (“Jung”)
1041	Jacob Millman, <i>Micro-Electronics: Digital and Analog Circuits and Systems</i> , McGraw-Hill Book Company, at 651–653, (1979), (“Millman”)
1042	STMicroelectronics, <i>L298: Dual Full-Bridge Driver</i> , STMicroelectronics at 1–13 (2000), (“STMicroelectronics”)
1043	Stipulation of Grounds Pursued in District Court Litigation
1044	Updated Stipulation of Grounds Pursued in District Court Litigation

As authorized by the Board (Paper 13), Petitioners file this Preliminary Reply.

I. DENIAL UNDER *FINTIVIS* INAPPROPRIATE

Petitioners have provided a *Sotera* stipulation (EX1044), which resolves consideration of *Fintiv*. See Interim Procedure for Discretionary Denials at 7.

II. DENIAL UNDER *ADAPTICSIS* INAPPROPRIATE

A. The Petition’s Grounds Are Not Unduly Voluminous/Excessive

The Petition’s 30 grounds are presented with particularity and have overlapping issues, which narrows the Petition to a reasonable scope and reduces the burden on Patent Owner (“PO”) and the Board. As such, the Board should decline to exercise its discretion to deny institution, and nothing in *Adaptics* suggests otherwise.

As an initial matter, each ground clearly states that it is based on a particular reference/combo, and the Petition does not use “and/or” to combine references. Thus, a primary concern in *Adaptics*—i.e., an “and/or” that resulted in hundreds of combinations—does not apply. See *Adaptics Ltd. v. Perfect Co.*, IPR2018-01596, Paper 20, 18-19 (PTAB Mar. 6, 2019); see also *Uber Tech., Inc. v. Surgetech LLC*, IPR2023-00735, Paper 13, 13-16 (PTAB Oct. 12, 2023) (denying institution in part because “Petitioner’s arguments present thousands of asserted combinations”).

Moreover, the Petition clearly identifies which reference applies to which

claim/claim limitation for each ground, and the grounds have overlapping issues—further reducing any alleged burden. In more detail, the Petition presents Fukumoto (1A-U) and Ogusu/Fukumoto (2A-I) grounds. In the Fukumoto grounds, 1A applies Fukumoto to independent claims 1 and 20 (and certain dependent claims), 1B-C combine Fukumoto with Grant and Barton, respectively, regarding limitations 1[f] and 20[f], and the remaining grounds (1D-U) add references to 1A-C to address certain dependent claims (e.g., 1D-F apply Ueda to Fukumoto (1A), Fukumoto/Grant (1B), and Fukumoto/Barton (1C), respectively). A similar pattern applies to the Ogusu/Fukumoto grounds. This is shown below.

Grounds based on primary reference/combination	Additional grounds applied to references in grounds 1A-C and 2A-C
<u>1A</u> : Fukumoto (claims 1-3, 7-9, 15, 17, and 20)	<u>1D-F</u> : Ueda (claims 3–6) <u>1G-I</u> : Erixon (claims 7–8)
<u>1B</u> : Fukumoto-Grant (same claims as 1A)	<u>1J-L</u> : Fuller (claim 8) <u>1M-O</u> : Dong-Ogusu (claims 14, 19)
<u>1C</u> : Fukumoto-Barton (same claims as 1A)	<u>1P-R</u> : Saiki (claims 15, 20) <u>1S-U</u> : Saiki-Masahiko (claim 16)
<u>2A</u> : Ogusu-Fukumoto (claims 1, 2, 7, 11, 15, 17, and 20)	<u>2D-F</u> : Ueda (claims 3–6) <u>2G-I</u> : Erixon (claims 7–8)
<u>2B</u> : Ogusu-Fukumoto-Grant (same claims as 2A)	
<u>2C</u> : Ogusu-Fukumoto-Barton (same claims as 2A)	

Where, as here, the grounds are stated with particularity and have a reasonable scope, the Board has declined to exercise its discretion to deny institution. *See, e.g., PAWS v. Onpoint Sys.*, IPR2021-01483, Paper 11, 18-19

(PTAB Mar. 4, 2022) (instituting review and noting reduced burden “because the alternative combinations are used to teach the same limitation”); *Philip Morris Prods. SA v. RAI Strategic Holdings, Inc.*, IPR2020-00921, Paper 13, 40-41 (PTAB Aug. 5, 2021) (granting institution despite combinations that used “and/or,” and further noting that “secondary references [were used] to show particular claim limitations,” which limited grounds to a reasonable scope).

B. PO’s Arguments in Support of Denial Are Meritless

PO’s arguments amount to a series of false premises, inapt comparisons to *Adaptics*, and attorney *ipse dixit*. The Board should reject them accordingly.

First, PO contends that 30 grounds is an undercount, “is not explainable,” and that there are no “complicating factors” requiring numerous arguments. POPR, 9, 15. PO implies that 30 grounds is *per se* excessive. It is not. Further, there is no concerning “undercount” issue in 2A-C, as “alternative combinations [are] used to teach the same limitation.” *PAWS*, 18-19. The Petition presents the grounds clearly and with overlap, such that the concerns in *Adaptics* simply do not apply.

Second, PO contends that “Petitioner’s expert invokes yet additional prior art references.” POPR, 10-11. Here, Dr. Wolfe cites 2 references to explain how a POSITA would have understood Fukumoto. *See* EX1003, ¶¶ 167-173. In *Adaptics*, the declaration included “voluminous additional exhibits,” which “may be relied upon to fill gaps.” *Adaptics*, 22. Dr. Wolfe’s use of 2 references is not analogous to

the “voluminous” references in *Adaptics* and, in any event, is not improper. *See Ariosa Diagnostics v. Verinata Health*, 805 F.3d 1359, 1365 (Fed. Cir. 2015).

Third, PO identifies 12 grounds against claim 7 as excessive, and incorrectly suggests that the Petition effectively presented the grounds in “and/or” format. POPR, 11. But the Petition does not do that. Rather, as summarized above, the only unique issues for claim 7 are whether Fukumoto (1A-C), Ogusu (2A-C), or Erixon (1G-I; 2G-I) disclose the relevant limitation. *See* Petition, 27-28, 56-60, 87, 93.

Fourth, PO analogizes to *Adaptics* in “gross numerical terms,” such as the fact that both petitions include 10 references. POPR, 11-12. That is irrelevant, as nothing in *Adaptics* suggests that 10 references is improper. Moreover, PO’s remaining comparisons to *Adaptics* ring hollow for the reasons explained above.

Fifth, PO contends that 9 grounds (1M-U) as to unasserted claims is excessive. POPR, 15-16. But these overlapping grounds are not excessive (i.e., 3 sets directed to 5 claims). Further, as PO acknowledges, “there is nothing improper *per se* about challenging [unasserted] claims.” *Id.*, 17; *see also Palo Alto Networks v. Centripetal Networks*, IPR2022-00182, Paper 11, 20 (PTAB May 25, 2022).

Finally, PO raises *ipse dixit* and cursory arguments that the Petition’s grounds/motivations to combine are deficient. POPR, 13-15. PO’s arguments are not only wrong, but go to the merits of the Petition without evidentiary support. The Board should reject them accordingly.

Date: November 13, 2023

Respectfully submitted,

/Ali R. Sharifahmadian/

Ali R. Sharifahmadian (Reg. No. 48,202)
Counsel for Petitioners

CERTIFICATE OF SERVICE

I certify that on November 13, 2023, I caused a true and correct copy of the foregoing PETITIONERS' PRELIMINARY REPLY TO PATENT OWNER'S PRELIMINARY RESPONSE is being filed via P-TACTS and served via electronic mail upon the following attorneys of record for the Patent Owner:

Reza Mirzaie (rmirzaie@raklaw.com)
Kristopher R. Davis (kdavis@raklaw.com)
Christian W. Conkle (cconkle@raklaw.com)
Qi Tong (ptong@raklaw.com)
Paul Anthony Kroeger (pkroeger@raklaw.com)

/Ali R. Sharifahmadian/
Ali R. Sharifahmadian (Reg. No. 48,202)
Counsel for Petitioners