**IN THE UNITED STATES DISTRICT COURT**
**FOR THE WESTERN DISTRICT OF TEXAS**
**AUSTIN DIVISION**

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| NETWORK SYSTEM TECHNOLOGIES, LLC,<br><br>Plaintiff.<br><br>v.<br><br>QUALCOMM INCORPORATED, QUALCOMM TECHNOLOGIES, INC., and ARTERIS, INC.<br><br>Defendants. | Civil Action No. 1:22-cv-1331-DAE<br><br>**JURY TRIAL DEMANDED** |

**DEFENDANTS' SUPPLEMENTAL CLAIM CONSTRUCTION BRIEF**

**TABLE OF CONENTS**

I. INTRODUCTION ..... 1

II. "DROPPING MEANS" AND "COMMUNICATION MANAGER" ARE INDEFINITE ..... 2

III. "INTERCONNECT MEANS" IS GOVERNED BY § 112(6) ..... 6

IV. "OPTIMAL AMOUNT OF DATA" AND "OPTIMAL MOMENT FOR SENDING DATA" ARE INDEFINITE ..... 7

V. THE PHRASE "RESOURCE MANAGER DETERMINING WHETHER A TARGET CONNECTION WITH THE DESIRED CONNECTION PROPERTIES IS AVAILABLE" IS LIMITED BY DISCLAIMER ..... 8

VI. CONCLUSION ..... 10

CERTIFICATE OF SERVICE ..... 13

# TABLE OF AUTHORITIES

**Cases**

*BASF Agro B.V. v. Makhteshim Agan of N. Am., Inc.*,
519 Fed. Appx. 1008 (Fed. Cir. Mar. 20, 2013) ..... 9, 10

*Diebold Nixdorf, Inc. v. Int'l Trade Comm'n*,
899 F.3d 1291 (Fed. Cir. 2018) ..... 4

*Function Media, L.L.C. v. Google Inc.*,
708 F.3d 1310 (Fed. Cir. 2013) ..... 4

*Interval Licensing LLC v. AOL, Inc.,*
766 F.3d 1364 (Fed. Cir. 2014) ..... 7

*Maurice Mitchell Innovations, L.P. v. Intel Corp.*,
249 Fed. Appx. 184 (Fed. Cir. 2007) ..... 4

*Nautilus, Inc. v. Biosig Instruments, Inc.,*
572 U.S. 898 (2014) ..... 7

*NMT Med., Inc. v. Cardia, Inc.*,
239 Fed. Appx. 593 (Fed. Cir. 2007) ..... 5

*Noah Sys. Inc. v. Intuit Inc.*,
675 F.3d 1302 (Fed. Cir. 2012) ..... 4

*Springs Window Fashions LP v. Novo Industries, L.P.*,
323 F.3d 989 (Fed. Cir. 2003) ..... 10

*Sulzer Textil A.G. v. Picanol N.V.*,
358 F.3d 1356 (Fed. Cir. 2004) ..... 5

*Tech Props. Ltd. LLC v. Huawei Techs. Co.*,
849 F.3d 1349 (Fed. Cir. 2017) ..... 9

*Texas Instruments, Inc. v. Linear Tech. Corp.*,
182 F.Supp.2d 580, 589 (E.D. Tex. 2002) ..... 1

*Williamson v. Citrix Online, LLC*,
792 F.3d 1339 (Fed. Cir. 2015) ..... 2, 3, 4, 6

*WSOU Invs. LLC v. Google LLC*,
No. 2022-1064, 2023 U.S. App. LEXIS 26584 (Fed. Cir. Oct. 6, 2023) ..... 4

**Statutes**

35 U.S.C. § 112 ..... 2, 4, 5, 6, 7

## I. INTRODUCTION

Plaintiff Network System Technologies, LLC ("NST") has accused a number of defendants across six separate civil actions of infringing the same six patents.[1] In one of those matters, against Texas Instruments ("TI"), Judge Schroeder issued a Claim Construction Order on January 3, 2024 that, among other things, construes six terms that are disputed here (hereinafter "TI Order," copy attached as Exhibit 1). Those terms are: "dropping means"; "communication manager"; "interconnect means"; "optimal amount of data to be buffered"; "optimal moment for sending the data"; and "resource manager."

For issues where the arguments were framed the same as they are in this case, the TI Order is relevant authority. But Defendants did not participate in the TI Case, and for a number of issues, TI made different arguments and relied on different evidence than Defendants have in this case. On these issues, the TI Order is not particularly relevant. *See*, *e.g.*, *Texas Instruments, Inc. v. Linear Tech. Corp.*, 182 F.Supp.2d 580, 589-90 (E.D. Tex. 2002) (recognizing that construing claims based on a previous matter where defendants did not participate "could cause an injustice of precisely the sort that due process seeks to avoid."). For the reasons discussed in Defendants' claim construction briefs and at the claim construction hearings, Defendants respectfully request the Court enter Defendants' proposed claim constructions.

[1] *See Network System Technologies, LLC v. Texas Instruments Inc. et al.*, No. 2:22-cv-00482 (E.D. Tex.) (the "TI Case"); *Network System Technologies, LLC v. Samsung Electronics Co., Ltd. et al.*, 2:22-cv-00481 (E.D. Tex.); *Network System Technologies, LLC v. Lenovo Group Ltd.*, 2:23-cv-00167 (E.D. Tex.); *Network System Technologies, LLC v. Ford Motor Co.*, 2:23-cv-00440 (E.D. Tex.); *Network System Technologies, LLC v. OnePlus Technology (Shenzhen) Co., Ltd.*, 2:23-cv-00520 (E.D. Tex.).

## II. "DROPPING MEANS" AND "COMMUNICATION MANAGER" ARE INDEFINITE

The TI Order addressed two of the three terms that Defendants here contend are "means plus function" terms governed by 35 U.S.C. § 112 ¶ 6 ("§ 112(6)") and are indefinite for failure to disclose corresponding structure in the specification: "dropping means" in the '818 patent and "communication manager" in the '449 patent. TI Order at 27-31, 38-42.

The TI Order applied the same three-step process to analyze these claim terms that Defendants advance here. *See* Dkt. 77 at 12-14; Ex. 2 at 20. Step 1 is determining whether § 112(6) applies. For this step, the arguments in the TI case were essentially the same as those here, with NST wrongly arguing that because everything on an integrated circuit is a circuit, the terms are not governed by § 112(6). The TI Order rejected NST's argument and held that both "dropping means" and "communication manager" are governed by § 112(6) because those terms do not have "sufficiently definite meaning as the name for structure." TI Order at 28, 39-40 (*quoting Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348 (Fed. Cir. 2015) (*en banc*)). That is Defendants' argument here, and the Court should reach the same conclusion here the reasons set forth in Defendants' briefs. Dkt. 77 at 12-13, 18-21; Dkt. 83 at 4-6, 9.

Step 2 is identifying the function recited in the claims. For this step, the parties in the TI case essentially agreed to the claimed function for "dropping means" and disagreed for "communication manager." TI Order at 27, 38. The TI Order adopted NST's proposed function for "communication manager." *Id*. at 42. Defendants respectfully disagree with this decision for the reasons discussed in its brief to this Court (*see* Dkt. 77 at 20-21, Dkt. 83 at 9), but this issue should not be critical to the Court's ultimate determination because under Step 3 there is not sufficient structure disclosed for any of the functions.

Step 3 is where the cases diverge. Step 3 requires the court to identify the structure disclosed in the specification that is both clearly linked to the claimed function and adequate to perform the claimed function. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1352 (Fed. Cir. 2015) (*en banc*). In both the TI case and in this case, NST has argued that the structure is simply "circuit." TI Order at 27, 38; Dkt. 81 at 9, 14. However, for "dropping means," TI did not argue for indefiniteness as Defendants do here; instead, TI argued that the corresponding structure was: "[W]ith respect to claim 1, 'buffer that implements a 'milk' policy (drops oldest data) or a 'wine' policy (drops newest data) when the buffer overflows, as disclosed in the '818 patent at 7:51-56, 8:38-39, 8:64-66." TI Order at 27.

The TI Order correctly rejected NST's argument that the disclosed structure is simply a "circuit," holding that the general recitation of "integrated circuit" in the preamble of the claim was not sufficient to provide the necessary structure for all subsequent means-plus-function claim elements. TI Order at 30-31, 42. That conclusion accords with all relevant authority.

However, the TI Order incorrectly identified the corresponding structure with reference to purely functional "schemes" allegedly disclosed in the specification. Specifically, the TI Order concluded that the corresponding structure for performing the "dropping means" function is the "portion of the circuit configured to implement the scheme disclosed in the '818 Patent at 7:45-56, 8:38-40, 8:64-9:10." TI Order at 31. Similarly, the TI Order concluded that the corresponding structure for performing the "communication manager" functions is the "portion of the circuit configured to implement the scheme disclosed in the '449 Patent at 10:19-24, 10-41-54." *Id.* at 42.

Those constructions are not tenable under Federal Circuit law, which requires that the claims be limited "to only the structure, materials, or acts described in the specification as

corresponding to the claimed function and equivalents thereof." *Williamson*, 792 F.3d at 1347; *see also* § 112(6); *Maurice Mitchell Innovations, L.P. v. Intel Corp.*, 249 Fed. Appx. 184, 187-88 (Fed. Cir. 2007) (holding claim indefinite because the specification did not have adequate structure linked to the claimed function); *WSOU Invs. LLC v. Google LLC*, No. 2022-1064, 2023 U.S. App. LEXIS 26584, at *16-18 (Fed. Cir. Oct. 6, 2023) (same). The TI Order does not identify any ***structure*** in the specification that is clearly linked to performance of the claimed functions. Instead, the TI Order improperly cites entire chunks of ***functional*** text from the specification. TI Order at 31, 42; '818 Patent at 7:45-56, 8:38-40, 8:64-9:10; '449 Patent at 10:19-24, 10-41-54. Indeed, the use of the word "scheme" shows that the TI Order improperly focused on functions in the specification, not structure.[2] This also contravenes Federal Circuit law. *See Noah Sys. Inc. v. Intuit Inc.*, 675 F.3d 1302, 1316-17 (Fed. Cir. 2012) (finding claims indefinite where the "portions of the specification that describe what occurs inside box 44, however, merely recite functional, not structural, language."); *Diebold Nixdorf, Inc. v. Int'l Trade Comm'n*, 899 F.3d 1291, 1303 (Fed. Cir. 2018) (finding claim indefinite, stating that suggested language "would still describe only function, not structure, and therefore would be insufficient to constitute 'adequate' corresponding structure to achieve the claimed function.") (internal quotations omitted).

[2] It is possible that the TI Order's incorporation of "schemes" was influenced by caselaw holding that when a patent specification links a means-plus-function element to a general-purpose computer or processor, such a claim can be saved from invalidity if the specification discloses a specific algorithm for performing the claimed function. *See, e.g.*, *Williamson*, 792 F.3d at 1352. That case law is not applicable here for two reasons. First, no party is arguing that a general purpose processor is the structure that carries out the recited function. Second, the specifications of the patents-in-suit do not clearly link the claimed functions to ***any*** structure, much less to a general-purpose computer or processor. Dkt. 83 at 6-7, 10. Even if these cases did apply here there is no algorithm disclosed in the specification. *See Function Media, L.L.C. v. Google Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013) (discussing requirements for disclosing specific algorithm). NST has not suggested anything in the specification is an algorithm.

The parties in the present case agree that it is improper to cite functional language from the specification when looking for the requisite structure. At the recent supplemental claim construction hearing, NST attacked the construction in the TI Order as erroneously importing functional limitations into the construction. Ex. 3 at 74:14-20 (NST arguing: "The reason we disagree with this incorporation is because [] there's Federal Circuit case law that makes clear that [the] section 112, paragraph 6 statute does not permit limitation of a means plus function claim by adopting a function different from that explicitly defined in the claims. You can't loop in additional function."); Ex. 4 at 113. And indeed, nothing in the governing statute permits a court to do this. *See* 35 U.S.C. § 112(6) (pre-AIA).

Finally, in addition to being contrary to law, the TI Order's importation of "schemes" from the specifications is unhelpful and unworkable. As the Court is aware, the claim constructions will be provided to the jury via a jury instruction, and the jury will be tasked with applying that construction. The passages cited by the TI Order ('818 Patent at 7:45-56, 8:38-40, 8:64-9:10 and '449 Patent at 10:19-24, 10-41-54) are not only voluminous, they are difficult to understand and untethered from the claimed functions. These constructions are inadequate to assist the jury in its role of deciding whether the accused ***structure*** is the same as or the equivalent to disclosed ***structure*** for performing the claimed function. *Sulzer Textil A.G. v. Picanol N.V.*, 358 F.3d 1356, 1366 (Fed. Cir. 2004) ("[T]he district court normally will need to provide the jury in a patent case with instructions adequate to ensure that the jury fully understands the court's claim construction rulings and what the patentee covered by the claims."); *NMT Med., Inc. v. Cardia, Inc.*, 239 Fed. Appx. 593, 597 (Fed. Cir. 2007) (determination of infringement of a 112(6) term requires the factfinder to analyze whether "the

accused device employs structure identical or equivalent to the structure disclosed in the patent . . .”).

In enacting § 112(6), “Congress struck a balance in allowing patentees to express a claim limitation by reciting a function to be performed rather than by reciting structure for performing that function, while placing specific constraints on how such a limitation is to be construed[.]” *Williamson*, 792 F.3d at 1347 (*en banc*). Under that statutory regime, while the TI Order correctly held that the terms “dropping means” and “communication manager” are governed by § 112(6), the TI Order erred in finding that the lack of structure could be overcome by importing additional functional language (i.e. “schemes”) from the specification. As the cases cited above indicate, functional language in the specification ***cannot*** stand in the place of the required structure that must be disclosed under the statute. These claims are invalid under § 112(6) for failure to disclose and clearly link a structure to the claimed function. Dkt. 77 at 11-16, 18-21; Dkt. 83 at 4-10.

## III. “INTERCONNECT MEANS” IS GOVERNED BY § 112(6)

In the TI Case, neither party argued that § 112(6) governs the term “interconnect means” in the ’052 patent. NST proposed the same construction as it does here: “multi-hop interconnection between modules separated by one or more network nodes.” TI’s proposed construction was “Plain and ordinary meaning. Not subject to Section 112 ¶ 6.” TI Order at 47-51. The Court adopted NST’s proposed construction. *Id*. at 60.

Here, in contrast, Defendants do argue that “interconnect means” is governed by § 112(6). Defendants’ Dkt. 77 at 22; Dkt. 83 at 13. The TI Order construction should not be adopted because it is contrary to applicable law. Specifically, when a claim uses the word “means” in conjunction with a function – as is the case here – § 112(6) presumptively applies. *Williamson*, 792 F.3d at 1349. The TI Order made no finding on whether § 112(6) applies

because "[a]lthough the term includes the word 'means,' the parties agree that the term is not subject to Section 112 ¶ 6." TI Order at 47. This case is different – no such agreement exists between the parties here.

Because the TI Order expressly states that it did not apply the § 112(6) framework in view of the parties' agreement, it provides no guidance to the Court in this case. As established in Defendants' briefs and during the claim construction hearing here, "interconnect means" is governed by the three-step process articulated above, it is in fact subject to § 112(6) and the Court should adopt the function and structure proposed by Defendants. Dkt. 77 at 22-23.

## IV. "OPTIMAL AMOUNT OF DATA" AND "OPTIMAL MOMENT FOR SENDING DATA" ARE INDEFINITE

Contrary to the means-plus-function claim terms discussed above, where the arguments were different than those presented in this case, the "optimal" claim term arguments are the same here as in the TI case. NST proposed "plain and ordinary meaning" in both cases, while the defendants in both cases argued the terms are indefinite under 35 U.S.C. § 112 ¶ 2 because the claims and the specification do not "provide objective boundaries for those of skill in the art" as required by the Supreme Court and the Federal Circuit. *Interval Licensing LLC v. AOL, Inc.,* 766 F.3d 1364, 1371 (Fed. Cir. 2014) (citing *Nautilus, Inc. v. Biosig Instruments, Inc.,* 572 U.S. 898 (2014)); Dkt. 77 at 32-38; Dkt. 83 at 20-23. After rejecting arguments that NST also is making in the present case, the TI Order correctly found that each of these terms "is indefinite for failing to inform, with reasonable certainty, those skilled in the art about the scope of the invention." TI Order at 55, 57. The court here should reach the same conclusion for the reasons set forth in Defendants' briefs and articulated during oral argument.

## V. THE PHRASE "RESOURCE MANAGER DETERMINING WHETHER A TARGET CONNECTION WITH THE DESIRED CONNECTION PROPERTIES IS AVAILABLE" IS LIMITED BY DISCLAIMER

During prosecution, the patent applicant clearly and unmistakably argued that the '449 patent claims were patentable because the claimed "resource manager" that "determine[es] whether a target connection with the desired connection properties is available" was different than a prior art "arbiter" that "prioritize[es] which port . . . is to be utilized." Dkt. 77 at 16-18. Having made this argument to obtain the patent, NST cannot now assert that the claim covers arbiters that prioritize which port should be utilized. The relevant statements from the prosecution history are reproduced below:

> The Office Action asserts that Emerson has a communication manager which is a multi-core module 102 and also has a resource manager which is arbiter 112. The Arbiter 112 of Emerson is a device for prioritizing which port 120 of the module 102 is to be utilized:
>
> > [0026] If the address received at a port matches that of the module for that bus, access to multiplexer 122 and the memory space of FIFO 126 and SRAM 130 is arbitrated by arbiter 132. **Arbiter 132 arbitrates which port has use of multiplexer 122 and of the memory space at a given time. The arbitration protocol may be any protocol suitable for the system, including rotation of the priority among the ports or assigning specific ports a priority over others, or a combination of both**. It is preferred that any given arbitration

> > cycle prioritizes ports 120 so that if the port with the highest priority does not have any current requests, the port with the next highest priority will be serviced. (Emerson par. 0026)(emphasis added).
>
> The Arbiter 112 of Emerson does not disclose or suggest the features of claim 1 which include the resource manager determining whether the at least one connection with the communication channels is available <u>based on the connection properties being available</u> and the features of claim 7 which include the first module issuing a request for a connection with the second module to a communication manager, the resource manager determining whether a target connection <u>with the desired connection properties is available</u>, and the resource manager responding with the availability of the target connection to the communication manager.

*Id.*; Dkt. 77-11 at 6-7. NST's construction attempts to recapture exactly what it disclaimed. The law does not permit that.. *See, e.g.*, *Tech Props. Ltd. LLC v. Huawei Techs. Co.*, 849 F.3d 1349, 1358-59 (Fed. Cir. 2017) (finding disclaimer based on patent applicant's characterization of prior art); *BASF Agro B.V. v. Makhteshim Agan of N. Am., Inc.*, 519 Fed. Appx. 1008, 1017 (Fed. Cir. Mar. 20, 2013) (same).

The TI Order addressed a different disclaimer argument than Defendants are making here. The TI Order phrased the disclaimer issue as being whether the patent applicant clearly and unmistakably argued "that the resource [manager] was not an arbiter." TI Order at 45. The TI Order held that the patent applicant did not argue that but instead had argued that "the arbiter in Emerson did not disclose the limitation explicitly added to the claim" during prosecution. *Id.*

Defendants fully agree with this part of the TI Order. During prosecution, the patent applicant argued for patentability based on ***the entire phrase*** resource manager "determining whether a target connection with the desired connection properties is available" that was added during prosecution. That is why Defendants identified the entire phrase for construction.

In addition, the patent applicant characterized Emerson's arbiter as "a device for prioritizing which port 120 of the module 102 is to be utilized." *See* p. 8 *supra*. The TI Order does not mention this important characterization. This characterization is important because it demonstrates that the patent applicant was providing a specific reason why Emerson's arbiter did not meet the entire claim phrase: because a device that "prioritize[es] which port . . . is to be utilized" is not a device that "determine[es] whether a target connection with the desired connection properties is available" as recited in the amended claims. The combination of the patent applicant's characterization of Emerson's arbiter and its statement that the arbiter did not meet the claim language amounts to a clear and unmistakable disclaimer. *See* Dkt. 77-1, ¶ 73.

NST should not be allowed to argue that the claim now covers the very structure that was distinguished during prosecution to gain allowance.[3] *BASF Agro B.V.*, 519 Fed. Appx. at 1017 (finding disclaimer based on patent applicant's characterization of prior art as "designed to provide a barrier around the buildings to be protected" and suggestion this was different than "forming both treated and untreated locations" as recited in the claims). For these reasons, the TI Order is not particularly relevant for the Defendants' disclaimer argument made in this case.

## VI. CONCLUSION

For issues where the arguments were framed the same as they are in this case, including in particular for the terms "optimal amount of data to be buffered" and "optimal moment, the TI Order is relevant authority. But Defendants did not participate in the TI Case, and for a number of issues TI made different arguments and relied on different evidence than Defendants have in this case. On these issues, the TI Order is not particularly relevant. The Court should adopt Defendants' proposed constructions for the reasons discussed in Defendants' briefs and during the claim construction hearings.

[3] As stated in Defendants' brief, this disclaimer was not only clear and unmistakable, it was effective in causing the patent office to allow the claims. Dkt. 77 at 17-18. NST has an alternative interpretation of the reason the examiner allowed the claim. The Court does not need to resolve this particular issue to find disclaimer, however, because under the law disclaimer applies when the statement is made regardless of whether the patent office ultimately agrees with it. *Springs Window Fashions LP v. Novo Industries, L.P.*, 323 F.3d 989, 994-95 (Fed. Cir. 2003) (holding disclaimer applied regardless of whether the examiner relied on it because "the examiner's remarks do not negate the effect of the applicant's disclaimer.").

Respectfully submitted,

Dated: March 1, 2024

s/ *J. Derek Vandenburgh*

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**CERTIFICATE OF SERVICE**

The undersigned hereby certifies that on March 1, 2024, all counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system. Any other counsel of record will be served by electronic mail on this same date.

s/ *J. Derek Vandenburgh*
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