

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO., LTD.
Petitioner

v.

NETWORK SYSTEM TECHNOLOGIES, LLC
Patent Owner

Patent No. 8,086,800

Inter Partes Review No. IPR2024-00339

PATENT OWNER'S PRELIMINARY SUR-REPLY

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LISTING OF EXHIBITS

Exhibit No.	Description
2001	Declaration of Dr. Erik Chmelar
2002	<i>Curriculum vitae</i> of Dr. Erik Chmelar
2003	Neil Weste & David Harris, CMOS VLSI DESIGN: A CIRCUIT AND SYSTEMS PERSPECTIVE (4th ed. 2010)
2004	Jan Rabaey, Anantha Chandrakasan & Borivoje Nikolic, DIGITAL INTEGRATED CIRCUITS: A DESIGN PERSPECTIVE (2nd ed. 2003)
2005	William J. Dally & Brian Towles, <i>Route Packets, Not Wires: On-Chip Interconnection Networks</i> , PROC. 38TH DESIGN AUTOMATION CONF. (2001)
2006	John F. Wakerly, DIGITAL DESIGN: PRINCIPLES AND PRACTICES (4th ed. 2005)
2007	Fayez Gebali, Haytham Elmiligi & Mohamed Watheq El-Kharashi, NETWORKS-ON-CHIPS: THEORY AND PRACTICE (2009)
2008	Kurt Shuler, <i>Busses, Crossbars and NoCs: The 3 Eras of SoC Interconnect History</i> , ARTERISIP (Oct. 22, 2010), https://www.arteris.com/blog/busses-crossbars-and-nocs-the-3-eras-of-soc-interconnect-history/
2009	Kurt Shuler, <i>The SoC Interconnect Fabric: A Brief History</i> , ARTERISIP (Aug. 6, 2013), https://www.arteris.com/blog/the-soc-interconnect-fabric-a-brief-history/
2010	William Stallings, DATA & COMPUTER COMMUNICATIONS (6th ed. 1999)
2011	RESERVED
2012	United States District Courts — National Judicial Caseload Profile
2013-2016	RESERVED
2017	U.S. Patent No. 7,373,449

Exhibit No.	Description
2018-2020	RESERVED
2021	Order Resetting Jury Trial, <i>Network System Technologies, LLC v. Texas Instruments Incorporated</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), Dkt. 182 (Mar. 18, 2024)
2022	Claim Construction Order, <i>Network System Technologies, LLC v. Texas Instruments Incorporated</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), Dkt. 150 (Jan. 3, 2024)
2023	Plaintiff Network System Technologies, LLC's Opening Claim Construction Brief, <i>Network System Technologies, LLC v. Texas Instruments Incorporated</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), Dkt. 98 (Sept. 27, 2023)
2024	Defendant Texas Instruments Incorporated's Responsive Claim Construction Brief, <i>Network System Technologies, LLC v. Texas Instruments Incorporated</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), Dkt. 107 (Oct. 11, 2023)
2025	Plaintiff Network System Technologies, LLC's Reply Claim Construction Brief, <i>Texas Instruments Incorporated</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), Dkt. 110 (Oct. 18, 2023)
2026	Claim Construction Hearing Transcript, <i>Texas Instruments Incorporated</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), (Nov. 8, 2023)
2027	Complaint, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd. et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.), Dkt. 1 (Dec. 19, 2022)
2028	Docket Control Order, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd. et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.), Dkt. 59 (Jun. 16, 2023)
2029	Samsung's First Amended Answer and Counterclaims, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd. et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.), Dkt. 96 (Jan. 24, 2024) (Public Version)

Exhibit No.	Description
2030	Samsung's P.R. 4-1 Identification of Proposed Terms and Claim Elements for Construction, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd.</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.) (Nov. 28, 2023)
2031	Samsung's Amended P.R. 4-1 Identification of Proposed Terms and Claim Elements for Construction, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd.</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.) (Dec. 18, 2023)
2032	Samsung's Preliminary Claim Construction and Extrinsic Evidence Pursuant to Local Patent Rule 4-2, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd.</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.) (Dec. 19, 2023)
2033	P.R. 4-3 Claim Construction and Prehearing Statement, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd.</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), Dkt. 91 (Jan. 9, 2024)
2034	Plaintiff Network System Technologies, LLC's Opening Claim Construction Brief, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd.</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), Dkt. 100 (Feb. 20, 2024)
2035	Defendant Samsung Electronics Co., Ltd.'s Responsive Claim Construction Brief, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd.</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), Dkt. 112 (March 12, 2024)
2036	Plaintiff Network System Technologies, LLC's Reply Construction Brief, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd.</i> , Civil Action No. 2:22-cv-00482-RWS (E.D. Tex.), Dkt. 116 (March 19, 2024)
2037	Complaint, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.) Dkt. 1 (Dec. 19, 2022)
2038	First Amended Complaint, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-

Exhibit No.	Description
	DAE (W.D. Tex.) Dkt. 57 (Aug. 7, 2023)
2039	Second Amended Scheduling Order, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.) Dkt. 80 (Oct. 23, 2023)
2040	Defendants' Joint Opening Claim Construction Brief, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.), Dkt. 77 (Oct. 12, 2023)
2041	Plaintiff Network System Technologies, LLC's Responsive Claim Construction Brief, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.), Dkt. 81 (Nov. 16, 2023)
2042	Defendants' Joint Reply Claim Construction Brief, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.), Dkt. 83 (Nov. 30, 2023)
2043	Plaintiff Network System Technologies, LLC's Sur-Reply Claim Construction Brief, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.), Dkt. 86 (Dec. 14, 2023)
2044	Defendants' Supplemental Claim Construction Brief, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.), Dkt. 105 (Mar. 1, 2024)
2045	Plaintiff Network System Technologies, LLC's Supplemental Claim Construction Brief, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.), Dkt. 106 (Mar. 1, 2024)
2046	Defendants' Supplemental Invalidity Contention Cover Pleading, <i>Network System Technologies, LLC v. Qualcomm Incorporated et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.) (Jan. 23, 2024)

Exhibit No.	Description
2047-2049	RESERVED
2050	Defendants' Invalidity and Ineligibility Contentions And Disclosures Pursuant to Patent Rule 3-3 Cover Pleading, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd., et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.) (July 11, 2023)
2051	Defendants' Invalidity and Ineligibility Contentions Cover Pleading, <i>Network System Technologies, LLC v. Qualcomm Incorporated, et al.</i> , Civil Action No. 1:22-cv-1331-DAE (W.D. Tex.) (Sep. 22, 2023)
2052-2054	RESERVED
2055	Statutory Disclaimer dated March 25, 2024
2056	Exhibit F-1 to Defendants' Invalidity Contentions, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd., et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.) (July 11, 2023)
2057	Exhibit F-2 to Defendants' Invalidity Contentions, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd., et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.) (July 11, 2023)
2058	Exhibit F-6 to Defendants' Invalidity Contentions, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd., et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.) (July 11, 2023)
2059	Exhibit F-19 to Defendants' Invalidity Contentions, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd., et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.) (July 11, 2023)
2060	Exhibit F-20 to Defendants' Invalidity Contentions, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd., et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.) (July 11, 2023)

Exhibit No.	Description
2061	Exhibit F-23 to Defendants' Invalidity Contentions, <i>Network System Technologies, LLC v. Samsung Electronics Co., Ltd., et al.</i> , Civil Action No. 2:22-cv-00481-JRG (E.D. Tex.) (July 11, 2023)

Pursuant to authorization from the Board, Patent Owner submits this Preliminary Sur-Reply. EX3001.¹

I. THE BOARD SHOULD DENY INSTITUTION IN VIEW OF THE INDEFINITENESS FINDINGS BY TWO DISTRICT COURTS

Petitioner argues that the Board should expend its limited time and resources instituting an IPR, even though two district court judges have now held that the “optimal” terms appearing in the only remaining challenged claim are indefinite, because Patent Owner has not admitted that they are indefinite. Reply, 3. That Patent Owner disagrees with the district court findings is neither surprising nor dispositive. Indeed, it is difficult to imagine any case in which a patentee would agree with an indefiniteness finding. While Petitioner correctly notes that neither party argued that the “determination of indefiniteness was incorrect” in *Samsung Elecs. Co., Ltd. v. Acorn Semi, LLC*, the Board denied institution even though the “the District Court’s finding is subject to appeal.” IPR2020-01182, Paper 17 at 7 (PTAB Feb. 10, 2021). None of the cases cited by Petitioner suggests that Patent Owner must stipulate to indefiniteness for discretionary denial to be appropriate.

Petitioner also stresses that the district court indefiniteness findings are not necessarily an absolute bar to institution. Reply, 4-5. But Patent Owner never argued

¹ Despite representing to the Board that it needed a Preliminary Reply to “address certain misrepresentations” in the POPR, Petitioner identifies none. EX3001, 3-4.

that they were: Patent Owner argued that the Board should exercise its discretion to deny institution in view of indefiniteness findings in the district court. POPR, 10-13. Petitioner does not address Patent Owner's argument that it would be a waste of the Board's limited resources to institute an IPR for a patent with terms which have been found indefinite by two district court judges. *Id.*, 12-13. This is especially true because Patent Owner has disclaimed challenged claims that were not subject to those indefiniteness findings, a fact that Petitioner conveniently ignores. EX2055.

Petitioner's reliance on email correspondence from the district court litigation to suggest that Patent Owner is taking inconsistent positions is misleading. Patent Owner's counsel was responding to an email from Petitioner's counsel inaccurately calling the '800 patent "an invalid patent." EX1038, 2. Importantly, this email exchange occurred before Patent Owner's statutory disclaimer of claims 1, 2, 4-5, 8-11, 13, and 18-21. Patent Owner merely indicated that it disagreed with the indefiniteness finding in the Texas Instruments case and that it reserved the right to appeal. *Id.*, 1. This does not make discretionary denial any less appropriate.

It is Petitioner that is taking inconsistent positions. Petitioner argued in the district court case that "[n]either the claim nor the specification provides any guidance as to how a POSITA can determine whether an amount of data to be buffered is 'optimal.'" EX2035, 23. It also argued that "whether an amount of data is 'optimal' is purely subjective and subject to personal judgments and experiences."

Id., 22. Yet in this proceeding, Petitioner claims that “the indefiniteness of the ‘optimal’ . . . claim terms is based on the uncertainty of their full scope and boundaries.” Reply, 5. Petitioner is arguing on one hand in district court that the “optimal” terms are purely subjective, while on the other hand arguing in this proceeding that no claim constructions are necessary and that “whatever the scope of the indefinite ‘optimal’ terms, these limitations are clearly disclosed in the prior art.” Reply, 5.

For the reasons set forth in Patent Owner's Preliminary Response, the Board should exercise its discretion to deny institution. POPR, 10-13.

II. PETITIONER'S FAILURE TO OFFER CLAIM CONSTRUCTIONS WARRANTS DENIAL

At least in view of the indefiniteness findings by two district court judges, Petitioner's failure to propose any claim constructions warrants denial of the Petition. POPR, 25-28. Petitioner argues that it did not need to propose constructions for the “optimal” terms because it is not “logically impossible” for the Board to address “the patentability issues raised in the Petition.” Reply, 5-6. However, as discussed above, Petitioner argued in district court that “optimal” is purely subjective and depends on personal judgments. *Supra*, § I. In this proceeding, Petitioner's expert states that he did not “analyze[] whether these terms are definite” and offered his opinions “[r]egardless of the precise scope of these terms.” EX1002,

¶ 94 n.4. Petitioner's failure to propose an objective claim construction in the Petition warrants denial. 37 C.F.R. § 42.104(b)(4).

With respect to the term “determination unit,” Petitioner argues that it was not obligated to propose its district court means-plus-function construction. Reply, 6. However, the Board must assess whether this term is subject to means-plus-function treatment because a claim “either contains means-plus function terms or it doesn't.” *Facebook, Inc. v. Sound View Innovations, LLC*, IPR2017-00998, Paper 13 at 16 (PTAB Sept. 5, 2017); *see also Orthopediatrics Corp., v. K2M, Inc.*, IPR2018-01546, Paper 10 at 11 (PTAB Feb. 14, 2019) (finding that because “Petitioner advocated for a different claim construction in the related district court litigation . . . construction of the claim term in dispute [is] necessary”). Where, as here, the Petitioner fails to address the means-plus-function issue, “the majority approach is to deny institution or find that the petitioner failed to carry its burden.” *Becton, Dickinson and Co. v. Baxter Int'l, Inc.*, IPR2018-01741, Paper 8 at 13 (PTAB Mar. 18, 2019); *see also Kingston Tech. Co. v. SPEX Techs., Inc.*, IPR2017-00824, Paper 8 at 18-19 (PTAB Aug. 17, 2017) (denying institution because petitioner failed to perform structural comparison); 37 C.F.R. § 42.104(b)(3).

The cases cited by Petitioner are inapposite. In *Howard Industries, Inc. v. Capsa Solutions LLC*, the petitioner “adopt[ed] Patent Owner's construction” for the means-plus-function term and used it in its analysis. IPR2023-01274, Paper 9 and

11-12 (PTAB Feb. 26, 2024). In *Peloton Interactive, Inc. v. NEC Corp.*, the petitioner expressly analyzed one of the claim terms at issue as a means-plus-function term. IPR2023-01239, Paper 16 at 18 (PTAB Mar. 4, 2024); *see also id.*, Paper 2 at 40 (PTAB July 27, 2023) (arguing that “[i]f [1d] is deemed means-plus-function, [1d] is still taught by Chou” and providing analysis). Similarly, in *Mylan Pharmas. Inc. v. Sanofi-Aventis Deutschland GMBH*, the petitioner expressly “applie[d] means-plus-function constructions in demonstrating how the prior art satisfies the claims as an alternative analysis.” IPR2018-01680, Paper 22 at 21 (PTAB April 3, 2019). Petitioner did not do any of those things: it only mentioned the possibility of a means-plus-function construction for the “determination unit” in a single footnote and did not cite any evidence. Petition, 22 n.2.

III. PETITIONER DID NOT FOLLOW THE BOARD'S RULES

Petitioner's citation to the *entirety* of the IEEE Declaration without more for its threadbare public accessibility arguments violated the Board's rules. POPR, 29-34; Petition, 4 (citing EX1017). While Petitioner denies violating the rule prohibiting incorporation by reference (Reply, 3), it does not address the rules that require the petition “include . . . a detailed explanation of the significance of the evidence including material facts” and that the Board “may exclude or give no weight to the evidence where a party has failed to state its relevance or to identify specific portions

of the evidence that support the challenge.” 37 C.F.R. § 42.22(a)(2); 37 C.F.R. § 42.204(b)(5).

The cases cited by Petitioner highlight how it failed to meet its burden: in both cases, the petitioner cited to specific portions of declarations to support its public accessibility arguments. *Tetra Tech Canada Inc. v. Georgetown Rail Equipment Co.*, IPR2019-00619, Paper 12 at 19 (PTAB Aug. 26, 2019) (noting that “the Petition cites paragraphs 21, 29–30, and 32–33 of the Carney Declaration” in support of public accessibility argument); *Expedia, Inc. v. Int’l Business Machines Corp.*, IPR2018-01136, Paper 7 at 26 (PTAB Dec. 3, 2018) (noting that petitioner cited “¶¶ 41-62 of the Mullins Declaration” and those paragraphs relate to “precisely what the Petition contends”). In this case, Petitioner cited the entire IEEE declaration with no pin cites, forcing the Board and Patent Owner to review it in its entirety to try to divine if or how it supports Petitioner’s contentions. *See* Petition, 4.

Petitioner’s Reply argues for the first time that IEEE is an “established publisher.” Reply, 2. This amounts to attorney argument because Petitioner cites no testimony or other evidence supporting this contention. Moreover, while petitioners can in some circumstances expand on public accessibility issues in its reply, the Board “does not allow a petitioner to completely reopen the record, by, for example, changing theories after filing a petition.” *Hulu, LLC v. Sound View Innovations*,

LLC, IPR2018-01039, Paper 29 at 15 (PTAB Dec. 20, 2019). The Board should disregard Petitioner's new "established publisher" theory.

Petitioner's new attempt to rely on Patent Owner's responses to requests for admission from the Qualcomm district court case is improper for two reasons. First, it is black letter law that responses to requests for admission "cannot be used against the party in any other proceeding." FED. R. CIV. P. 36(b). Second, Petitioner could have submitted this exhibit with its petition but chose not to. Indeed, Petitioner submitted Exhibit 1037 as Exhibit 1033 in IPR2024-00355 where it is a co-Petitioner with Qualcomm. The Board should disregard this new exhibit because its "rules prohibit a petitioner from submitting new evidence or new argument in reply that the petitioner could have presented earlier." *Kingston Tech. Co., Inc. v. SPEX Techs., Inc.*, 798 F. App'x 629, 635 (Fed. Cir. 2020) (citing 37 C.F.R. § 42.23(b)).

The Preliminary Reply underscores the Petition's failure to comply with the Board's rules.

IV. CONCLUSION

For at least these reasons and the reasons set forth in Patent Owner's Preliminary Response, the Petition should be denied.

U.S. Patent No. 8,086,800
IPR2024-00339

Patent Owner's Preliminary Sur-Reply

Respectfully submitted,

Dated: May 7, 2024

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of the foregoing **Patent Owner's Preliminary Sur-Reply** was served on May 7, 2024, by email:

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