

No. 26-____

In the
Supreme Court of the United States

GENUINE ENABLING TECHNOLOGY LLC,
Petitioner,

v.

SONY GROUP CORPORATION AND SONY INTERACTIVE
ENTERTAINMENT LLC,
Respondents.

On Petition for a Writ of Certiorari to the United
States Court of Appeals for the Federal Circuit

PETITION FOR A WRIT OF CERTIORARI

Daniel Woofter
Counsel of Record
Kevin K. Russell
RUSSELL & WOOFTER LLC
1701 Pennsylvania
Avenue NW, Suite 200
Washington, DC 20006
(202) 240-8433
dw@russellwoofter.com

QUESTION PRESENTED

The Patent Act allows an inventor to claim an element of his invention by the function it performs rather than by its precise structure. Such a claim covers “the corresponding structure” the specification discloses for performing the function “and equivalents thereof.” 35 U.S.C. § 112(f). One structure is equivalent to another if it performs “substantially the same function in substantially the same way to obtain the same result.” *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950) (quotation marks omitted). Equivalence “is a determination of fact,” and a key consideration is whether skilled artisans “would have known of the interchangeability” of the substituted feature. *Id.* at 609; see *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 36 (1997) (interchangeability bears on “whether the accused device is substantially the same as the patented invention”). The Federal Circuit affirmed summary judgment of noninfringement under a different rule. Whatever the patentee proves about the two structures as wholes, the court held, it loses as a matter of law unless it also goes through the disclosed structure component by component and, for each one not found in the accused device, explains why that component may be disregarded, as though the individual components of the disclosed structure were themselves elements of the claim. See Pet. App. 12a-14a.

The Question Presented is: Whether a patentee’s statutory entitlement to “equivalents thereof” under 35 U.S.C. § 112(f) may be extinguished as a matter of law, regardless of the evidence comparing the structures as wholes, whenever the patentee does not separately account for each component of the disclosed structure or explain why any should be omitted.

PARTIES TO THE PROCEEDING

The parties to the proceeding are:

1. Petitioner Genuine Enabling Technology LLC was the plaintiff-appellant in the court of appeals.
2. Respondents Sony Interactive Entertainment LLC and Sony Group Corporation (NYSE: SONY; TSE: 6758) were the defendants-appellees in the court of appeals.

CORPORATE DISCLOSURE STATEMENT

Pursuant to this Court's Rule 29.6, petitioner Genuine Enabling Technology LLC states that it has no parent corporation and that no publicly held company owns 10% or more of its stock.

RELATED PROCEEDINGS

Genuine Enabling Tech. LLC v. Nintendo Co., No. 2:19-cv-00351 (W.D. Wash.).

Genuine Enabling Tech. LLC v. Nintendo Co., 29 F.4th 1365 (Fed. Cir. 2022).

Genuine Enabling Tech. LLC v. Sony Corp., No. 1:17-cv-00135 (D. Del.).

Genuine Enabling Tech. LLC v. Sony Corp., No. 2024-1686 (Fed. Cir.).

TABLE OF CONTENTS

QUESTION PRESENTED	i
PARTIES TO THE PROCEEDING.....	ii
CORPORATE DISCLOSURE STATEMENT	iii
RELATED PROCEEDINGS	iv
TABLE OF APPENDICES	vi
TABLE OF AUTHORITIES	vii
PETITION FOR A WRIT OF CERTIORARI.....	1
OPINIONS BELOW	1
JURISDICTION.....	1
RELEVANT LEGAL PROVISION.....	1
INTRODUCTION	2
STATEMENT OF THE CASE.....	4
I. Legal Background	4
A. Functional claims	4
B. Equivalents under <i>Graver Tank</i>	6
C. The Federal Circuit’s additional “why” requirement	7
II. Factual And Procedural Background	9
A. The ’730 Patent.....	9
B. Proceedings below	11
1. <i>District court rulings</i>	11
2. <i>Panel decision</i>	16
3. <i>Rehearing order</i>	17
REASONS FOR GRANTING THE WRIT	18
I. The Decision Below Is Wrong.....	18

A. The panel’s account-for-every-component rule violates § 112(f).	18
B. The panel discarded the showing <i>Graver Tank</i> prescribes.	19
II. The Question Presented Is Important And Frequently Recurs.	22
III. Only This Court Can Correct The Federal Circuit’s Entrenched Error.	27
IV. This Case Is An Ideal Vehicle.	29
CONCLUSION.	33

TABLE OF APPENDICES

APPENDIX A: FEDERAL CIRCUIT PANEL OPINION, FILED FEBRUARY 19, 2026	1a
APPENDIX B: DISTRICT COURT SUMMARY JUDGMENT OPINION, FILED MARCH 25, 2024	18a
APPENDIX C: DISTRICT COURT REARGUMENT OPINION, FILED JULY 20, 2023	35a
APPENDIX D: DISTRICT COURT <i>DAUBERT</i> OPINION, FILED NOVEMBER 28, 2022.	55a
APPENDIX E: DISTRICT COURT <i>MARKMAN</i> OPINION, FILED MARCH 9, 2020	104a
APPENDIX F: FEDERAL CIRCUIT REHEARING ORDER, FILED APRIL 23, 2026	161a

TABLE OF AUTHORITIES

Cases

<i>Al-Site Corp. v. VSI Int’l, Inc.</i> , 174 F.3d 1308 (Fed. Cir. 1999)	13, 26
<i>Anderson v. Liberty Lobby, Inc.</i> , 477 U.S. 242 (1986).....	20
<i>AquaTex Indus., Inc. v. Techniche Sols.</i> , 479 F.3d 1320 (Fed. Cir. 2007)	9
<i>Caterpillar Inc. v. Deere & Co.</i> , 224 F.3d 1374 (Fed. Cir. 2000)	18, 28
<i>Cutter v. Wilkinson</i> , 544 U.S. 709 (2005).....	29
<i>Daubert v. Merrell Dow Pharms., Inc.</i> , 509 U.S. 579 (1993).....	14, 29
<i>Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.</i> , 535 U.S. 722 (2002).....	22
<i>Genuine Enabling Tech. LLC v. Nintendo Co.</i> , 29 F.4th 1365 (Fed. Cir. 2022).....	11
<i>Graver Tank & Mfg. Co. v. Linde Air Prods. Co.</i> , 339 U.S. 605 (1950)i, 2, 3, 4, 6, 7, 8, 9, 12, 19, 20, 21, 25, 27, 29, 30, 32	
<i>Halliburton Oil Well Cementing Co. v. Walker</i> , 329 U.S. 1 (1946).....	5, 20
<i>Kemco Sales, Inc. v. Control Papers Co.</i> , 208 F.3d 1352 (Fed. Cir. 2000)	7
<i>Lear Siegler, Inc. v. Sealy Mattress Co. of Mich., Inc.</i> , 873 F.2d 1422 (Fed. Cir. 1989)	8, 27
<i>Malta v. Schulmerich Carillons, Inc.</i> , 952 F.2d 1320 (Fed. Cir. 1991)	8, 27

<i>Markman v. Westview Instruments, Inc.</i> , 517 U.S. 370 (1996).....	4, 25
<i>NexStep, Inc. v. Comcast Cable Commc'ns</i> , 145 S. Ct. 2794 (2025) (mem.).....	28
<i>NexStep, Inc. v. Comcast Cable Commc'ns, LLC</i> , 119 F.4th 1355 (Fed. Cir. 2024).....	8, 9, 24, 27, 28
<i>O'Reilly v. Morse</i> , 56 U.S. (15 How.) 62 (1854)	4
<i>Odetics, Inc. v. Storage Tech. Corp.</i> , 185 F.3d 1259 (Fed. Cir. 1999) ..	3, 6, 7, 9, 14, 17, 18, 19, 20, 26, 27, 28, 29, 31
<i>Sanitary Refrigerator Co. v. Winters</i> , 280 U.S. 30 (1929).....	6
<i>Sekhar v. United States</i> , 570 U.S. 729 (2013).....	19
<i>Smartrend Mfg. Grp. (SMG), Inc. v. Opti-Luxx Inc.</i> , 159 F.4th 1322 (Fed. Cir. 2025).....	24
<i>Toro Co. v. Deere & Co.</i> , 355 F.3d 1313 (Fed. Cir. 2004)	16, 21
<i>Traxcell Techs., LLC v. Sprint Commc'ns Co.</i> , 15 F.4th 1121 (Fed. Cir. 2021).....	9, 27, 28
<i>VLSI Tech. LLC v. Intel Corp.</i> , 87 F.4th 1332 (Fed. Cir. 2023).....	8, 23, 24, 25
<i>Warner-Jenkinson Co. v. Hilton Davis Chem. Co.</i> , 520 U.S. 17 (1997)	i, 4, 5, 6, 7, 18, 20, 21, 26
<i>Williamson v. Citrix Online, LLC</i> , 792 F.3d 1339 (Fed. Cir. 2015)	25
<i>Winans v. Denmead</i> , 56 U.S. (15 How.) 330 (1854)	6

Statutes

28 U.S.C. § 1254(1)	1
---------------------------	---

35 U.S.C. § 112(b)	4
35 U.S.C. § 112(f) .i, 1, 2, 3, 5, 6, 7, 9, 13, 18, 20, 21, 22, 25, 26, 28, 29	
Act of July 19, 1952, ch. 950, 66 Stat. 792	5
Act of Nov. 14, 1975, Pub. L. No. 94-131, 89 Stat. 685	5
Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011)	5

Rules

Fed. R. Evid. 702	13
Fed. R. Evid. 704(a)	29

Other Authorities

John R. Allison & Mark A. Lemley, <i>The (Unnoticed) Demise of the Doctrine of Equivalents</i> , 59 Stan. L. Rev. 955 (2007)	24
Dennis Crouch, <i>Smartrend and the Stretching of Markman: When Specification Parsing Becomes a Question of Law</i> , Patently-O (Nov. 19, 2025), https://tinyurl.com/4w59r8dp	24
Lisette Donewald, <i>Did You Account for the Entire Corresponding Disclosed Structure?</i> , McDermott Will & Schulte IP Update (Mar. 5, 2026), https://tinyurl.com/359mpnt4	22
<i>Federal Circuit Affirms Summary Judgment of Non Infringement for Failure to Prove Structural Equivalence Under § 112(f)</i> , A&O Shearman IP Blog (Mar. 3, 2026), https://tinyurl.com/376uzy2r	3, 22

Felix Frankfurter, <i>Some Reflections on the Reading of Statutes</i> , 47 Colum. L. Rev. 527 (1947)	20
Scott A. Hogan & James D. Stevens, Jr., <i>Functional Claiming in the Aftermath of Williamson</i> , in IAM Innovation & Invention Yearbook (6th ed. 2021), https://tinyurl.com/5bx3sf6n	3, 25
Minute Order, <i>Genuine Enabling Tech. LLC v. Nintendo Co.</i> , No. C19-0351 TSZ (W.D. Wash. May 19, 2026).....	11
Order Denying Pet. for Reh’g En Banc, <i>NexStep, Inc. v. Comcast Cable Commc’ns, LLC</i> , No. 22-1815 (Fed. Cir. Jan. 2, 2025).....	28
Order Denying Reh’g & Suggestion for Reh’g En Banc, <i>Caterpillar Inc. v. Deere & Co.</i> , No. 99-1593 (Fed. Cir. Oct. 23, 2000).....	28
Order Denying Reh’g & Suggestions for Reh’g En Banc, <i>Odetics, Inc. v. Storage Tech. Corp.</i> , Nos. 98-1533, 98-1585 (Fed. Cir. Aug. 27, 1999)....	28
Pet. for Writ of Cert., <i>NexStep, Inc. v. Comcast Cable Commc’ns</i> , 145 S. Ct. 2794 (No. 24-1137).....	29
David L. Schwartz, <i>Explaining the Demise of the Doctrine of Equivalents</i> , 26 Berkeley Tech. L.J. 1157 (2011).....	25
Michael Stojavljevic, <i>The Precedent: Federal Circuit Tightens Structural Equivalence Showing for Means-Plus-Function Claims in Genuine Enabling Tech. LLC v. Sony Group Corp.</i> , Vorys (Apr. 2, 2026), https://tinyurl.com/yc4db6em	22

PETITION FOR A WRIT OF CERTIORARI

Petitioner Genuine Enabling Technology LLC respectfully petitions for a writ of certiorari to review the judgment of the United States Court of Appeals for the Federal Circuit.

OPINIONS BELOW

The opinion of the Federal Circuit (Pet. App. 1a-17a) is reported at 167 F.4th 1196. The district court's summary judgment (Pet. App. 18a-34a), reargument (*id.* 35a-54a), *Daubert* (*id.* 55a-103a), and *Markman* (*id.* 104a-160a) opinions are not reported but are available at 2024 WL 1255513, 2023 WL 4686024, 2022 WL 17325656, and 2020 WL 1140910.

JURISDICTION

The judgment of the court of appeals was entered on February 19, 2026. Pet. App. 1a. The court denied a timely petition for panel rehearing and rehearing en banc on April 23, 2026. *Id.* 161a-162a. On July 17, 2026, Chief Justice Roberts extended the time within which to file a petition for a writ of certiorari to September 18, 2026. No. 26A60. This Court has jurisdiction under 28 U.S.C. § 1254(1).

RELEVANT LEGAL PROVISION

Section 112(f) of Title 35 provides:

Element in Claim for a Combination.—

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

INTRODUCTION

An inventor may describe an element of his creation by what it does rather than what it is; in exchange, his claim reaches only the structure his specification discloses “and equivalents thereof.” 35 U.S.C. § 112(f). An inventor who claims “a means of connecting” and discloses a nail catches the copycat who substitutes a screw, but not the creator who fastens with Velcro. Without this protection, a rival could steal the invention with a trivial substitution, making the patent “a hollow and useless thing.” *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950).

Petitioner’s patent solved a problem of 1990s computing. Back then, computers required individual connections and separate computer resources for each input device. The patent discloses a device that merges the data of multiple peripherals, such as a mouse and a microphone, into a single stream transmitted over one communication link. But a mouse’s slow-varying stream of button and motion data and the higher-frequency audio stream from a microphone could not simply be placed on the same line. Sent over one link without coordination, the streams would collide—like cars of different speeds merging into one lane without a yield rule. The inventor solved the problem with a structure the patent calls a “framer,” which coordinates the timing of the disparate data streams to the beat of a common clock, synchronizing and encoding them into a combined data stream the computer receives intact.

Petitioner’s expert showed how respondent Sony’s PlayStation 3 and 4 controllers synchronize and encode multiple streams of controller-generated data in the same way, and he explained that in digital logic,

logic designs performing the same operation are interchangeable regardless of whether they use the same gates. C.A. App'x 1586-89 & nn.7-13. The Federal Circuit affirmed summary judgment of noninfringement anyway, under a rule found nowhere in § 112(f) or *Graver Tank*. Whatever else the patentee shows about the patented and accused structures as wholes, the court held, it must still go through the disclosed drawing and explain why any component missing from the accused device “may be ignored.” Pet. App. 12a-14a. That rule turns the one element Congress let the inventor claim by function into as many structural elements as the drawing has parts—the reverse of what § 112(f) says, and a maneuver the Federal Circuit previously forbade. *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1268 (Fed. Cir. 1999) (the components of the disclosed structure “are not claim limitations”).

Practitioners read the decision as “reinforc[ing] the heightened evidentiary burden” the Federal Circuit has layered on top of *Graver Tank*’s test. *Federal Circuit Affirms Summary Judgment of Non Infringement for Failure to Prove Structural Equivalence Under § 112(f)*, A&O Shearman IP Blog (Mar. 3, 2026), <https://tinyurl.com/376uzy2r>. And the rule harms inventors of technologies where protection for equivalents matters most; the easier a structure is to rebuild from interchangeable parts, the longer the list of “omissions” the patentee must justify. Worse, the court increasingly shunts claims that were not written in functional terms or intended as such into § 112(f)’s narrower protection. See Scott A. Hogan & James D. Stevens, Jr., *Functional Claiming in the Aftermath of Williamson*, in *IAM Innovation & Invention Yearbook* (6th ed. 2021), <https://tinyurl.com/5bx3sf6n>.

The petition should be granted.

STATEMENT OF THE CASE

I. Legal Background

A. Functional claims

1. A patent protects only what its claims describe. The claims “particularly point[] out and distinctly claim[]” the invention, 35 U.S.C. § 112(b), and thereby mark the bounds of the inventor’s property. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996) (a claim defines “the scope of the patentee’s rights”).

Most claims are combinations of elements, many or all individually old and known, which the inventor assembles into a new machine. A claim describing such an invention is a “combination claim,” and each recited element is a “limitation” the accused product must meet; there is no literal infringement unless the accused product satisfies every limitation. *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 29 (1997). In drafting each element, the inventor faces a choice. He may either name the element by its structure, “a two-penny nail,” or describe it by the function it performs, “a means of connecting Part A to Part B,” disclosing the nail in the specification. *Id.* at 27. Each style carries a risk. A structural claim invites evasion by trivial substitution; a copyist who swaps a screw for the claimed nail pilfers the invention while escaping liability. *See Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 607 (1950). A functional claim, read too broadly, grants the patentee far more than he created; “a means of connecting” would reach every type of fastener (e.g., glue, magnets, and Velcro), even though the inventor devised none of them and disclosed only a nail. *See O’Reilly v. Morse*, 56 U.S. (15 How.) 62, 112-13 (1854).

2. In *Halliburton Oil Well Cementing Co. v. Walker*, 329 U.S. 1 (1946), this Court invalidated a combination claim because it relied on “functional language at the exact point of novelty.” *Id.* at 8 (quotation marks omitted). The inventor had improved a known device for measuring oil-well depth by adding a new element: a “means ... for tuning said receiving means.” *Id.* at 8-9. Because the relevant claims described “this most crucial element in the ‘new’ combination in terms of what it will do rather than in terms of its own physical characteristics,” the Court invalidated the claims. *Id.* at 9. Read broadly, the claims would cover “any device heretofore or hereafter invented” that performed the function, “whether the device be an actual equivalent of [the patentee]’s ingredient or not.” *Id.* at 12.

Congress responded with what is now § 112(f).¹ See *Warner-Jenkinson*, 520 U.S. at 27-28. Section 112(f) restored an inventor’s ability to claim functionally: “An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.” 35 U.S.C. § 112(f). It then provides that “such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” *Ibid.* The statute thus speaks of one element, claimed by function, and prescribes what that element covers.

¹ Congress enacted the provision as the third paragraph of § 112. Act of July 19, 1952, ch. 950, 66 Stat. 792, 798-99. It was renumbered as the sixth paragraph, Act of Nov. 14, 1975, Pub. L. No. 94-131, § 7, 89 Stat. 685, 691, and later designated as § 112(f) without material change. Leahy-Smith America Invents Act, Pub. L. No. 112-29, § 4(c)(6), 125 Stat. 284, 296 (2011). This petition cites § 112(f); older decisions reference § 112, ¶ 6.

B. Equivalents under *Graver Tank*

“Equivalents” arise in two settings. The common-law doctrine traces to *Winans v. Denmead*, 56 U.S. (15 How.) 330 (1854). Under the common law, an accused device that does not meet every claim limitation infringes if it is equivalent to what the claim describes; the doctrine thus *broadens* the reach of the literal claim. In contrast, § 112(f) applies “the doctrine of equivalents in a restrictive role, *narrowing* the application of broad literal claim elements.” *Warner-Jenkinson*, 520 U.S. at 28 (emphasis added). The Court “recognized this type of role for the doctrine of equivalents in *Graver Tank* itself.” *Ibid.* (citing 339 U.S. at 608-09). In a functional claim under § 112(f), then, the “means” element *is* the claim limitation, and the structure disclosed in the specification along with its equivalents is the measure of what the means element covers. *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267-68 (Fed. Cir. 1999).

Two years before Congress enacted § 112(f), this Court gave the concept its modern formulation in *Graver Tank*. First, the Court settled what the patentee must show to establish equivalence: that the accused device “performs substantially the same function in substantially the same way to obtain the same result.” 339 U.S. at 608 (quoting *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 42 (1929)). Function, way, result. Second, the Court explained that because equivalence “is not the prisoner of a formula and is not an absolute to be considered in a vacuum,” “[p]roof can be made in any form: through testimony of experts or others versed in the technology; by documents, including texts and treatises; and, of course, by the disclosures of the prior art.” *Id.* at 609. Third, the Court instructed that a

“finding of equivalence is a determination of fact,” resolved like “any other issue of fact,” by “a balancing of credibility, persuasiveness and weight of evidence.” *Id.* at 609-10; *see Warner-Jenkinson*, 520 U.S. at 38 (noting “ample support in our prior cases” that “it was for the jury to decide whether the accused process was equivalent to the claimed process”).

The Court also identified evidence of known interchangeability—whether persons reasonably skilled in the art “would have known of the interchangeability of an ingredient not contained in the patent with one that was”—as a critical factor for the whole inquiry. *Graver Tank*, 339 U.S. at 609. Known interchangeability in the art was the basis for affirming the finding of infringement in *Graver Tank*. The claims recited alkaline earth metal silicates, and the patented composition used “silicates of calcium and magnesium, two alkaline earth metal silicates”; the accused composition “substitute[d] silicates of calcium and manganese—the latter not an alkaline earth metal.” *Id.* at 610. Because those skilled in the art knew the silicates were interchangeable to achieve the same ends, the swap still infringed. *Id.* at 610-12.

C. The Federal Circuit’s additional “why” requirement

The Federal Circuit applies the same equivalence test under both the common law and § 112(f). *See Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1364 (Fed. Cir. 2000).² It developed the test in the

² For § 112(f) claims, the Federal Circuit requires that the functions of the patented and accused structures be identical rather than substantially the same. *Odetics*, 185 F.3d at 1267. That difference is not at issue.

common-law setting, and it is there that the court added the disputed requirement.

In 1989, the Federal Circuit layered an additional evidentiary requirement on top of *Graver Tank's*, holding that patentees claiming infringement under the common-law doctrine must present evidence of function-way-result “in the form of particularized testimony and linking argument.” *Lear Siegler, Inc. v. Sealy Mattress Co. of Mich., Inc.*, 873 F.2d 1422, 1426 (Fed. Cir. 1989) (reversing jury verdict). In 1991, the court clarified that this required form of proof must establish “*why* those functions, ways, and results are substantially the same.” *Malta v. Schulmerich Carillons, Inc.*, 952 F.2d 1320, 1327 n.5 (Fed. Cir. 1991). Judge Newman dissented over this “new requirement of proof of equivalency: proof of not only the three *Graver Tank* ‘prongs’ of ‘function, way, and result’, but also a fourth prong of ‘why’,” required “no matter how simple the invention,” without which “the case can not go to the jury at all.” *Id.* at 1334.

The Federal Circuit applies this fourth “why” prong as a screen the court resolves for itself. In *VLSI Technology LLC v. Intel Corp.*, 87 F.4th 1332 (Fed. Cir. 2023), the court reversed a \$675 million verdict because the expert’s testimony “contain[ed] no meaningful explanation of why the way” was “substantially the same.” *Id.* at 1344. In *NexStep, Inc. v. Comcast Cable Communications, LLC*, 119 F.4th 1355 (Fed. Cir. 2024), the court affirmed the erasure of another verdict, holding that “particularized testimony and linking argument is always required,” “regardless of the complexity or the simplicity of the underlying technology.” *Id.* at 1379. Like Judge Newman a generation earlier, Judge Reyna dissented in relevant part, describing this requirement as a “new rule that in all cases a patentee must present

expert opinion testimony,” “contrary to existing precedent,” under which expert testimony is only “an ‘example’” of the proof that may establish equivalence. *Id.* at 1381, 1384-85 (quoting *AquaTex Indus., Inc. v. Techniche Sols.*, 479 F.3d 1320, 1329 (Fed. Cir. 2007), itself quoting *Graver Tank*).

In the statutory setting, meanwhile, the Federal Circuit confronted and rejected the premise of the Question Presented. “The individual components, if any, of an overall structure that corresponds to the claimed function are not claim limitations,” the court held. *Odetics*, 185 F.3d at 1268. Instead, “[t]he appropriate degree of specificity is provided by the statute itself.” *Ibid.* Under the statute’s text, “the claim limitation is the overall structure corresponding to the claimed function,” such that “structures with different numbers of parts may still be equivalent under § 112, ¶ 6.” *Ibid.* “Further deconstruction or parsing,” the court recognized, “is incorrect.” *Ibid.*

Despite *Odetics*, the Federal Circuit has since applied the “why” requirement to § 112(f) claims as well, where it takes the form of a rule that the patentee account for every component of the corresponding structure—first to a claim whose corresponding structure was an algorithm, *Traxcell Techs., LLC v. Sprint Commc’ns Co.*, 15 F.4th 1121, 1129 (Fed. Cir. 2021), and then, in the decision below, to a logic design, *infra* pp.16-17.

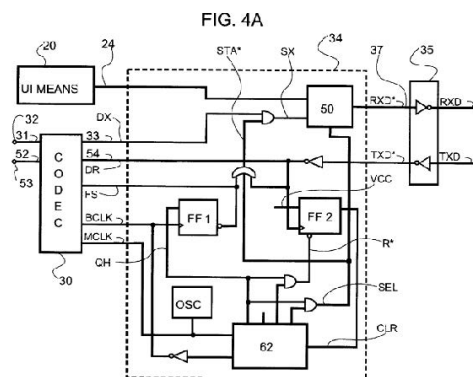
II. Factual And Procedural Background

A. The ’730 Patent

Petitioner Genuine Enabling Technology LLC owns U.S. Patent No. 6,219,730 (the ’730 Patent), which discloses inventor Nghi Nho Nguyen’s solution to a problem of 1990s computing: too many input

devices competing for too few computer resources. Every device that fed data into a computer (a keyboard, a mouse, a microphone) needed its own dedicated connection and share of the computer's limited resources. Pet. App. 3a, 106a-107a. In 1998, Mr. Nguyen disclosed a device that would do two jobs over a single connection: a computer mouse that was also a microphone, sending the user's clicks and movements as well as his voice to the computer on a single link, using just one computer resource. *See id.* 19a-20a, 107a; C.A. App'x 161, 172. But each data stream has its own rhythm, asynchronous to the other—the mouse's slow-varying clicks and movements, the microphone's fast, continuous flow of audio-or-higher-frequency data—so the two would “collide” and become unreadable if merely sent down one wire. Pet. App. 116a-117a; C.A. App'x 281-82. Mr. Nguyen's solution was a structure the patent calls a “framer,” which synchronizes the two data streams onto a single shared rhythm—matching both to one clock, like two wristwatches set to the same wall clock—and encodes them into a combined data stream the computer receives uncorrupted. Pet. App. 4a-5a.

Figure 4A illustrates one embodiment of the framer (block 34, within the dashed line below):



Pet. App. 4a-5a, 62a (depicting an oscillator (labeled OSC) producing the circuit’s raw electrical heartbeat; a clock generator (62) producing a usable heartbeat (a “bit-rate clock”); a data selector (50) sampling the two data streams on that beat and merging them; flip-flops (FF1, FF2) and logic gates; and the connections that wire the components together).

The specification describes block 34 as “[o]ne logic implementation of the framer, as depicted in FIG. 4A.” C.A. App’x 173. The whole structure is a logic design; so are its named parts. The data selector and clock generator are labeled boxes that “represent a number of potential logic designs,” to be specified later depending on the protocol the framer is linked to. *Id.* 1857, 1862. And the bit-rate clock, BCLK, is just a signal produced by the clock generator; it is not a part at all. *Id.* 173.

B. Proceedings below

Petitioner sued Sony in the District of Delaware and Nintendo in the Western District of Washington, alleging that each company’s gaming consoles and wireless controllers infringe the ’730 Patent.³

1. District court rulings

Petitioner asserted eight claims. Two describe the relevant element as a “means” for synchronizing and encoding two data streams; the others call it a “framer.” The district court construed all eight by their function as “synchronizing the user input stream with

³ The Nintendo action produced a prior claim-construction appeal, in which the Federal Circuit reversed summary judgment of noninfringement. *Genuine Enabling Tech. LLC v. Nintendo Co.*, 29 F.4th 1365, 1368 (Fed. Cir. 2022). That case is stayed on remand pending disposition of this petition. Minute Order, No. C19-0351 TSZ (W.D. Wash. May 19, 2026).

the input stream and encoding the user input stream and the input stream into a combined data stream,” identifying the corresponding structure as “[t]he logic design at block 34 in Figure 4A and equivalents thereof.” Pet. App. 137a-138a, 157a.

Sony’s controllers send two kinds of data to the console over one Bluetooth link: (1) the user’s button presses and (2) motion data from an accelerometer⁴ (and, in Sony’s DualShock 4 controller, microphone audio as well). C.A. App’x 1871, 1882, 3227. The claims are directed to that combination. Claim 1, for example, requires a user input means that produces the button data as a “user input stream”; an input means that produces a second signal, construed as “[a] signal having an audio or higher frequency”; a converting means that turns that signal into an “input stream”; and an encoding means that synchronizes the two streams and encodes them into one. *Id.* 174; Pet. App. 120a. Only the encoding means is at issue.

Petitioner’s structural-equivalence case was built on the analysis of its expert Dr. Kenneth Fernald, whose report proceeded in the sequence *Graver Tank* contemplates. C.A. App’x 1585-1635. He first laid the foundation, citing standard texts and a working computer that long predate the patent, explaining that logic designs performing the same operation are interchangeable (that the same operation can be rebuilt from different components, differently arranged), which is why skilled artisans in digital electronics compare logic by operation, not by inventorying parts. *Id.* 1586-89 & nn.7-13. He traced the streams’ signal paths through block 34 to identify the components performing that function. Pet. App.

⁴ The accelerometer in Sony’s game controllers detects when the player tilts, swings, or shakes the controller.

72a. He then identified the “way” the framer functions: The logic of block 34 synchronizes the two streams “by sampling both streams using a common bit-rate clock,” so that each stream, captured on the same rhythm, emerges synchronized to the clock and therefore to the other. C.A. App’x 1604-05 & n.39; *id.* 1860. It then encodes them into one stream by storing each in a predetermined location of the outgoing frame. *Id.* 173, 1605; *see id.* 1896.

He then examined Sony’s controllers with a Bluetooth protocol analyzer, capturing their packet transmissions to confirm which packet types their modules use. C.A. App’x 1593 & n.27.⁵ Sony’s packet types require two bitstream processes that operate by shifting the data serially through shift registers. *Id.* 1606-07, 1871. “For either process to operate properly,” he explained, the incoming data “must be synchronized to the same bit clock used for shifting these shift registers”—in Sony’s controllers, “the button data and the accelerometer data.” *Id.* 1608, 1871. Because those are the two kinds of data streams the claims describe, he concluded that Sony’s devices synchronize them to a bit-rate clock the same way block 34 does. *Id.* 1810; *see* Pet. App. 40a-41a. As to encoding, Sony’s controllers likewise store the two streams “in predetermined locations, just like block 34 does.” C.A. App’x 1897; *see id.* 1596-97.

Exclusion. Sony moved to exclude Dr. Fernald’s testimony under Federal Rule of Evidence 702 and

⁵ Because a § 112(f) equivalent must have existed when the patent issued, *Al-Site Corp. v. VSI Int’l, Inc.*, 174 F.3d 1308, 1320 (Fed. Cir. 1999), Dr. Fernald also showed that the Bluetooth structures he identified existed in specifications and products available by the April 2001 issuance date, C.A. App’x 1593, 1615-16, a point Sony does not dispute.

Daubert. The court granted the motion only as to his ultimate opinion of structural equivalence and solely because his explanation did not expressly account for specific components of block 34. Pet. App. 70a-72a.

Because Sony's challenge and the court's rulings focused on the synchronizing aspect of the framer, the proceedings that followed did too. Pet. App. 61a-62a; *see id.* 4a n.3. Sony did not challenge, and the court did not question, Dr. Fernald's method of proof. *Id.* 71a ("Sony does not argue that it is necessarily improper for an expert working without schematics to reason backward from a specification to determine what steps must have been performed to meet the specification."). The court did not exclude his descriptions of block 34 and of Bluetooth technology or his inferences about the accused modules. *Id.* 72a. But the court held that Dr. Fernald's analysis "omits several details: the data selector, the CODEC, the process of sampling, and the use of a common bit-rate clock to drive two operations," and "there is no assertion, or even discussion, that the data selector, CODEC, and sampling operation are sufficiently insubstantial that they may be omitted from the 'way.'" *Id.* 70a-71a.

Yet the same order denied Sony's separate objection that Dr. Fernald failed "to Analyze Every Component" of the corresponding structure. Pet. App. 72a. Citing *Odetics*, the court held that a component-by-component analysis is not required, and that Dr. Fernald "justifie[d] his selection of relevant components by tracing the signal paths." *Ibid.* Any omissions "might be impeached at trial for omitting 'critical factors,'" but "admissibility does not require an expert to consider 'every possible factor.'" *Ibid.* Which components matter and whether Dr. Fernald had chosen the right ones were for the factfinder, according to the court. *Id.* 72a-73a. The order thus

held that the selection of components was admissible and a matter for cross-examination, but excluded the conclusion formed on that selection because the omitted components had not been accounted for.

Reargument. Petitioner moved for reargument, but the district court adhered to its ruling, holding that the interchangeability of logic circuits is legally irrelevant to the “way” the framer and Sony’s Bluetooth modules function. Pet. App. 52a-53a.

In its *Daubert* opinion, the court had “focused its discussion on the ‘synchronizing aspect’ of the claimed function because it ‘best illustrates Sony’s objection,’” C.A. App’x 1805 (quoting Pet. App. 61a-62a), and had read Dr. Fernald’s report as requiring “two specific components ... a CODEC and a data selector,” *id.* 1809 (citing Pet. App. 69a). His supplemental declaration and testimony responded to that analysis. He explained that from the start, the report had defined the way the competing structures function as “sampling both streams using a common bit-rate clock,” C.A. App’x 1808; that the CODEC (which sits *outside* block 34) and data selector are the two components that play roles in the synchronization and perform that sampling, *id.* 1605 & n.39, 1806, 1813 n.6; and that “[i]f this means that the accused products must have a ‘CODEC’ and a ‘data selector,’ that is different from my definition of the ‘way’ prong,” *id.* 1809. Asked whether his opinion implied that all ways of synchronizing are equivalent, Dr. Fernald answered: “No, of course not.” *Id.* 1889. Streams synchronized “directly to each other,” he explained—like one wristwatch set to another, rather than both to a wall clock—would be a different means to the same ends, one he would not “consider ... equivalent.” *Ibid.*

The court did not dispute Dr. Fernald's testimony that "[o]nce you identify *a specific way* that something is being accomplished, ... the various logic designs that could implement *that specific way* are considered equivalent." Pet. App. 52a. But it held that "interchangeability 'goes to the function or result of these systems, and begs the issue of the way in which' they 'actually work.'" *Ibid.* (quoting *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1324 (Fed. Cir. 2004)).

Summary judgment. Sony then moved for summary judgment of noninfringement, arguing "that proving the shared feature of a bit-rate clock is insufficient as a matter of law." Pet. App. 29a. The court granted the motion on "the same principles that warranted the partial exclusion," *id.* 30a, declining to reach Sony's alternative grounds, *id.* 33a n.2.

In so doing, the court credited that block 34 and Sony's accused Bluetooth modules "synchronize data streams to a common bit-rate clock as opposed to by some other method, such as synchronizing the data streams directly to each other without a clock." Pet. App. 29a. The court also determined that "Sony does not dispute the factual accuracy of this assertion," that the *Daubert* ruling "did not preclude Dr. Fernald from offering this testimony," and that Sony did not contest that matching a bit-rate clock is not the only way to synchronize signals. *Ibid.*

2. Panel decision

The panel affirmed in a published opinion, holding that the "district court faulted GET, like we do today, for its lack of explanation regarding its omissions," Pet. App. 14a, that is, for failing to "account for many of the elements in block 34," *id.* 2a. And because the "same principles" that led to the exclusion also "compel[led]" summary judgment, the

panel held it “need not separately address” the district court’s *Daubert* ruling. *Id.* 17a n.6 (quoting *id.* 30a).

The panel acknowledged its precedent that structural equivalence “does not require a component-by-component analysis.” Pet. App. 10a (citing *Odetics*, 185 F.3d at 1267-68). Yet it held that “the patentee must still account for each element of the claimed structure in its equivalence analysis,” *id.* 14a, and “has an obligation to meaningfully explain why it is permissible to discard the other elements,” *id.* 15a.

Applying that rule, the panel held that “Dr. Fernald offer[ed] no meaningful explanation of why the bit-rate clock is the only part of logic block 34 that matters,” and without further explanation of why, at least, the data selector and CODEC “may be ignored,” the analysis was incomplete. Pet. App. 12a-13a. The panel faulted petitioner for not showing, for example, that the other components are “devoted to only the encoding function and therefore may be ignored for the purposes of synchronization.” *Id.* 12a. And the panel remarked that whether based on Dr. Fernald’s description of the way in his report, hearing testimony, or supplemental declaration, his analysis failed for the same reason: not accounting for each of the components not named. *See id.* 2a, 11a-15a.

3. *Rehearing order*

Petitioner sought panel rehearing and rehearing en banc, arguing that the decision “is contrary to” *Odetics*, among others. *See* C.A. Doc. 56, at 1-3 (Mar. 23, 2026).

The court denied the petition on April 23, 2026. Pet. App. 162a.

This petition follows.

REASONS FOR GRANTING THE WRIT

I. The Decision Below Is Wrong.

A. The panel's account-for-every-component rule violates § 112(f).

Section 112(f) provides that “[a]n element in a claim for a combination ... expressed as a means or step for performing a specified function ... shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” 35 U.S.C. § 112(f). There is one “element” here: the means clause, the framer. That single element is the claim limitation, *Warner-Jenkinson*, 520 U.S. at 29, and what it covers is the “corresponding structure” that performs its function—the overall structure, not each of its component parts. To read “equivalents thereof” as “equivalents of every component thereof” transforms the one element Congress allowed an inventor to express by function into a series of structural “elements” he must prove one by one. That is what § 112(f) says he need not do.

Odetics read the text faithfully. “The appropriate degree of specificity is provided by the statute itself; the relevant structure is that which ‘corresponds’ to the claimed function.” *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1268 (Fed. Cir. 1999). Because “[t]he individual components, if any, of an overall structure that corresponds to the claimed function are not claim limitations,” “the claim limitation is the overall structure corresponding to the claimed function,” and “structures with different numbers of parts may still be equivalent under § 112, ¶ 6.” *Ibid.* “Further deconstruction or parsing is incorrect.” *Ibid.*

Thus, in *Caterpillar Inc. v. Deere & Co.*, 224 F.3d 1374 (Fed. Cir. 2000), the Federal Circuit vacated a

district court's decision granting summary judgment of noninfringement because three named parts of the disclosed structure were not in the accused infringer's device. *Id.* at 1380. The court of appeals held that the district court had performed "an impermissible component-by-component analysis," because "the claim limitation is the overall structure corresponding to the claimed function." *Ibid.* (quoting *Odetics*, 185 F.3d at 1268).

The panel nonetheless held that a patentee "must still account for each element of the claimed structure." Pet. App. 14a. But the claimed structure has no "elements." The element is the framer. The structure is a logic design, and its named boxes are logic designs too, each standing for any of countless implementations. *Supra* p.11. Even the bit-rate clock, which the panel treated as one part of block 34 among the others, Pet. App. 12a-13a, is not a part but a signal the clock generator produces. C.A. App'x 173. By calling the contents of block 34 "elements" and requiring petitioner to account for "all the elements of that identified structure," Pet. App. 15a, the panel faulted petitioner for failing to litigate each as a claim limitation of its own.

B. The panel discarded the showing *Graver Tank* prescribes.

The panel's rule also discards the three things *Graver Tank* settled: the showing that establishes equivalence, the choice of proof and allocation of the question to the factfinder, and the critical interchangeability factor.

First, when Congress employs a term of art, it "brings the old soil with it." *Sekhar v. United States*, 570 U.S. 729, 733 (2013) (quoting Felix Frankfurter, *Some Reflections on the Reading of Statutes*, 47

Colum. L. Rev. 527, 537 (1947)). The soil beneath “equivalents thereof” is *Graver Tank*’s function-way-result test, announced just two years before Congress enacted § 112(f). Congress “could easily have responded to *Graver Tank* as it did to the *Halliburton* decision” when it enacted the provision, but “did not.” *Warner-Jenkinson*, 520 U.S. at 28.

Second, the panel’s decision abolishes *Graver Tank*’s allocation of the question to the factfinder. *Graver Tank* held that equivalence “is a determination of fact,” resolved by “a balancing of credibility, persuasiveness and weight of evidence,” and that “[p]roof can be made in any form.” 339 U.S. at 609-10; see *id.* at 611 (declining to “essay an independent evaluation of this evidence”); see also *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 255 (1986) (“Credibility determinations, the weighing of the evidence, and the drawing of legitimate inferences from the facts are jury functions, not those of a judge ...”). Whether the components Dr. Fernald selected were the ones that matter, the district court thus held, was a question for the factfinder to resolve under *Odetics*. Pet. App. 72a-73a. But the panel’s rule assigns that function to the court and prescribes the form the proof must take—an expert’s component-by-component explanation. *Id.* 14a. It makes equivalence the “prisoner of a formula” *Graver Tank* held it is not. See 339 U.S. at 609.

Third, the courts below read *Graver Tank*’s “important factor” of “interchangeability” out of the test. “An important factor” deciding equivalence is “whether persons reasonably skilled in the art would have known of the interchangeability of an ingredient not contained in the patent with one that was.” 339 U.S. at 609. This Court later confirmed that known interchangeability “is one of the express objective

factors noted by *Graver Tank* as bearing upon whether the accused device is substantially the same as the patented invention.” *Warner-Jenkinson*, 520 U.S. at 36. Substantial sameness *is* equivalence. The district court accepted Dr. Fernald’s undisputed testimony that, in digital logic, “the various logic designs that could implement *that specific way* are considered equivalent,” yet it held that showing insufficient under “the function-way-result test, as interchangeability ‘goes to the function or result of these systems, and begs the issue of the way.” Pet. App. 52a (quoting *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1324 (Fed. Cir. 2004)). The panel agreed, describing interchangeability as a “suggestion” that “collapses the function-way-result test into a function-result test.” *Id.* 16a-17a.

The error is not confined to this case. The Federal Circuit has long read interchangeability more narrowly than *Graver Tank*. Just seven years after *Warner-Jenkinson* explained that interchangeability evidence is key to determining whether two devices are “substantially the same,” 520 U.S. at 36, the Federal Circuit, in another § 112(f) case, dismissed the patentee’s expert evidence that structures were interchangeable on the ground that the evidence went to the “function or result of these systems, and begs the issue of the way in which [the competing] systems actually work.” *Toro Co.*, 355 F.3d at 1324 (rejecting expert evidence that “cams and solenoids can be used interchangeably”). The Federal Circuit thus deems inadequate the very evidence this Court treats as highly probative of substantial sameness.

But changes of that order are not for the court of appeals to make. *See Warner-Jenkinson*, 520 U.S. at 28 (only “Congress can legislate the doctrine of equivalents out of existence any time it chooses”). The

panel has again “ignored the guidance of *Warner-Jenkinson*, which instructed that courts must be cautious before adopting changes that disrupt the settled expectations of the inventing community.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 739 (2002) (“The responsibility for changing them rests with Congress.”).

II. The Question Presented Is Important And Frequently Recurs.

For a means claim under § 112(f), “equivalents thereof” is the only protection besides the precise corresponding structure. With no equivalents, the inventor who claims a “means of connecting” and discloses a nail is limited to the nail. The bar thus read the decision below as confirming the Federal Circuit’s “why” requirement in its most demanding form.⁶

The consequence is perverse and worst where equivalents matter most. Recall the rival who swaps a screw for the disclosed nail. With a fastener, he has a

⁶ See Michael Stojavljevic, *The Precedent: Federal Circuit Tightens Structural Equivalence Showing for Means-Plus-Function Claims in Genuine Enabling Tech. LLC v. Sony Group Corp.*, Vorys (Apr. 2, 2026) (patentees “should either map all claim-relevant elements of [the disclosed] structure to the accused device or clearly explain why some elements are insubstantial”), <https://tinyurl.com/yc4db6em>; Lisette Donewald, *Did You Account for the Entire Corresponding Disclosed Structure?*, McDermott Will & Schulte IP Update (Mar. 5, 2026) (decision “clarified” that expert’s analysis “must consider all components of the identified structure or justify any omissions”), <https://tinyurl.com/359mpnt4>; *Federal Circuit Affirms Summary Judgment of Non Infringement for Failure to Prove Structural Equivalence Under § 112(f)*, A&O Shearman IP Blog (Mar. 3, 2026) (disclosed structure must be addressed “in its entirety” or omissions “meaningfully explain[ed]”; selective focus “will not suffice”), <https://tinyurl.com/376uzy2r>.

handful of substitutes, and the inventor can protect his invention by disclosing each. With a logic design, the rival has a myriad. For example, the logic design of block 34 names a data selector, clock generator, and flip-flops. C.A. App'x 1857. A competitor needs no ingenuity. He chooses any of the countless interchangeable implementations in lieu of those components; his device does what block 34 does, the way block 34 does it; and his parts list matches nothing in Figure 4A. Dr. Fernald testified that “if an exact gate-by-gate and connection-by-connection match between two logic designs were required, there would be no meaning to the suffix of the Court’s construction reading ‘and equivalents thereof.’” *Id.* 1589. Under the panel’s rule, every mismatch becomes an “omitted” component the patentee must inventory and separately justify—one functional claim element turned into a list of further limitations. The easier it is to trivially substitute component parts, as in logic design, the longer the list of “omissions” and therefore the heavier the patentee’s burden. The Federal Circuit’s rule thus rewards the cosmetic substitution “equivalents thereof” was enacted to defeat.

And because the screen is administered as a matter of law, jury verdicts finding equivalence do not survive it. In just the last few years, the Federal Circuit has set aside several. In *VLSI*, a jury heard six days of evidence, found that Intel’s accused microprocessors infringed a patent under the doctrine of equivalents, and awarded \$675 million to the patentee; the district court denied Intel’s post-trial motions. *VLSI Tech. LLC v. Intel Corp.*, 87 F.4th 1332, 1336, 1339 (Fed. Cir. 2023). The Federal Circuit reversed the jury’s finding, holding that the expert’s testimony was insufficiently particularized under the court’s “why” requirement such that the patentee’s

“doctrine of equivalents theory fail[ed] as a matter of law.” *Id.* at 1345. Less than a year later, the Federal Circuit affirmed a judgment setting aside another jury verdict of infringement under the doctrine of equivalents because, whatever else the patentee had proved, it had not supplied the “why” in the form the court of appeals demands. *NexStep, Inc. v. Comcast Cable Commc’ns, LLC*, 119 F.4th 1355, 1361-62, 1381 (Fed. Cir. 2024). And just last November, a jury found infringement, the district court denied judgment as a matter of law, and the Federal Circuit reversed, holding that no reasonable jury could have found equivalence. *Smartrend Mfg. Grp. (SMG), Inc. v. Opti-Luxx Inc.*, 159 F.4th 1322, 1325, 1334 (Fed. Cir. 2025).⁷

The empirical scholarship confirms the demise of protection against equivalent copies and explains how we got here. Professors Allison and Lemley found that by the late 1990s, patentee assertions under the doctrine of equivalents almost never prevailed in litigated decisions or on appeal. John R. Allison & Mark A. Lemley, *The (Unnoticed) Demise of the Doctrine of Equivalents*, 59 Stan. L. Rev. 955, 966-67, 976-77 (2007). They attributed the “demise” to matter-of-law dispositions in the *Markman* era: A judge who has construed the claims and found no literal infringement is “doubly inclined to hold for the accused infringer” on equivalents as the only way to dispose of the entire case. *Id.* at 977. Professor Schwartz reached the same conclusion, finding that the Federal Circuit has shifted adjudicatory control

⁷ As one commentator observed, the court in *Smartrend* “largely transform[ed]” a question of fact, the function performed, “into a claim construction exercise”—“another tool for avoiding the jury.” Dennis Crouch, *Smartrend and the Stretching of Markman: When Specification Parsing Becomes a Question of Law*, Patently-O (Nov. 19, 2025), <https://tinyurl.com/4w59r8dp>.

over patent scope from juries to judges through “doctrinal reallocation,” and then “used its institutional power to weaken the doctrine of equivalents.” David L. Schwartz, *Explaining the Demise of the Doctrine of Equivalents*, 26 Berkeley Tech. L.J. 1157, 1210 (2011). Equivalence had been a standard jury issue under *Graver Tank* and its progeny; by diminishing it, judges could resolve more cases by summary judgment. *Id.* at 1201; *see also id.* at 1206-07 (finding that equivalents fell from roughly a third of the discussion in Federal Circuit opinions before *Markman* to between 12% and 25% after, while claim construction roughly doubled).

And since 2015, even claims written without “means” terms are routinely reclassified as functional after the fact. In *Williamson v. Citrix Online, LLC*, 792 F.3d 1339 (Fed. Cir. 2015), the en banc Federal Circuit abolished the “strong” presumption that a claim limitation lacking the word “means” is not subject to § 112(f). *Id.* at 1349. One survey found the shift sweeping in every claim-writing style—“compliance mechanism,” “symbol generator,” “cheque standby unit,” “mechanical control assembly,” even “control circuit.” Scott A. Hogan & James D. Stevens, Jr., *Functional Claiming in the Aftermath of Williamson*, in IAM Innovation & Invention Yearbook (6th ed. 2021), <https://tinyurl.com/5bx3sf6n>. Six of the eight claims here were reclassified that way at Sony’s urging. Pet. App. 130a, 134a, 154a. For those patentees the decision below takes away, through a rule of proof, the one thing Congress gave in exchange for confining the claim to the drawing.

The Federal Circuit justifies its fourth “why” prong as necessary to keep the “exceptional” common-law application of the doctrine “properly limited” for the sake of public notice. *VLSI*, 87 F.4th at 1342-43.

This Court also recognizes that the doctrine, extended beyond literal infringement of structural claims, may become “unbounded.” *Warner-Jenkinson*, 520 U.S. at 28. But whatever force that policy rationale has for extending protection beyond the literal claim, it has none here. Equivalents for functional claims under § 112(f) define the literal scope of a claim Congress has already confined to the disclosed structure. That is why a § 112(f) equivalent “cannot embrace technology developed after the issuance of the patent because the literal meaning of a claim is fixed upon its issuance.” *Al-Site*, 174 F.3d at 1320; *see supra* p.13 n.5. The district court thus recognized that fair-notice “policy concerns ... do not apply to a literal infringement case” under § 112(f) “such as this one.” Pet. App. 31a. There is no expansion beyond the claim for a notice-based screen to police.

And the courts that must apply the Federal Circuit’s screening requirement struggle to do so. The district judge asked for “any precedent ... which would give me some guidance as to how much [detail] is enough,” D. Ct. Dkt. 315 at 81:8-10, observed that “honestly we’re not able to find a lot of clear guidance on this,” *id.* 84:3-4, and confessed, “I do find this analysis challenging,” *id.* 91:8. No wonder, then, that in the same *Daubert* order, the court held under *Odetics* that no component-by-component analysis is required, that Dr. Fernald had justified his selection of components, and that which components matter was for the factfinder, Pet. App. 72a-73a, yet excluded his conclusion because he had not accounted for the components he left out, *id.* 70a-71a.

III. Only This Court Can Correct The Federal Circuit's Entrenched Error.

The panel's account-for-every-component rule is not new. It fuses two strands of Federal Circuit doctrine, each entrenched over dissent: (1) the fourth "why" prong the court grafted onto *Graver Tank* in the common-law setting, and (2) the component parsing *Odetics* rejected. The first strand is traced above. See *supra* pp.8-9. The court adopted it in *Lear Siegler*; affirmed it in *Malta* over Judge Newman's objection that a fourth prong of proof would keep equivalence cases from the jury, *Malta v. Schulmerich Carillons, Inc.*, 952 F.2d 1320, 1334 (Fed. Cir. 1991) (Newman, J., dissenting); and reaffirmed it in *NexStep* over Judge Reyna's objection that it was a new rule of proof contrary to precedent, 119 F.4th at 1381, 1384-85 (Reyna, J., concurring in part and dissenting in part).

In 2021, the Federal Circuit carried these requirements into the statute. In *Traxcell*, the corresponding structure was a "very detailed" algorithm whose "numerous steps" were "necessary for its function"; the expert skipped at least nine of them, "eliding the way" the structure achieved its result, and the court affirmed summary judgment. *Traxcell Techs., LLC v. Sprint Commc'ns Co.*, 15 F.4th 1121, 1128-29 (Fed. Cir. 2021). That was an accounting rule: The patentee had to address the algorithm's steps rather than its overall structure. The outcome was defensible even if the rule was not, because in an algorithm the steps are the way the overall structure achieves its result. To account for the steps was to account for the way. See *id.* at 1129.

The decision below took the rule further. It found block 34 "a similarly detailed circuit ... containing various signal paths and elements analogous to the

algorithm in *Traxcell*,” Pet. App. 12a-13a, and required an account of those “elements” as *Traxcell* had required an account of the algorithm’s steps. But the parts drawn in one implementation of a logic design are *not* the way the overall structure achieves its result; on the undisputed evidence, a skilled artisan could rearrange or replace them without changing the way the logic design’s structure functions. C.A. App’x 1586-89. Accounting for the steps in *Traxcell* was accounting for the overall structure’s way; accounting for the parts here is accounting for one drawing of it. Carrying *Traxcell*’s rule from a structure whose parts define the overall way to one whose parts do not makes each part an element of its own. Like the district court, the panel acknowledged *Odetics*’s holding that § 112(f) equivalence does not require a component-by-component analysis, Pet. App. 10a, then demanded precisely that accounting, *id.* 12a-15a.

Yet the Federal Circuit will not revisit its rule. Judge Lourie dissented in *Odetics* on the ground that equivalence cannot be assessed “without looking at what components the structures consist of, i.e., by deconstructing or dissecting the structures” themselves. 185 F.3d at 1277. The court denied rehearing en banc. Nos. 98-1533, 98-1585 (Fed. Cir. Aug. 27, 1999) (order). Judge Lourie dissented again in *Caterpillar*, 224 F.3d at 1381, and the court again denied rehearing en banc, No. 99-1593 (Fed. Cir. Oct. 23, 2000) (order). The patentee in *NexStep* sought en banc review of the “why” requirement, invoking Judge Reyna’s partial dissent; the court denied it. No. 22-1815 (Fed. Cir. Jan. 2, 2025) (order).⁸ The rehearing

⁸ This Court denied the petition for certiorari in *NexStep*, 145 S. Ct. 2794 (2025) (mem.), which presented the question whether “particularized testimony and linking argument” is

petition here presented the conflict with *Odetics* to the full court, C.A. Doc. 56, at 1-3; en banc review was denied, Pet. App. 162a. This Court should intervene.

IV. This Case Is An Ideal Vehicle.

If this Court answers “no” to the Question Presented, the judgment cannot stand.

The district court granted summary judgment expressly on “the same principles that warranted the partial exclusion of Dr. Fernald’s equivalency analysis,” reaching no alternative ground. Pet. App. 30a; see *Cutter v. Wilkinson*, 544 U.S. 709, 718 n.7 (2005) (alternative grounds pressed but not reached below are no obstacle to certiorari review). The panel confirmed the same as the sole basis of its decision. Pet. App. 15a (“[W]e base our decision on [petitioner]’s incomplete analysis of the identified structure in the ’730 patent”). The panel then declared the evidentiary exclusion and the judgment inseparable, disclaiming any need to address the *Daubert* ruling. *Id.* 17a n.6. Accordingly, there is no independent *Daubert* holding to defend at either level.

In any event, *Daubert* focuses on “principles and methodology, not on the conclusions.” *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 595 (1993); Fed. R. Evid. 704(a). The conclusion, equivalence, is for the factfinder. *Graver Tank*, 339 U.S. at 609-10. A

required in every case under the common-law doctrine, Pet. for Writ of Cert., *NexStep*, 145 S. Ct. 2794 (No. 24-1137). This petition presents the statutory question *NexStep* could not. While the judge-made doctrine extends protection beyond a claim’s literal elements, § 112(f) defines what a single element literally covers. The question here is whether the common-law requirement can be imposed on § 112(f), so that every part of the structure corresponding to a functional element becomes an element in its own right.

ruling that admits the method and excises only the conclusion is not a judgment about reliability; it is the account-for-every-component rule at work.

Under the correct test, the showing petitioner made is the showing *Graver Tank* found sufficient. There, the Court took the compositions as wholes—“identical in operation” and result—and asked only whether the one substitution was “a change of such substance” that it defeats equivalence. 339 U.S. at 610. The answer came from expert testimony that one silicate could stand in for another, corroborated by “recognized texts” and, “[p]articularly important,” by “the disclosures of the prior art.” *Id.* at 610-11. Petitioner’s showing took the same form. First, Dr. Fernald laid the foundation, grounded in standard texts published a decade or more before the patent and a working computer built entirely from a single gate type. C.A. App’x 1586 n.7, 1588 nn.11-12. Based on this evidence and his expertise, he testified that, to skilled artisans, logic circuits performing the same operation are interchangeable—the same operation can be rebuilt from different components, differently arranged, in myriad implementations. Pet. App. 52a; *see id.* 66a; C.A. App’x 1586-89, 1884. Two circuits can “implement the exact same computer instructions” and behave identically, he explained, “yet ... not share a single gate type in common.” C.A. App’x 1587-88. That is why comparing logic part by part “is just not the way that someone thinks in this industry,” which instead compares logic designs by their operation. *Id.* 1884; *see id.* 1883-89, 1903. Sony offered no contrary evidence, and the district court left his “opinions about how equivalence is viewed in the art” undisturbed. Pet. App. 54a n.9; *see also id.* 71a.

Second, Dr. Fernald explained how the disclosed and accused structures operate in the same way. Sony

did not dispute that logic block 34 and the accused Bluetooth modules synchronize data streams to a bit-rate clock, *see* Pet. App. 29a, and Dr. Fernald showed that both then encode the streams into one by storing each at predetermined locations in the outgoing frame. *Supra* p.13. In every accused controller, the microcontroller “proceeds to pack values from the user input streams and values from the input streams into predetermined locations in a block of memory” for the Bluetooth module to encode and transmit, C.A. App’x 1596; *see id.* 1605, 1896-98. It should not have mattered that he did not provide component-by-component proof that any particular part of block 34 “should be treated as having little to no weight,” Pet. App. 15a, because the components “are not claim limitations,” and “deconstruction or parsing is incorrect,” *Odetics*, 185 F.3d at 1268.

Petitioner also met the inquiry’s limits. The district court found that Dr. Fernald “justifie[d] his selection of relevant components by tracing the signal paths,” Pet. App. 72a, the function-performing core. The panel did not disturb that finding. And he did not sweep in the error-checking and whitening logic of Sony’s Bluetooth modules (evidence of clock-synchronization, not claimed structure). C.A. App’x 1608 n.46. He even accounted for the CODEC, which sits *outside* block 34 in Figure 4A and is not part of the construed structure. Pet. App. 6a-7a n.4; C.A. App’x 1813 n.6.

The panel’s other observations were expressly not the grounds for affirmance, Pet. App. 15a-16a, and none could supply one.

First, the panel commented that petitioner’s theory is “very broad.” Pet. App. 16a. But petitioner’s patent claim is limited to devices that synchronize and

encode two specific kinds of data streams into a combined stream—(1) a user input stream and (2) an audio-or-higher-frequency input stream. *Id.* 120a; C.A. App’x 174. Moreover, synchronizing to a bit-rate clock is just one way. The district court credited, and Sony did not dispute, that streams synchronized directly to each other, for example, would be a different way. Pet. App. 29a; C.A. App’x 1889, 1894. What Dr. Fernald called infinite was the number of logic designs that implement “that specific way,” C.A. App’x 1884, not the number of ways.

Second, the panel cast petitioner’s argument as “because both structures synchronize streams to a bit-rate clock, and all logic designs performing this operation are structurally equivalent, the structure in the Accused Products, whatever they may be, must be equivalent.” Pet. App. 16a. But each step of that argument rested on the evidence described above: the undisputed common clock, the unrebutted testimony that logic designs performing the same operation are interchangeable, and the evidence of what Sony’s modules receive and transmit. *Supra* pp.13, 30-31. Whether that evidence establishes equivalence is the question *Graver Tank* commits to the factfinder, 339 U.S. at 609-10, and the panel took it from the jury only because its rule made the parts petitioner did not account for dispositive. That is why the answer to the Question Presented decides this case.

Third, the panel called the Bluetooth modules a “black box” and faulted petitioner for failing to obtain their schematics. Pet. App. 6a, 16a. This observation matters only if the statute requires the accused logic to be inventoried gate by gate—again, the Question Presented. And a schematic of Sony’s modules would not have cured the deficiency the panel identified. A Bluetooth schematic shows the particular circuitry a

manufacturer chose from among innumerable interchangeable logic designs that perform the operation the same way. C.A. App'x 1857, 1867. There would have been nothing in the patent disclosure to measure it against; block 34 is a logic diagram, not a schematic. *See id.* 1857. Dr. Fernald did the relevant comparison: Using a protocol analyzer, he captured the modules' transmitted packets, then compared what any compliant module's logic must do based on the governing specification to what block 34 does. *See id.* 1593 & n.27, 1867-68. Sony did not challenge that method, and the district court did not question it. Pet. App. 71a.

CONCLUSION

For the reasons above, the petition for a writ of certiorari should be granted.

Respectfully submitted,

Daniel Woofter
Counsel of Record
Kevin K. Russell
RUSSELL & WOOFTER LLC
1701 Pennsylvania
Avenue NW, Suite 200
Washington, DC 20006
(202) 240-8433
dw@russellwoofter.com

September 18, 2026

APPENDIX

TABLE OF APPENDICES

APPENDIX A: FEDERAL CIRCUIT PANEL OPINION, FILED FEBRUARY 19, 2026.....	1a
APPENDIX B: DISTRICT COURT SUMMARY JUDGMENT OPINION, FILED MARCH 25, 2024	18a
APPENDIX C: DISTRICT COURT REARGUMENT OPINION, FILED JULY 20, 2023.....	35a
APPENDIX D: DISTRICT COURT <i>DAUBERT</i> OPINION, FILED NOVEMBER 28, 2022	55a
APPENDIX E: DISTRICT COURT <i>MARKMAN</i> OPINION, FILED MARCH 9, 2020	104a
APPENDIX F: FEDERAL CIRCUIT REHEARING ORDER, FILED APRIL 23, 2026	161a

**APPENDIX A: FEDERAL CIRCUIT OPINION,
FILED FEBRUARY 19, 2026**

**United States Court of Appeals
for the Federal Circuit**

GENUINE ENABLING TECHNOLOGY LLC,
Plaintiff-Appellant

v.

**SONY GROUP CORPORATION, SONY
INTERACTIVE ENTERTAINMENT LLC,**
Defendants-Appellees

2024-1686

Appeal from the United States District Court for
the District of Delaware in No. 1:17-cv-00135-MSG,
Judge Mitchell S. Goldberg.

Decided: February 19, 2026

DEVAN V. PADMANABHAN, Padmanabhan &
Dawson PLLC, Minneapolis, MN, argued for plaintiff-
appellant. Also represented by MICHELLE DAWSON,
ERIN DUNGAN, BRITTA LOFTUS, PAUL J. ROBBENNOLT.

SETH W. LLOYD, Morrison & Foerster LLP,
Washington, DC, argued for defendants-appellees.
Also represented by CLIFFORD T. BRAZEN, ADAM
PRESCOTT SEITZ, Erise IP, P.A., Overland Park, KS.

Before DYK, TARANTO, and CHEN, *Circuit Judges*.
CHEN, *Circuit Judge*.

Genuine Enabling Technology LLC (GET) appeals the U.S. District Court for the District of Delaware’s grant of summary judgment of noninfringement in favor of Sony Group Corporation & Sony Interactive Entertainment LLC (collectively, Sony). *Genuine Enabling Tech. LLC v. Sony Corp.*, No. 17-CV-135, 2024 WL 1255513, at *1 (D. Del. Mar. 25, 2024) (*Decision*). The district court determined that GET raised no genuine issue of material fact as to whether Sony’s Accused Products—PlayStation 3 and 4 controllers and consoles—infringe claims 10, 14, 16–18, and 21–23 of U.S. Patent No. 6,219,730 (’730 patent). *Id.* GET also appeals the district court’s exclusion of testimony from its expert, Dr. Fernald. *Genuine Enabling Tech. LLC v. Sony Corp.*, No. 17-CV-135, 2022 WL 17325656, at *8 (D. Del. Nov. 28, 2022) (*Daubert Order*). The key claim limitation in this dispute is a means-plus-function limitation—“encoding means for synchronizing” two input data streams—and the specification describes FIG. 4A’s logic block 34, a logic design circuit containing a multitude of elements, as the corresponding structure for performing the synchronizing function. Because GET and its expert failed to account for many of the elements in block 34 in their infringement analysis, we agree with the district court that GET presented a deficient infringement case as to this limitation and we thus *affirm*.

BACKGROUND

I

The ’730 patent generally relates to input devices for a computer. At the time of invention, there were

several options for user-input devices for a computer including a keyboard, mouse, or pen-based input device. Additional input data could come from sources like a microphone or modem. In order to receive data from these sources, a computer needed dedicated resources for each input device (e.g., their own port), which created problems due to limited resources. *See* '730 patent col. 1 ll. 24–29. The '730 patent discloses a solution to the limited resources problem: combining the data streams from different input devices to minimize the number of computer resources. *Id.* col. 1 ll. 47–51.

Dependent claim 10 is representative¹ and states:

A user input apparatus operatively coupled to a computer via a communication means additionally receiving at least one input signal, comprising:

user input means for producing a user input stream;

input means for producing the at least one input signal;

converting means for receiving the at least one input signal and producing therefrom an input stream; and

encoding means for synchronizing the user input stream with the input stream and encoding the same into a combined data stream transferable by the communication means,

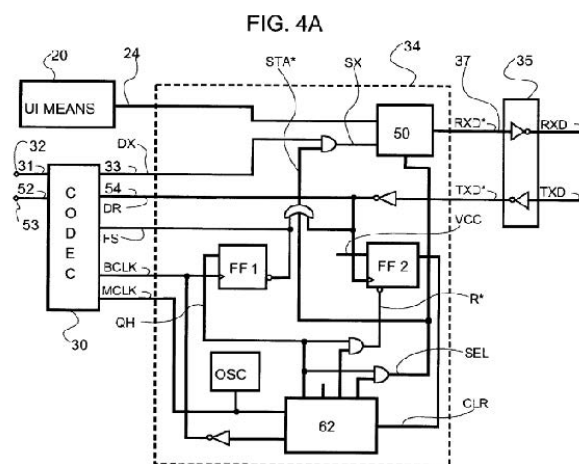
¹ Claim 10 is a dependent claim that depends from claim 1. The reproduction here incorporates the limitations of claim 1 into claim 10.

4a

wherein the input means is an input transducer.

Id. col. 8 ll. 26–27; *id.* col. 7 l. 61 – col. 8 l. 4 (emphasis added).

Each of claims 10, 14, 16–18, and 21–23 (Asserted Claims) includes an “encoding means”² limitation, emphasized above. The ’730 patent specification states that the claimed structure “keeps [user input] stream 24 and input stream 33 in synchrony and encodes³ them into [a] combined data stream 37 in accordance with the protocol of the communication means.” *Id.* col. 4 ll. 12–15 (cleaned up).



² Terms used in the Asserted Claims include “encoding means,” “framer,” and “means for synchronizing and encoding.” Both parties agree these terms refer to the same means-plus-function limitation, and the district court gave them all the same construction. *See* Appellant Br. 6–7; Appellee Br. 14 n.1; *Decision*, 2024 WL 1255513, at *1. For simplicity, we refer to all versions as the “encoding means” limitations.

³ We focus on the synchronize function in this opinion because, as the district court noted, it “best illustrates” the issues. *See Daubert Order*, 2022 WL 17325656, at *3.

Id., FIG. 4A.

The '730 patent discloses a representative embodiment of the “encoding means” (also referred to as a “framer”): logic block 34 in FIG. 4A as depicted above. *See id.* col. 5 ll. 4–6. Several components of logic block 34 are depicted as boxes including data selector 50, clock generator 62, and oscillator OSC. *Id.* col. 5 ll. 47–50, 59–62.

The specification includes a detailed description of block 34’s multi-step synchronization process. *See generally id.* col. 5 ll. 35–64. According to the specification, clock generator 62 divides the signal from oscillator OSC to create bit-rate clock signal BCLK. Clock generator 62 feeds signal BCLK into codec 30, which converts input signal 31 into input stream 33. Input stream 33 is further converted into digital input stream SX. Clock generator 62 also forms control signal SEL, used by data selector 50. Using control signal SEL, data selector 50 “samples” bits from (i.e., selects between) user input stream 24 and input stream SX, storing the data in a single output signal RXD*—thereby synchronizing the two data streams.

II

On February 8, 2017, GET filed a complaint against Sony, alleging that Sony directly and indirectly infringes the Asserted Claims via the Accused Products. For the “encoding means” limitations, GET alleged that the Bluetooth module within the Accused Products synchronized user input from controller buttons with input from controller sensors (e.g., accelerometers).

In a March 9, 2020 *Markman* order, the district court construed the “encoding means” limitations as

means-plus-function limitations. *Genuine Enabling Tech., LLC v. Sony Corp.*, No. CV 17-135, 2020 WL 1140910, at *14, *20–21 (D. Del. Mar. 9, 2020) (*Markman Order*). The court did so because the claim terms “encoding means” and “framer” failed to sufficiently denote structure to a skilled artisan, and thus 35 U.S.C. § 112(f) applied. *Id.* The court construed the “encoding means” limitations’ function as “[s]ynchronizing the user input stream with the input stream and encoding the user input stream and the input stream into a combined data stream.” And it construed the corresponding structure as “[t]he logic design at block 34 in Figure 4A and equivalents thereof.” *Id.* No party ever suggested that the corresponding structure should be only some portion of block 34.

On the final day of fact discovery, January 22, 2021, GET served subpoenas on three of Sony’s manufacturing partners, seeking discovery on the internal structure of the Bluetooth module in the Accused Products. *See* J.A. 1459; *see also* J.A. 43. The district court denied GET’s request to extend the close of fact discovery, *see* J.A. 3212, and thus GET and Dr. Fernald never analyzed a schematic of the Bluetooth module.

At the end of discovery, the parties filed competing *Daubert* motions, and the district court excluded Dr. Fernald’s “ultimate conclusion that Block 34 of Figure 4A and the accused Bluetooth modules meet the function-way-result test for structural equivalency.” *Daubert Order*, 2022 WL 17325656, at *8. Omitting the other elements in logic block 34, Dr. Fernald’s expert report identified only the data selector, codec,⁴

⁴ While codec 30 is not within logic block 34, the specification and testimony from Dr. Fernald demonstrate that logic block 34

and bit-rate clock as the elements involved in performing the claimed function.⁵ *Id.* at *3 (citing J.A. 1605 at ¶¶ 125–26 & 126 n.39). However, at the *Daubert* hearing, GET argued that Dr. Fernald’s position was that the “way” the “encoding means” structure synchronized the two streams was by “synchroniz[ing] each of the bits of the input stream and user input stream . . . to the rising edge of the [bit-rate] clock,” effectively dropping each component in block 34 except for the BCLK signal. *Id.* at *4. This narrow focus on just the bit-rate clock signal BCLK from block 34 enabled Dr. Fernald to argue that the claimed and accused structures were equivalent without ever viewing a Bluetooth module schematic. *See id.* at *5. The court stated that while it was permissible for the “way” a structure operates to be framed at a high level, the proposition needed factual support. *Id.* at *7. The court faulted Dr. Fernald’s position as lacking discussion about what level of generality was appropriate to assess the “way” block 34 synchronized the data, or whether the elements he had previously identified, such as the data selector and codec, were sufficiently insubstantial as to be omitted from the “way.” *Id.* at *8. Because Dr. Fernald’s testimony that the claimed and accused structures were equivalent was unsupported by his limited analysis of solely the bit-rate clocks, the district court excluded his “ultimate conclusion.” *Id.*

synchronizes input stream 33 to the bit-rate clock by “feeding [bit-rate clock signal] BCLK to the codec, causing its output stream to clock on rising edges of BCLK.” J.A. 1605 ¶ 126 n.39; *see also* ’730 patent col. 5 ll. 10–11, 33–35.

⁵ Dr. Fernald’s expert report identified no additional elements in logic block 34 for the “encoding” portion of the claimed function. *See* J.A. 1591 ¶ 102; J.A. 1598–99 ¶ 114.

GET filed a motion for reargument of the *Daubert* motion. *Genuine Enabling Tech. LLC v. Sony Corp.*, No. 17-CV-135, 2023 WL 4686024, at *1 (D. Del. July 20, 2023) (*Reargument Order*). In denying the motion, the court found that Dr. Fernald still failed to explain why the omitted parts of block 34 from his “way” analysis were “insubstantial” or why his simplified description of the “way” matched the specificity of the ’730 patent’s disclosure. *Id.* at *6.

A summary judgment motion followed. And, in a March 25, 2024 opinion, the district court granted Sony summary judgment of noninfringement. *Decision*, 2024 WL 1255513, at *1. The court determined that “the same principles that warranted the partial exclusion of Dr. Fernald’s equivalency analysis compel the conclusion that [GET] lacks sufficient evidence to prove that block 34 and the accused Bluetooth module synchronize signals in substantially the same ‘way.’” *Id.* at *5.

GET timely appealed. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

STANDARD OF REVIEW

This court reviews decisions on motion for summary judgment under the law of the regional circuit, which in the Third Circuit is *de novo*. *MobileMedia Ideas LLC v. Apple Inc.*, 780 F.3d 1159, 1164 (Fed. Cir. 2015) (citing *Gonzalez v. Sec’y of Dep’t of Homeland Sec.*, 678 F.3d 254, 257 (3d Cir. 2012)). “[I]f the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law,” summary judgment is proper. *Traxcell Techs., LLC v. Sprint Commc’ns Co.*, 15 F.4th 1121, 1127 (Fed. Cir. 2021) (quoting FED. R. CIV. P. 56(a)).

The movant “always bears the initial responsibility of informing the district court of the basis for its motion, and identifying those portions of [the record] . . . which it believes demonstrate the absence of a genuine issue of material fact.” *Celotex Corp. v. Catrett*, 477 U.S. 317, 323 (1986). On an issue where the nonmoving party bears the burden of proof, “[a] movant may prevail by pointing out the absence of evidence to support the nonmoving party’s case.” *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1389 (Fed. Cir. 1992) (citing *Celotex*, 477 U.S. at 325).

Though we “view all evidence in the light most favorable to the nonmoving party and draw all reasonable inferences in that party’s favor,” the nonmoving party cannot defeat summary judgment “with conclusory allegations, unsupported assertions, or only a scintilla of evidence.” *Traxcell Techs.*, 15 F.4th at 1127–28 (internal citations removed).

DISCUSSION

I

GET appeals the district court’s determination that it failed to make a showing that the claimed and accused structures are structurally equivalent. The parties agree that “encoding means” is a means-plus-function claim limitation.

“A means-plus-function limitation recites a function to be performed rather than definite structure or materials for performing that function. Such a limitation must be construed to cover the corresponding structure . . . described in the specification and equivalents thereof.” *Lockheed Martin Corp. v. Space Sys./Loral, Inc.*, 324 F.3d 1308, 1318 (Fed. Cir. 2003) (internal citations removed). “The duty of a patentee to clearly link or associate structure with the claimed function is the quid pro quo

for allowing the patentee to express the claim in terms of function under section [112(f)].” *Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1211 (Fed. Cir. 2003).

“Literal infringement of a [means-plus-function] limitation requires that the relevant structure in the accused device perform the identical function recited in the claim and be identical or equivalent to the corresponding structure in the specification.” *Odetics, Inc. v. Storage Tech. Corp.*, 185 F.3d 1259, 1267 (Fed. Cir. 1999). “Once the relevant structure in the accused device has been identified, a party may prove it is equivalent to the disclosed structure by showing that the two perform the identical function in substantially the same way, with substantially the same result.” *Traxcell Techs.*, 15 F.4th at 1128 (internal citation removed). This is called the “function-way-result test” for structural equivalence of a means-plus-function limitation. *Id.*

Determination of structural equivalence does not require a component-by-component analysis. *Odetics*, 185 F.3d at 1267–68. Instead, “[t]he appropriate degree of specificity is provided by the statute itself; the *relevant structure* is that which ‘corresponds’ to the claimed function. . . . Further deconstruction or parsing is incorrect.” *Id.* at 1268 (emphasis added).

GET argues Dr. Fernald’s testimony about the “way” the structures in the ’730 patent and the Bluetooth modules of the Accused Products synchronize data streams demonstrates structural equivalence. Appellant Br. 56–61. GET attempts to recast Dr. Fernald’s analysis of logic block 34, arguing that, though the ’730 patent contains an extensive disclosure relating to FIG. 4A, very little relates to synchronization.

GET's infringement analysis failed to meet its burden in describing the "way" the "encoding means" structure in the '730 patent performs its function. The district court identified logic block 34 as the structure for the '730 patent's "encoding means," a decision which GET did not dispute below and does not attempt to relitigate here. *See generally* Appellant Br. As discussed above, block 34 contains many different elements, but GET and Dr. Fernald's analysis ignored most of those elements without any substantive explanation for why that was appropriate. Moreover, Dr. Fernald provided inconsistent testimony as to which subset of elements matter to the structural equivalence analysis. GET's post-hoc attorney argument cannot fill these gaps in Dr. Fernald's analysis.

Dr. Fernald's expert report originally described the "way" logic block 34 performs the function of synchronization at a fairly detailed level. He highlighted portions of the '730 patent's specification to explain that (1) the codec uses BCLK to generate the input stream and (2) the data selector "samples" both the user-input stream and input stream on the rising edge of BCLK to create the synchronized output. *See* J.A. 1605 ¶ 126 n.39 (citing '730 patent col. 5 ll. 33–35); *id.* ¶ 125 (citing '730 patent col. 5 ll. 47–50). He reiterated in his declaration attached to GET's motion for reargument that the data selector and codec "play roles in the synchronization of the user input stream and the input stream as described in the '730 Patent." J.A. 1806–07 ¶ 9.

However, in the *Daubert* hearing, GET pared down Dr. Fernald's description of the "way," describing the role of the bit-rate clock and nothing else. *See Daubert Order*, 2022 WL 17325656, at *4. In his declaration attached to GET's motion for reargument,

Dr. Fernald also reasserted his new position that the “way” block 34 synchronized the two data streams is by “synchronizing both to a common bit-rate clock.” *Decision*, 2024 WL 1255513, at *3.

Despite these shifting positions, Dr. Fernald offers no meaningful explanation of why the bit-rate clock is the only part of logic block 34 that matters. GET does not argue now, nor did it attempt to argue before the district court, that the other elements of logic block 34 are, e.g., devoted to only the encoding function and therefore may be ignored for the purposes of synchronization. Thus, the district court found that Dr. Fernald was deficient in his explanation of why he had considerably curbed his analysis of logic block 34 to just one of its elements. *See Decision*, 2024 WL 1255513, at *3. We agree.

In *Traxcell Technologies*, we held that a patent owner had failed to meet its burden to show structural equivalence of a means-plus-function limitation when its expert “neglected to address a significant fraction” of a “‘very detailed’ algorithm” identified in the patent specification as the corresponding structure. *Traxcell Techs.*, 15 F.4th at 1129. In doing so, the expert improperly “focus[ed] on function and results but elid[ed] the way those results are achieved.” *Id.* We upheld the district court’s determination that the patent owner did not “provide enough evidence for a reasonable jury to conclude that the accused structure performs the claimed function in ‘substantially the same way’ as the disclosed structure.” *Id.* (internal citation removed). We for that reason affirmed summary judgment of no infringement.

Here, we have a similarly detailed circuit in logic block 34, containing various signal paths and elements analogous to the algorithm in *Traxcell*

Technologies. See *id.* Yet, Dr. Fernald’s analysis of the “way” logic block 34 synchronizes the two streams relies solely on the bit-rate clock. Like the expert in *Traxcell Technologies*, Dr. Fernald has “neglected to address a significant fraction” of logic block 34. 15 F.4th at 1129. Moreover, Dr. Fernald has suggested at various points in GET’s filings that the data selector and codec “play roles” in the synchronization process. See, e.g., J.A. 1806–07 ¶ 9. Without further explanation of why, at least, these two elements of the structure may be ignored, GET fails to present enough evidence for a reasonable jury to conclude that the accused structure and logic block 34 are structural equivalents.

Our decision in *Dawn Equipment Co. v. Kentucky Farms Inc.*, 140 F.3d 1009 (Fed. Cir. 1998) also supports the district court’s analysis. We note that though *Dawn* is a doctrine of equivalents case, the “‘way’ and ‘result’ prongs are the same” for both literal infringement of a means-plus-function and doctrine of equivalents. *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 1364 (Fed. Cir. 2000). In *Dawn*, the structure of the means-plus-function limitation claim was construed as “the rotatable shaft 52, the pin 54, and the slot 72” depicted in FIGs. 1 and 2 of the asserted patent, and the accused structure consisted of a movable pin and holes to affix the pin. 140 F.3d at 1015; *id.* at 1013–14.

We remarked that, though the patent owner “presented substantial expert testimony on infringement, the experts, in testifying with regard to these two mechanisms, merely compared the pins in the two mechanisms” and made no reference to the rotatable shaft or the slot. *Id.* at 1017. We concluded that “[m]ere comparison of the pins [was] insufficient to establish that the devices operate in substantially

the same way,” because the “relevant structure disclosed in the [asserted patent] included at least the rotatable shaft, pin and slot—not merely a pin.” *Id.*

Dr. Fernald’s testimony regarding the bit-rate clock suffers from a similar issue. Logic block 34, the relevant structure, consists of several elements—some identified by GET as part of *how* block 34 synchronizes the two streams—that are absent from his description of the “way” the structure functions. *See* J.A. 1806–07 ¶ 9. Like the expert’s incomplete, pin-only analysis in *Dawn*, merely comparing the bit-rate clock of the “encoding means” structure, as GET attempts to do here, is insufficient to demonstrate that the claimed and accused *structures* are equivalent. *See Dawn*, 140 F.3d at 1017.

GET argues that the district court incorrectly required Dr. Fernald to perform the type of component-by-component analysis which this Court has deemed unnecessary to demonstrate structural equivalence. *See* Appellant Br. 52–56 (citing *Odetics*, 185 F.3d at 1268). This argument is unavailing.

First, in its denial of the reargument motion, the district court explicitly noted that it did *not* conduct a component-by-component analysis; instead, the district court faulted GET, like we do today, for its lack of explanation regarding its omissions of a significant fraction of the block 34 structure. *See Reargument Order*, 2023 WL 4686024, at *8.

Second, though we articulated a component-by-component analysis was unnecessary in *Odetics*, the patentee must still account for each element of the claimed structure in its equivalence analysis. *See Odetics*, 185 F.3d at 1264, 1269–70 (discussing the patentee’s “theory of equivalence” which focused on how the claimed structure’s rotation of “the rod, gear,

and rotary loading and loading mechanisms” compared to the rotation in the accused “bin array” structure). As *Odetics* and our caselaw demonstrate, each element of the identified structure in the specification does not need its own equivalence mapping to a respective element in the accused product. See, e.g., *Caterpillar Inc. v. Deere & Co.*, 224 F.3d 1374, 1380 (Fed. Cir. 2000) (holding the district court erred when it found no structural equivalence because the accused products “lacked a front axle, a spherical bearing, and angled struts” but had not compared “the overall structure”). But where the patentee elects to focus its equivalence analysis on something less than the whole structure that is disclosed in the specification, the patentee has an obligation to meaningfully explain why it is permissible to discard the other elements. GET failed to do so here.

Though “[o]ur case law allows for greater weight to be given to individual components that play a central role in the identified structure,” *Solomon Techs., Inc. v. Int’l Trade Comm’n*, 524 F.3d 1310, 1317 (Fed. Cir. 2008) (citing *Toro Co. v. Deere & Co.*, 355 F.3d 1313, 1324 (Fed. Cir. 2004)), this does not excuse the patentee’s obligation to account for all the elements of that identified structure and make the case for why certain elements are more central to the infringement analysis than others. In this case, GET never supplied any evidence for why many elements of its identified structure should be treated as having little to no weight in the infringement analysis.

II

While we base our decision on GET’s incomplete analysis of the identified structure in the ’730 patent, we note that GET and Dr. Fernald’s analysis of the

Bluetooth modules in the Accused Products was even more sparse. *See Decision*, 2024 WL 1255513, at *5 (stating that GET offered “essentially no information regarding how the accused Bluetooth module operates” other than the involvement of a bit-rate clock). Dr. Fernald first inferred, based on knowledge of Bluetooth protocol, that the Accused Products’ Bluetooth module synchronizes input streams from the Accused Products using a bit-clock. *See J.A.* 1606 ¶ 129. Dr. Fernald then posited that structural equivalence in logic design circuits “relies on a comparison of the operation performed . . . rather than a gate-by-gate and connection-by-connection comparison.” *Daubert Order*, 2022 WL 17325656, at *5 (emphasis added). Effectively he argues that because both structures synchronize streams to a bit-rate clock, and all logic designs performing this operation are structurally equivalent, the structure in the Accused Products, whatever they may be, must be equivalent to the patent’s identified structure. Driving this very broad infringement theory was GET’s failure to review schematics of the Accused Products’ Bluetooth module, causing the Accused Products to be left as something of a black box.

We detect no error in the district court’s rejection of this testimony. First, we agree with the district court that this testimony is conclusory. *See Daubert Order*, 2022 WL 17325656, at *5–6. GET and Dr. Fernald use the theory to bridge the gap between the “black box” accused structure and logic block 34, but a party cannot defeat summary judgment “with conclusory allegations, unsupported assertions, or only a scintilla of evidence.” *Traxcell Techs.*, 15 F.4th at 1128 (internal citations removed). Second, as the district court noted, the suggestion that an, essentially, infinite number of “ways” to accomplish a

function are equivalent collapses the function-way-result test into a function-result test—an outcome that would clash with our precedent. *See Reargument Order*, 2023 WL 4686024, at *8. And finally, this argument is inconsistent with the patent’s specification, which reveals a detailed logic circuit for performing the claimed function, and its prosecution history, in which the inventor stressed the claimed invention’s synchronization scheme was “unique and novel.” *See* ’730 patent FIG. 4A; *Markman Order*, 2020 WL 1140910, at *13.

CONCLUSION

We have reviewed GET’s remaining arguments⁶ and find them unpersuasive. For the foregoing reasons, we *affirm* the district court’s summary judgment grant.

AFFIRMED

⁶ GET also appeals the district court’s exclusion of Dr. Fernald’s ultimate conclusion. *See* Appellant Br. 61. Because the “same principles” which led to the district court’s exclusion of Dr. Fernald’s conclusion also “compel[led]” the district court to grant summary judgment, we need not separately address this argument. *See Decision*, 2024 WL 1255513, at *5.

**APPENDIX B: DISTRICT COURT SUMMARY
JUDGMENT OPINION, FILED MARCH 25, 2024**

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

**GENUINE ENABLING
TECHNOLOGY LLC,**

Plaintiff,

v.

SONY CORPORATION et al.,

Defendants.

Civil Action

No. 17-cv-135

MEMORANDUM OPINION

GOLDBERG, J.¹

March 25, 2024

In this patent infringement dispute, Plaintiff Genuine Enabling Technology LLC (“Genuine Enabling”) asserts that video game hardware sold by Defendants Sony Corporation and Sony Interactive Entertainment LLC (collectively “Sony”) infringes U.S. Patent No. 6,219,730 (the ’730 patent). A more fulsome recitation of the facts is set forth in my November 28, 2022 Opinion, wherein I addressed the parties’ motions under Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993).

¹ Pursuant to 28 U.S.C. § 292(b), I have been designated to serve as a visiting judge for the District of Delaware to handle this matter and other District of Delaware cases.

Sony has now moved for summary judgment of noninfringement. Sony argues that Genuine Enabling lacks sufficient evidence to establish that a certain component of the accused controllers (a Bluetooth module) is structurally equivalent to a logic diagram disclosed in Genuine Enabling's '730 patent. For the reasons set out below, Sony's motion will be granted.

I. FACTUAL AND PROCEDURAL BACKGROUND

The material facts, which are essentially undisputed, are presented below in the light most favorable to Genuine Enabling as the non-moving party.

A. The '730 Patent

The '730 patent claims an apparatus for sending multiple streams of information to a computer over a single communication link. The patent gives the example of a user-input device—such as a computer mouse—that can also receive speech input. ('730 patent, cols. 1-2.) By sending both voice and button presses over a single communication link instead of two, the invention “utilize[es] the computer resources efficiently.” (*Id.*)

Genuine Enabling accuses Sony's products of infringing claims 10, 14, 16-18, and 21-23 of the '730 patent. Claim 10 is illustrative of these claims and reads, with independent claim 1 inserted:

A user input apparatus operatively coupled to a computer via a communication means additionally receiving at least one input signal, comprising:

user input means for producing a user input stream;

20a

input means for producing the [sic] at least one input signal;

converting means for receiving the [sic] at least one input signal and producing therefrom an input stream; and

encoding means for synchronizing the user input stream with the input stream and encoding the same into a combined data stream transferable by the communication means[;]

wherein the input means is an input transducer.

(’730 patent, claim 10 (emphasis added).)

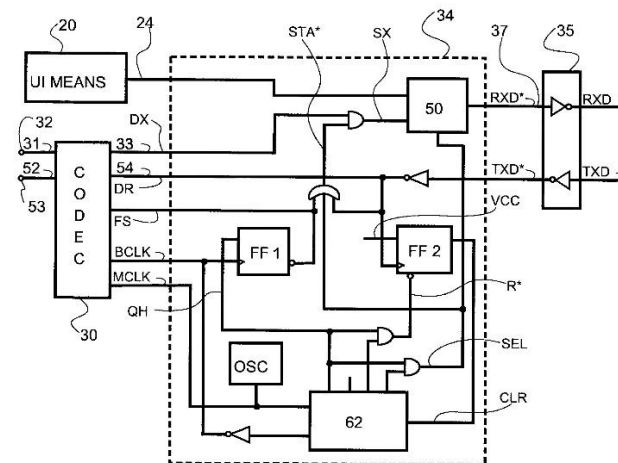
As noted above, the two streams of information are referred to as the “user input stream” and the “input stream.” Using the example from the patent of a mouse with voice input, the “user input stream” could be button presses on the mouse and the “input stream” could be sound data from a microphone. (See ’730 patent, Fig. 1B.) The “encoding means” synchronizes the two data streams, combines them, and sends the combined data stream to the computer via the “communication means.”

Each of the asserted claims requires the claimed invention to include an “encoding means,” “means for synchronizing and encoding,” or a “framer.” Following a Markman hearing, I construed these terms synonymously as “means-plus-function terms” under 35 U.S.C. § 112(f) (codified as § 112, ¶ 6 at the time the ’730 patent issued). A means-plus-function term consists of a “function” and a set of possible “structures” for performing that function, the latter of which are taken from the patent’s specification. See § 112(f); Odetics, Inc. v. Storage Tech. Corp., 185 F.3d

21a

1259, 1266-67 (Fed. Cir. 1999). I construed the term “framer” and its synonyms to have a function of “[s]ynchronizing the user input stream with the input stream and encoding the user input stream and the input stream into a combined data stream” and a structure of “[t]he logic design at block 34 in Figure 4A and equivalents thereof.” (Claim Construction Opinion, ECF No. 112, at 27.)

Figure 4A depicts the following:



(’730 patent, Fig. 4A.) “Block 34” of this figure, which corresponds to the “framer,” is denoted by the dashed line. Other components of this figure that have been the subject of expert testimony are block 50, which is a “data selector”; block 62, a “clock generator”; and block 30 (not part of the framer), which is a “CODEC.” An accompanying text in the patent’s specification describes how block 34 uses these components to synchronize the user input stream with the input stream to create a combined data stream. (’730 patent, col. 5.)

B. The Accused Product

The accused products are video game consoles and controllers. Genuine Enabling asserts that Sony uses the patented technology to send multiple streams of information—such as button presses, motion sensor data, and voice—to the game console over a single wireless communication link.

According to Genuine Enabling, Sony’s accused products contain a “user input stream” that consists of button presses and various “input streams” that include data from motion sensors (accelerometers) and a microphone. Genuine Enabling asserts that a Bluetooth module in the accused video game controllers acts as a “framer”: it synchronizes the button data stream (i.e., the “user input stream”) with data from the motion sensors or microphone (i.e., the “input stream”) and combines these into a single data stream that may be transmitted to the video game console over a wireless communication link. (See Genuine Enabling’s Response Brief at 8-10.)

C. Dr. Fernald’s Opinion and the Court’s Subsequent Daubert Ruling

To support its theory that the accused Bluetooth module acts as a “framer,” Genuine Enabling produced a report from its engineering expert Dr. Kenneth Fernald. Dr. Fernald asserts that certain steps in the Bluetooth protocol (called “whitening” and “CRC generation”) require data that has been synchronized to a “bit-rate clock.” Dr. Fernald further reasons that the data from button presses and the accelerometer must “be synchronized” to a common bit-rate clock for these steps to work correctly. Thus, Dr. Fernald concludes that the accused Bluetooth module, like block 34 of Figure 4A, synchronizes data streams to a common bit-rate clock. However, Dr. Fernald’s report

does not describe how the Bluetooth module causes the button presses and accelerometer data to become synchronized to a common bit-rate clock. The report only explains that such synchronization must occur for the product to use Bluetooth as it does. (Fernald Report ¶¶ 128-31.)

On October 11, 2021, Sony moved to exclude Dr. Fernald's opinion pursuant to Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579 (1993), based on Dr. Fernald's alleged failure to analyze whether the accused Bluetooth module performed synchronization in substantially the same "way" as block 34 of Figure 4A, which is required under the "function-way-result test" for structural equivalency. See Traxcell Tech. LLC v. Sprint Comms. Co., 15 F.4th 1121, 1128 (Fed. Cir. 2021). I granted Sony's motion in part, agreeing with Sony that Dr. Fernald's analysis was incomplete and excluding Dr. Fernald's ultimate conclusion that the accused Bluetooth module was equivalent to block 34 of Figure 4A. However, I did not preclude Dr. Fernald from testifying that the accused Bluetooth module does in fact synchronize certain data streams to a common bit-rate clock. (Daubert Opinion, ECF No. 303, at 15.)

On December 12, 2022, Genuine Enabling moved to reargue Sony's Daubert motion. Genuine Enabling attached a declaration from Dr. Fernald stating that the "way" block 34 of Figure 4A synchronizes the two data streams is by synchronizing both to a common bit-rate clock, and the "way" the accused Bluetooth module synchronizes data streams is also by synchronizing them to a common bit-rate clock. In other words, the two structures operate in the same "way." Based on that clarification, Genuine Enabling asked that Dr. Fernald be permitted to testify to his ultimate conclusion that block 34 of Figure 4A and the

accused Bluetooth module are equivalent. I denied Genuine Enabling's reargument motion, determining that Dr. Fernald had provided no information about how the accused Bluetooth module caused the two data streams to become synchronized to a common bit-rate clock, and it was therefore impossible to tell whether any conceivable variation from block 34 was "substantial." Notably, block 34 of Figure 4A included more details than simply the presence of a bit-rate clock (e.g., a data selector, a clock generator, and a signal sent to a CODEC), and Dr. Fernald had performed no analysis of whether those details or the corresponding unknown details in the accused Bluetooth module should be viewed as substantial from the perspective of one of ordinary skill in the art. (Reargument Opinion, ECF No. 316, at 10-12.)

D. Sony's Summary Judgment Motion and Mr. Nguyen's Declaration

On September 11, 2023, Sony filed the instant motion for summary judgment. Sony asserts that Genuine Enabling cannot prove that the accused Bluetooth modules are equivalent to block 34 of Figure 4A and, for that reason, Genuine Enabling lacks evidence that any accused product contains the "framer" limitation or its synonyms.

In response, Genuine Enabling attached a declaration from the inventor of the '730 patent, Nghi Nho Nguyen. There, Mr. Nguyen provides additional grounds for inferring that the accused Bluetooth modules must synchronize data streams to a common bit-rate clock. For example, Mr. Nguyen observes that data is fed into the Bluetooth modules using an interface called "UART," which will not work unless the data is synchronized to a bit-rate clock. (Nguyen Dec. ¶ 23.)

Mr. Nguyen also opines that the accused Bluetooth module is equivalent to block 34 of Figure 4A. In Mr. Nguyen's view, this is true because both devices synchronize data streams to a common bit-rate clock, and therefore function in the same way. (Nguyen Dec. ¶ 22.) Mr. Nguyen further clarifies that there are other ways of synchronizing two data streams that are different from synchronizing to a common bit-rate clock, such as "by detecting edges in the other data stream and synchronizing the one data stream to those edges." (Nguyen Dec. ¶ 41.)

Sony objects to consideration of Mr. Nguyen's declaration on the ground that it contains undisclosed expert opinion testimony, as confirmed by Mr. Nguyen's statement in deposition that he had not tested the accused product and relied on his lawyers' investigation. (Reply at 2-3.)

II. LEGAL STANDARD

Summary judgment is proper "if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law." Fed. R. Civ. P. 56(a). A dispute is "genuine" if there is evidence from which a reasonable factfinder could return a verdict for the non-moving party, and a dispute is "material" if it might affect the outcome of the case under governing law. Kaucher v. County of Bucks, 455 F.3d 418, 423 (3d Cir. 2006) (citing Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 248 (1986)). The court must view the evidence in the light most favorable to the non-moving party. Galena v. Leone, 638 F.3d 186, 196 (3d Cir. 2011). However, "unsupported assertions, conclusory allegations or mere suspicions" are insufficient to overcome a motion for summary judgment. Schaar v. Lehigh Valley

Health Servs., Inc., 732 F. Supp. 2d 490, 493 (E.D. Pa. 2010) (citing Williams v. Borough of W. Chester, Pa., 891 F.2d 458, 461 (3d Cir. 1989)).

The movant “always bears the initial responsibility of informing the district court of the basis for its motion, and identifying those portions of [the record] which it believes demonstrate the absence of a genuine issue of material fact.” Celotex Corp. v. Catrett, 477 U.S. 317, 323 (1986). Where the non-moving party bears the burden of proof on a particular issue at trial, the moving party’s initial Celotex burden can be met by showing that the non-moving party has “fail[ed] to make a showing sufficient to establish the existence of an element essential to that party’s case.” Id. at 322.

After the moving party has met its initial burden, summary judgment is appropriate if the non-moving party fails to rebut the moving party’s claim by “citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations ..., admissions, interrogatory answers, or other materials” that show a genuine issue of material fact or by “showing that the materials cited do not establish the absence or presence of a genuine dispute.” Fed. R. Civ. P. 56(c)(1)(A).

III. DISCUSSION

Sony’s primary argument is that Genuine Enabling cannot prove that any accused product satisfies the “framer” limitation (and the synonymous limitations “encoding means” and “means for synchronizing and encoding”), found in every asserted claim.

As described above, these are means-plus-function terms with a function of “[s]ynchronizing the user input stream with the input stream and encoding the user input stream and the input stream into a combined data stream” and a structure of “[t]he logic design at block 34 in Figure 4A and equivalents thereof.” (Claim Construction Opinion, ECF No. 112, at 27.) In analyzing infringement, a means-plus-function term encompasses any structure that performs the same function recited in the claim and that is the same as or equivalent to a structure disclosed in the specification. Odetics, 185 F.3d at 1267. “The word ‘equivalent’ in section 112 invokes the familiar concept of an insubstantial change which adds nothing of significance.” Valmont Indus., Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1043 (Fed. Cir. 1993). “Structural equivalence under [§ 112(f)] is met only if the differences are insubstantial ...; that is, if the assertedly equivalent structure performs the claimed function in substantially the same way to achieve substantially the same result as the corresponding structure described in the specification.” Odetics, 185 F.3d at 1267. This is called the “function-way-result test” for structural equivalence. Traxcell, 15 F.4th at 1128.

In applying the function-way-result test, “[t]he appropriate degree of specificity is provided by the statute itself; the relevant structure is that which ‘corresponds’ to the claimed function. ... Further deconstruction or parsing is incorrect.” Odetics, 185 F.3d at 1268. Each “individual component[]” of a disclosed structure is not in itself a “claim limitation[]” required to be present (literally or as an equivalent) in the accused device. Id. “Rather, the claim limitation is the overall structure corresponding to the claimed function.” Id.

By limiting the scope of a means-plus-function term to disclosed structures and their equivalents, § 112(f) “prevents an overly broad claim construction by requiring reference to the specification, and at the same time precludes an overly narrow construction that would restrict coverage solely to those means expressly disclosed in the specification.” Symbol Techs., Inc. v. Opticon, Inc., 935 F.2d 1569, 1575 (Fed. Cir. 1991). A patentee does not obtain ownership of “every conceivable way or means to perform the [claimed] function”—just those ways that are substantially the same as the way the patentee invented and disclosed. Mas-Hamilton Grp. v. LaGard, Inc., 156 F.3d 1206, 1214 (Fed. Cir. 1998). But by the same token, the patentee is not limited to structures that replicate every detail disclosed in the specification—so long as the details that vary are insubstantial. Odetics, 185 F.3d at 1267.

Sony argues that summary judgment is appropriate because Genuine Enabling cannot prove that the Bluetooth module is equivalent to block 34 of Figure 4A under the function-way-result test. There is no dispute that Genuine Enabling could prove that the accused Bluetooth module performs the same “function” as block 34 of Figure 4A: that is, synchronizing and combining the two data streams. It is also not disputed that Genuine Enabling could prove that the Bluetooth module achieves substantially the same “result” as block 34 of Figure 4A: a combined data stream. Rather, Sony’s position focuses on Genuine Enabling’s inability to prove that the accused Bluetooth module synchronizes the two data streams in substantially the same “way” as block 34 of Figure 4A. See Odetics, 185 F.3d at 1267. Sony presses that absent Dr. Fernald’s now-excluded opinion that the two devices do operate in

substantially the same way, Genuine Enabling cannot meet its burden at trial to prove structural equivalence. See AquaTex Indus., Inc. v. Techniche Sols., 479 F.3d 1320, 1329 (Fed. Cir. 2007) (proof of equivalence requires expert testimony).

Genuine Enabling responds that it will prove that the accused Bluetooth module and block 34 of Figure 4A synchronize data streams in the same “way” because both synchronize data streams to a common bit-rate clock as opposed to by some other method, such as synchronizing the data streams directly to each other without a clock. Sony does not dispute the factual accuracy of this assertion, and, indeed, my prior Daubert ruling did not preclude Dr. Fernald from offering this testimony. Sony also does not take issue with the assertion in Dr. Fernald’s declaration (repeated in Mr. Nguyen’s declaration) that synchronizing to a bit-rate clock is not the only way to synchronize signals. Noting all of the above, Sony’s contention is that proving the shared feature of a bit-rate clock is insufficient as a matter of law to show that the “way” in which these devices synchronize data streams is substantially the same. Specifically, Sony presses that each device consists of more than just a bit-rate clock, and proving only that the bit-rate clock is similar sheds no light on whether any other differences that might exist are “substantial.”

While the legal principles underlying the present summary judgment motion substantially overlap with issues addressed in my prior Daubert ruling, the standard for evaluating summary judgment is different than the standard for evaluating evidentiary motions. Thus, my prior Daubert ruling is not necessarily dispositive of the outcome here. See Bradley v. Pittsburgh Bd. of Educ., 913 F.2d 1064, 1069-70 (3d Cir. 1990) (describing the difference

between an evidentiary motion and a motion for summary judgment, the latter of which allows “the nonmovant [to] marshal his or her evidence to show that there is a genuine issue of material fact”). Nevertheless, I agree with Sony that the same principles that warranted the partial exclusion of Dr. Fernald’s equivalency analysis compel the conclusion that Genuine Enabling lacks sufficient evidence to prove that block 34 and the accused Bluetooth module synchronize signals in substantially the same “way.”

Genuine Enabling proposes to prove equivalence by framing the “way” the claimed and accused structures operate at such a high level of generality that it is impossible to tell how they are similar or different. In denying Genuine Enabling’s motion to reconsider my Daubert ruling, I used the analogy of a paperclip and a paperweight, which are similar in that they both apply pressure to paper but different in that one uses bent metal while the other uses gravity. (ECF No. 316 at 10.) To say that the “way” both devices work is by applying pressure to paper just begs the question of whether the omitted details (bent metal and gravity) are insubstantial. Here, analogously, Genuine Enabling argues that block 34 and the Bluetooth module are equivalent because both synchronize data streams using a bit-rate clock. But Genuine Enabling does not explain why a person of ordinary skill in the art would view other details about the two structures as less significant. In particular, Genuine Enabling has pointed to essentially no information regarding how the accused Bluetooth module operates other than that a bit-rate clock is involved somehow. Missing is any explanation of how the Bluetooth module differs from block 34 or why a person of ordinary skill in the art would view these unknown differences as “insubstantial.” Valmont, 983 F.2d at

1043. A factfinder would be left with no basis to draw the inference that block 34 and the accused Bluetooth module synchronize data streams in substantially the same way.

The Federal Circuit’s recent decision in VLSI Tech. LLC v. Intel Corp., 87 F.4th 1332 (Fed. Cir. 2023), supports this conclusion. While VLSI Tech. rested in part on policy concerns with the “doctrine of equivalents” (e.g., public notice) that do not apply to a literal infringement case such as this one, its discussion of the “way” prong of the function-way-result test is nevertheless instructive. See Kemco Sales, Inc. v. Control Papers Co., 208 F.3d 1352, 1364 (Fed. Cir. 2000) (“[T]he ‘way’ and ‘result’ prongs are the same under both the [§ 112(f)] and doctrine of equivalents tests”). In VLSI Tech., the accused product differed from the claim elements in how it performed a request to change clock frequency: in the claim, “the request function [was] performed by one component ... and the receipt and output functions [were] performed by a distinct component.” In the accused product, the request and receipt “[were] performed not by distinct physical components but by different software ‘modules’” within the same physical component. 87 F.4th at 1344. The plaintiff’s expert characterized this difference as a “design choice” but did not otherwise explain why it should be viewed as “insubstantial.” Id. In granting judgment as a matter of law to the defendant, the Federal Circuit concluded that such testimony was insufficient, as the label “design choice” “does not indicate whether, or begin to explain why, the options in the choice are substantially different or substantially the same: In both circumstances, the choice between the options is a design choice.” Id.

Here, the evidence that the differences between the claimed and accused structures is insubstantial is even less specific. In VLSI Tech., the plaintiff's expert had at least narrowed the difference between the claim and the accused product to whether a request was transmitted between distinct physical components or software modules within the same physical component. Here, Genuine Enabling has provided essentially no information about how the accused Bluetooth module differs from block 34 of Figure 4A, much less why any differences should be viewed as insubstantial. For example, block 34 of Figure 4A feeds both data streams into a data selector that alternates between them to produce a combined data stream. (Fernald Report ¶ 125.) It is unknown whether the Bluetooth module does the same thing, or, if it does not, whether the choice to forego a data selector is substantial. A factfinder would be left entirely in the dark as to these issues.

Dr. Fernald's observation that there are other ways to synchronize data streams, without using a bit-rate clock, does not cure this problem. That block 34 and the accused Bluetooth module do not differ in every conceivable way sheds no light on whether the ways in which they do differ are insubstantial. Using again the analogy of a paperclip and a paperweight, a plaintiff might be able to prove that the two function in substantially the same "way" if it can convince a factfinder that the difference between bent metal and gravity is insubstantial in the context of the invention at hand. But absent such an explanation, the fact that there are other ways to hold paper together without pressure (e.g., a folder) does not bridge the necessary evidentiary gap. Just as it was insufficient in VLSI Tech. to show that both the claimed and accused devices transmitted a request to change clock

frequency, the identification of one common feature, be it pressure or a bit-rate clock, is insufficient to explain why the “overall structure[s]” function in substantially the same way. Odetics, 185 F.3d at 1268.

Finally, Genuine Enabling notes that “[t]he ‘way’ ... prong[] of a function-way-result test ... [is a] factual inquir[y] that [is] not subject to construction by the Court.” Marvell Semiconductor v. Commonwealth Sci. & Indus. Rsch. Organisation, No. 07-cv-204, 2010 WL 11531186, at *6 (E.D. Tex. Apr. 27, 2010). Although the “ways” the claimed and accused structures operate are indeed factual questions, it is still the plaintiff’s burden at summary judgment to come forward with “concrete evidence” to “support[]” its factual contentions. Nitkin v. Main Line Health, 67 F.4th 565, 571 (3d Cir. 2023). Genuine Enabling has not pointed to “evidence on which the jury could reasonably find” that the differences between the way block 34 and the accused Bluetooth module synchronize signals are insubstantial. Anderson, 477 U.S. at 252.

For these reasons, I conclude that Genuine Enabling has failed to raise a dispute of fact as to whether the accused Bluetooth module satisfies the “framer” limitation and the synonymous limitations “encoding means” and “means for synchronizing and encoding.” As at least one of those limitations is present in every asserted claim, and Genuine Enabling has not advanced an argument under the doctrine of equivalents, Sony is entitled to summary judgment of noninfringement.²

² Sony offers four other grounds for summary judgment. Because I agree with Sony on its first ground, I do not reach Sony’s alternative grounds.

IV. CONCLUSION

For the reasons set out above, Sony's motion for summary judgment will be granted.

An appropriate order follows.

**APPENDIX C: DISTRICT COURT
REARGUMENT OPINION,
FILED JULY 20, 2023**

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

**GENUINE ENABLING
TECHNOLOGY LLC,**

Plaintiff,

v.

SONY CORPORATION et al.,

Defendants.

Civil Action

No. 17-cv-135

MEMORANDUM OPINION

GOLDBERG, J.¹

July 20, 2023

In this patent infringement dispute, Plaintiff Genuine Enabling Technology LLC (“Genuine Enabling”) asserts that video game hardware sold by Defendants Sony Corporation and Sony Interactive Entertainment LLC (collectively “Sony”) infringes U.S. Patent No. 6,219,730 (the ’730 patent).

On October 11, 2021, Sony moved to exclude certain opinions offered by Genuine Enabling’s expert Dr. Kenneth Fernald under Daubert v. Merrell Dow

¹ Pursuant to 28 U.S.C. § 292(b), I have been designated to serve as a visiting judge for the District of Delaware to handle this matter and other District of Delaware cases.

Pharms., Inc., 509 U.S. 579, 113 (1993). I granted Sony's motion in part, precluding Dr. Fernald from offering the opinion that a component of Sony's products was structurally equivalent to an element of the claimed invention. Specifically, I found that Dr. Fernald had not sufficiently explained how that component operated in substantially the same "way" as the claimed structure under the function-way-result test. (See Daubert Opinion, ECF No. 303, at 6-15.)

Presently before me is Genuine Enabling's "reargument" motion, which posits that my Daubert ruling misunderstood Dr. Fernald's opinions. In support, Genuine Enabling attached a declaration by Dr. Fernald clarifying which aspects of the claimed and accused structures he considers to be the "way" those structures operate under the function-way-result test. Finding that testimony from Dr. Fernald would be helpful to resolve this issue, I scheduled a hearing on June 20, 2023, wherein Dr. Fernald testified about his equivalency conclusions.

Having considered this testimony, along with Dr. Fernald's declaration, the parties' briefs on the original Daubert motion, and the motion for reargument, I conclude that Genuine Enabling's motion does not provide a basis to reconsider the reliability of Dr. Fernald's proposed testimony.

I. FACTUAL AND PROCEDURAL BACKGROUND

A. Dr. Fernald's Opinions and the Prior Daubert Motion

Genuine Enabling contends that certain video game controllers and consoles manufactured by Sony infringe claims of the '730 patent. A central

infringement issue is whether the accused products contain a structure that meets the definition of a “framer” as used in the asserted claims. I construed the term “framer” as a means-plus-function term with a function of “[s]ynchronizing the user input stream with the input stream and encoding the user input stream and the input stream into a combined data stream” and a structure of “[t]he logic design at block 34 in Figure 4A and equivalents thereof.” (Claim Construction Opinion, ECF No. 112, at 27.) Figure 4A of the ’730 patent is a diagram showing various components and signals with an accompanying text describing how those components operate to synchronize the two data streams into a combined stream. (’730 patent at col. 5; Fernald Report ¶¶ 124-26.) The inventor described this approach to combining the two data streams as “unique and novel.” (Claim Construction Opinion at 23.)

Through the report of its expert Dr. Kenneth Fernald, Genuine Enabling contends that the accused Sony products contain Bluetooth modules that are structurally equivalent to block 34 of Figure 4A under the “function-way-result” test, which requires that “the two [structures] perform the identical function in substantially the same way, with substantially the same result.” Traxcell Tech. LLC v. Sprint Comms. Co., 15 F.4th 1121, 1128 (Fed. Cir. 2021).

Sony moved to exclude Dr. Fernald’s opinion on structural equivalence for several reasons, and I granted Sony’s motion as to just one, concluding that Dr. Fernald did not explain how the accused Bluetooth modules synchronized the two data streams in substantially the same “way” as block 34 of Figure 4A. (Daubert Opinion, ECF No. 303, at 6-15.)

B. Genuine Enabling's Motion for Reargument

Genuine Enabling seeks to reargue Sony's Daubert motion as to Dr. Fernald's function-way-result opinion, and requests that Dr. Fernald be permitted to testify at trial as to his ultimate opinion that the accused Bluetooth modules are structurally equivalent to block 34 of Figure 4A. Genuine Enabling offers two bases for this request. First, it contends that I misunderstood Dr. Fernald's report when I concluded that Dr. Fernald did not analyze the "way" prong of the function-way-result test. In support, Genuine Enabling attached a new declaration from Dr. Fernald, which clarifies his opinion regarding the "way" block 34 of Figure 4A synchronizes the two data streams. Specifically, Dr. Fernald now expressly states that the "way" is by "synchronizing [the two data streams] to a common bit-rate clock." (Fernald Dec. ¶ 22.) Dr. Fernald extensively elaborated on this opinion at the June 20, 2023 hearing.

Dr. Fernald's declaration further states that details contained in his original report about how block 34 synchronizes streams to a common bit-rate clock (e.g., using a CODEC and a data selector) were not meant to be included in the "way" for purposes of the function-way-result test. Instead, Dr. Fernald defines the "way" so that it stops at "synchronizing them to a common bit-rate clock" with no additional details. (Fernald Dec. ¶ 17.)²

² To the extent Dr. Fernald's declaration could be considered a request to supplement his expert report, it would have to meet the factors set out in Meyers v. Pennypack Woods Home Ownership Assn., 559 F.2d 894 (3d Cir. 1977). See LabMD Inc. v. Boback, 47 F.4th 164, 189 (3d Cir. 2022). These factors are: (a) whether there was "bad faith on the part of the party seeking to

Second, Genuine Enabling posits that Sony did not fully articulate the alleged problems with Dr. Fernald's report until its reply brief. In particular, Genuine Enabling submits, the section of Sony's brief addressed to Dr. Fernald's alleged failure to analyze the "way" prong did not quote from Dr. Fernald's report and instead relied on deposition testimony. Genuine Enabling therefore complains that it lacked an opportunity to fully respond to Sony's challenge.

Because Genuine Enabling had raised a concern that I misunderstood Dr. Fernald's report, and because Dr. Fernald's report concerns a highly technical subject, I determined that a hearing was appropriate to "allow for a meaningful evidentiary determination" of Sony's Daubert challenge. Oddi v. Ford Motor Co., 234 F.3d 136, 153 (3d Cir. 2000). That hearing was held on June 20, 2023.

C. Dr. Fernald's Hearing Testimony

At the hearing, Dr. Fernald explained his opinions consistently with how those opinions were expressed in his report. Generally, it remains Dr. Fernald's

call [the] witness[...]" an "intent to mislead," or "willfulness" in failing to comply with the court's schedule; (b) the "ability of the party to have discovered" the relevant testimony early and the "validity of [its] excuse" for not doing so; (c) "the importance of the ... testimony"; (d) "the prejudice or surprise" to the opposing party and its "ability ... to cure [that] prejudice"; and (e) any "disrupt[ion][to] the orderly and efficient trial of the case or of other cases in the court." Pennypack, 559 F.2d at 904-05. Dr. Fernald's declaration does not present new opinions of a technical or factual nature. Instead, Genuine Enabling stands by its prior explanation of how the accused devices function and seeks only to show that, legally, that explanation satisfies the "way" prong of the function-way-result test. Sony's response to that argument is likewise primarily legal and not factual. Thus, I conclude that an analysis under Pennypack is unnecessary.

opinion that because all Bluetooth devices require data to be synchronized to a bit-rate clock, the accused Bluetooth module must be equivalent to block 34 of Figure 4A. (N.T. 6/20/23 at 40:14-25, 42:25-43:3, 43:20-23, 46:2-5.) He testified that Bluetooth is the “standard” that the accused products use to communicate, and some parts of that standard—called “whitening” and “CRC generation”—must be supplied with data that is synchronized to a bit-rate clock. (N.T. 6/20/23 at 50:6-13.) Thus, according to Dr. Fernald, the accused Bluetooth module must produce data that is synchronized to a bit-rate clock, or “the product would fail.” (N.T. 6/20/23 at 43:13; see also id. at 51:11-13 (“[W]e know that again from looking at [sic] what the logic would have to be doing in order to satisfy the Bluetooth specification.”).)

Consistent with his original report, Dr. Fernald’s testimony clarified that “whitening” and “CRC generation” are not themselves the steps that synchronize the two data streams. Rather, whitening and CRC generation are the parts of the Bluetooth module that need synchronized data, and the data streams therefore “must be synchronized” for whitening and CRC generation to function in the manner required by the Bluetooth specification. (See id. at 43:19-23; Fernald Report at ¶ 131 n.46.)

Although Dr. Fernald testified that the Bluetooth module must synchronize the two data streams to a common bit-rate clock, he did not testify to any processes, components, or other details inside the accused Bluetooth module to explain how the two data streams become synchronized to a common bit-rate clock.³ When pressed on this point, Genuine

³ While Dr. Fernald did inspect the accused Bluetooth module with a “Bluetooth protocol analyzer,” his report and

Enabling's counsel explained that, in Dr. Fernald's view, synchronizing to a common bit-rate clock is in itself the "how"—i.e. the "way." (N.T. 6/20/23 at 46:10-47:18.) Dr. Fernald testified consistently and stated:

If I understood your question correctly, because we know whitening occurs with a specific circuit diagram showing in the Bluetooth specification, we know that not only are the two streams synchronized together, but they were necessarily synchronized, each of them was necessarily synchronized to the bit clock, which is the way the block 34 does it.

You know, there's multiple ways of synchronizing two streams together. The specific way for both block 34 and the Bluetooth modules, the logic of the Bluetooth modules is they synchronize each of the two streams to the bit clock.

(N.T. 6/20/23 at 49:15-24 (emphasis added).) In short, at the hearing and in its briefing, Genuine Enabling has not added any more details to the "way" other than to continue to posit that the data streams are synchronized to a bit-rate clock in the accused Bluetooth module.

testimony make clear that the purpose of this inspection was to determine which optional features of the Bluetooth protocol were being used, and, consequently, whether "CRC generation" was being performed ("whitening" is mandatory). (Fernald's Report ¶ 129; N.T. 6/20/23 at 37:25-38:16, 39:17-40:13.) Genuine Enabling does not argue that this "protocol analyzer" allowed Dr. Fernald to uncover the process by which the Bluetooth module produced the synchronized data streams necessary for the "whitening" and "CRC generation" steps.

Dr. Fernald did not agree that his analysis established only “that ... synchronization is occurring.” Rather, he claimed it also showed that a bit-rate clock was involved and that each stream was synchronized to that bit-rate clock. (N.T. 6/20/23 at 44:3-24.) In Dr. Fernald’s view, there are two types of synchronizing: synchronizing two streams to each other and synchronizing each stream to a common bit-rate clock:

[T]o give you an analogy, ... think about if you have two wrist watches. If I wanted to synchronize the two, the time of two wrist watches, I could look at one and set the time on the other to match it or I could look at a wall clock and set both wrist watches to the wall clock time.

It’s the latter analogy that best fits what’s happening [in block 34 of Figure 4A]. Rather than trying to directly synchronize one stream to the other, what block 34 [does] is it synchronizes both streams to a common clock, which thereby forces the two streams to also [be] synchronized to each other, just like the wrist watch example.

(N.T. 6/20/23 at 29:9-20.) Thus, Dr. Fernald opined that not “all ways” of synchronizing data streams are equivalent, because there are at least two “ways” that are not equivalent: synchronizing to a bit-rate clock and synchronizing streams directly to each other. (N.T. 6/20/23 at 58:2-19.)⁴

⁴ Dr. Fernald also rejected Sony’s accusation that his analysis of the Bluetooth module rested on a theory that all ways of achieving a given result are considered equivalent in electrical engineering. Rather, Dr. Fernald clarified that he only meant to say that logic circuits that perform a “specific function” in a

D. Sony's Response

Sony maintains that Genuine Enabling's latest efforts are nothing new and still impermissible under Daubert and as a matter of patent law because it is incorrect to frame the "way" a device operates by isolating just one feature—the bit-rate clock—and ignoring the device's "overall structure[]." (Sony's Response at 4, citing Toro Co. v. Deere & Co., 355 F.3d 1313, 1324 (Fed. Cir. 2004).) Sony asks that I not alter my ruling barring Dr. Fernald from testifying to his ultimate opinion on structural equivalence.

II. LEGAL STANDARD

"Reargument under the District of Delaware's local rules attempts to balance the interests in obtaining a final decision on matters presented to the Court and the recognition that the Court, like all others, is capable of mistake and oversight. Well-grounded motions for reargument thus present the court with an opportunity to correct erroneous rulings." Morningred v. Delta Fam.-Care & Survivorship Plan, 790 F. Supp. 2d 177, 191 (D. Del. 2011) (footnotes and quotation marks omitted). Motions for reargument are granted "sparingly," and typically only when: (1) "the court has patently misunderstood a party"; (2) "the court has made a decision outside the adversarial issues presented to the court by the parties"; (3) "the court has made an error not of reasoning but of apprehension"; (4) there has been "an intervening change in the controlling law"; (5) there is "new evidence that was not available

"specific way" may be considered equivalent in the art even if they do not have "gates" (i.e., the building block of logic circuits) in common. (N.T. 6/20/23 at 53:4-20.)

when the court issued its order”; or (6) there is a “need to correct a manifest injustice.” Id. at 192.

“[A] motion for reargument may not be used by the losing litigant as a vehicle to supplement or enlarge the record provided to the Court and upon which the merits decision was made unless new factual matters not previously obtainable have been discovered since the issue was submitted to the Court ...” Schering Corp. v. Amgen, Inc., 25 F. Supp. 2d 293, 295 (D. Del. 1998) (quotation marks omitted, emphasis in original).

III. DISCUSSION

Genuine Enabling primarily argues that my prior Daubert opinion misunderstood the “way” Dr. Fernald had opined that the claimed structure (block 34 of Figure 4A) and accused structure (logic in the Bluetooth modules) synchronize data streams. Through his declaration and hearing testimony, Dr. Fernald has clarified that the “way” each device synchronizes data streams is by synchronizing those streams to a common bit-rate clock. Dr. Fernald has supplied no further details.⁵ Genuine Enabling argues that even though Dr. Fernald has not described the specific processes or components that produce synchronized streams in the Bluetooth module, it is sufficient to demonstrate the “way” by explaining that data streams synchronized to a bit-rate clock must occur in order for the product to function correctly. Essentially, Genuine Enabling continues to press that

⁵ As noted, Dr. Fernald’s original report did supply additional details regarding how block 34 of Figure 4A synchronizes the two data streams, but he has since clarified that he does not consider those details to be part of the “way” (even if they are part of the “how”).

Dr. Fernald be allowed to testify that the two structures in question are equivalent because they both function in that “way.” It is worth noting, again, that Dr. Fernald has not opined on the steps or components within the Bluetooth module involved in producing such synchronized data streams, other than that a bit-rate clock is involved.

The relevant statutory section, 35 U.S.C. § 112(f), “operates to limit a claim from every possible means to those which are ‘equivalent.’” Intel Corp. v. U.S. Int’l Trade Comm’n, 946 F.2d 821, 842 (Fed. Cir. 1991); see also Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc., 145 F.3d 1303, 1309 (Fed. Cir. 1998) (“[S]ection 112, paragraph 6, rules out the possibility that any and every means which performs the function specified in the claim literally satisfies that limitation.” (emphasis in original)). “The word ‘equivalent’ in section 112 invokes the familiar concept of an insubstantial change which adds nothing of significance.” Valmont Indus., Inc. v. Reinke Mfg. Co., 983 F.2d 1039, 1043 (Fed. Cir. 1993). “Structural equivalence under § 112, ¶ 6 is met only if the differences are insubstantial ...; that is, if the assertedly equivalent structure performs the claimed function in substantially the same way to achieve substantially the same result as the corresponding structure described in the specification.” Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999).

By limiting the scope of a means-plus-function term to disclosed structures and their equivalents, § 112(f) “prevents an overly broad claim construction by requiring reference to the specification, and at the same time precludes an overly narrow construction that would restrict coverage solely to those means expressly disclosed in the specification.” Symbol

Techs., Inc. v. Opticon, Inc., 935 F.2d 1569, 1575 (Fed. Cir. 1991). A patentee does not obtain ownership of “every conceivable way or means to perform the [claimed] function”—just those ways that are substantially the same as the way the patentee invented and disclosed. Mas-Hamilton Grp. v. LaGard, Inc., 156 F.3d 1206, 1214 (Fed. Cir. 1998). But by the same token, the patentee is not limited to structures that replicate every detail disclosed in the specification—so long as the insubstantiality test is met. Odetics, 185 F.3d at 1267.

A patentee and accused infringer will sometimes disagree as to how specifically or generally to phrase the “way” a disclosed structure operates. 5B Chisum on Patents § 18.04b (2022). As an analogy, consider how the “way” a paperclip holds paper together could be phrased with more detail (“by using bent metal to apply pressure to pages”) or less (“by applying pressure to pages”). Depending on the level of specificity, a paperclip and a paperweight may or may not hold papers together in the same “way.” In deciding how much detail is required, “[t]he appropriate degree of specificity is provided by the statute itself; the relevant structure is that which ‘corresponds’ to the claimed function. ... Further deconstruction or parsing is incorrect.” Odetics, 185 F.3d at 1268.

“Generally, a number of factors may be considered when determining the scope of a means-plus-function limitation, including the language of the claim, the patent specification, the prosecution history of the patent, other claims in the patent, and expert testimony.” In re Hayes Microcomputer Prod., Inc. Pat. Litig., 982 F.2d 1527, 1543 (Fed. Cir. 1992) (quotation marks omitted). For example, an “‘indispensable’ part of” a structure may be given “greater weight” in

determining whether two structures are equivalent. Toro Co. v. Deere & Co., 355 F.3d 1313, 1324 (Fed. Cir. 2004). But each “individual component[]” of a structure is not in itself a “claim limitation[]” required to be present (literally or as an equivalent) in the accused device. Odetics, 185 F.3d at 1268. “Rather, the claim limitation is the overall structure corresponding to the claimed function.” Id.

Here, the dispute between the parties revolves around how specifically or generally Genuine Enabling’s expert may describe the “way” the claimed and accused structures synchronize the two data streams. Genuine Enabling asserts that synchronizing two streams to a bit-rate clock is, in itself, the “way” block 34 of Figure 4A functions. That is, Genuine Enabling proposes to omit details described in the specification (such as the data selector and CODEC) from the “way,” even though Dr. Fernald agrees that those details are part of the process by which block 34 causes the two streams to become synchronized. (Fernald Dec. ¶ 9.)⁶ Phrasing the “way” solely in terms of the bit-rate clock potentially allows Genuine Enabling to show that the accused Bluetooth module is equivalent to block 34 even though the specific processes used to synchronize data streams in the Bluetooth module are left undescribed by Dr. Fernald and he has not discussed how the Bluetooth module’s structure resembles (or

⁶ As Genuine Enabling points out, the CODEC is outside the dotted-line border of block 34 and therefore not part of the “framer” limitation as construed. But Dr. Fernald’s report makes clear that part of how block 34 causes the two streams to become synchronized is by using the same bit-rate clock for the CODEC as for the data selector. (Fernald Report ¶ 126 n.39; Fernald Dec. ¶ 9; N.T. 6/20/23 at 27:14-15 (“[S]ome of the logic of the codec does play a role in the synchronization process ... ”).)

differs from) the claimed structure. But Dr. Fernald's report does not discuss why it is appropriate to omit details that are concededly part of how block 34 of Figure 4A causes the two data streams to become synchronized. And Dr. Fernald has not explained why these details are "insubstantial." See Odetics, 185 F.3d at 1267. This deficiency is even more pronounced on the Bluetooth module side, as it is unknown what other details are even involved in the process of synchronization and thus whether the omitted details are "insubstantial change[s] which add[] nothing of significance." Valmont Indus., 983 F.2d at 1043.

The second problem with phrasing the "way" so broadly is that the law requires the "degree of specificity" of a means-plus-function claim limitation to be "the ... structure [that] 'corresponds' to the claimed function." Odetics, 185 F.3d at 1268. The '730 patent describes the structure corresponding to the "framer" limitation with a certain degree of specificity. While that description does not include every possible detail (e.g., some of the components are depicted as "box[es]" even though they are made from smaller parts, N.T. 6/20/23 at 27:18-24), it does include at least a data selector that alternately selects between two streams to synchronize them. (Fernald Report ¶¶ 125-26.) Genuine Enabling remains free to claim as equivalents structures that omit such details—and thus that operate in different "ways"—by showing that the differences are insubstantial. Valmont Indus., 983 F.2d at 1043. But Genuine Enabling needs a basis for doing so. Showing only that block 34 and the Bluetooth module have one detail in common—a bit-rate clock—fails to shed light on why that detail is the

most significant or why other details are of lesser importance.⁷

Toro Co. v. Deere & Co., 355 F.3d 1313 (Fed. Cir. 2004), is instructive in resolving this issue. That case involved a means-plus-function term (“control means”) with a structure that “include[d] a mechanical cam system.” *Id.* at 1323. The accused product used a solenoid system, making the issue for infringement whether the cam and solenoid “function[ed] identically and in a substantially similar

⁷ Compare, for example, Dr. Fernald’s analysis of a different claimed function (producing the “output stream”) to show that one of its components (an “inverting logic gate”) was an insubstantial difference from the accused product:

A POSITA [person of ordinary skill in the art] would not consider a simple inverting logic gate, as in the highlighted path above in Figure 4A, as a substantial structural difference. This inverter is used in that embodiment to correct for the signal inversion of the TXD line that occurs in block 35. However, as I discuss in ¶ 114 of this report, the ’730 patent describes a number of different communication links and hence associated transceivers. A POSITA would clearly understand that if using different transmitter/receiver circuitry in place of block 35, such an inverter may or may not be needed.

(Fernald Report ¶ 140.) This analysis is less conclusory than that offered for the “synchronizing” function, which essentially asserts, without explanation, that the common feature of a bit-rate clock shows equivalence. While *Genuine Enabling* cites cases in which expert testimony on equivalence was found sufficient despite accusations that it was “conclusory,” the cited opinions do not endorse those accusations or hold that conclusory expert testimony is admissible. See Applied Medical Res. Corp. v. U.S. Surgical Corp., 448 F.3d 1324, 1335 (Fed. Cir. 2006) (“[W]e conclude that the declaration was not overly conclusory” (emphasis added)); Charles Mach. Works, Inc. v. Vermeer Mfg. Co., 723 F.3d 1376, 1380 (Fed. Cir. 2013) (describing the expert’s detailed reasoning on equivalence).

structural way to achieve the substantially same result.” Id. The patentee’s expert testimony demonstrated that the cam and solenoid systems were interchangeable, but this showed only their “function or result,” not “the way in which cam systems and solenoid systems actually work.” Id. at 1324. Absent evidence that the two systems functioned in substantially the same way, summary judgment was found to be properly granted on noninfringement. Id. at 1314.

This result is consistent with In re Hayes Microcomputer Prod., Inc. Pat. Litig., 982 F.2d 1527 (Fed. Cir. 1992). Hayes also involved a means-plus-function claim limitation, but the specification described the corresponding structure as a microprocessor programmed to perform certain “desired functions” without specifying how this programming was to be accomplished, relying instead on the fact that “[o]ne skilled in the art would know how to program a microprocessor to perform the necessary steps described in the specification.” Id. at 1533-34 (emphasis deleted). The patentee’s evidence demonstrated that the accused product contained a microprocessor and that it had been programmed in the specified manner, including testimony from the designer about the steps he designed the product to perform. Id. at 1541-42. The Federal Circuit concluded that the patentee’s evidence was sufficient to prove infringement. Id. at 1543.

Thus, Hayes shows that where the patent’s specification itself describes a structure in terms of the steps it has been programmed to perform, evidence that an accused product has been programmed to perform those same steps will suffice. See id. at 1543 (noting that “the patent specification,” among other factors, may be considered in

“determining the scope of a means-plus-function limitation”); Odetics, 185 F.3d at 1268. (“[T]he relevant structure is that which ‘corresponds’ to the claimed function.”). Hayes does not stand for the broader proposition that evidence regarding how a device behaves is always sufficient to establish that structures operate in the same way, regardless of how the structure is described in the specification.

Here, in contrast to Hayes, the specification of the ’730 patent does not describe the framer merely as any logic circuit designed to synchronize two data streams to a bit-rate clock. Rather, it is described as a logic circuit that synchronizes data streams in a particular manner, using particular processes and components. Dr. Fernald notes these processes in paragraphs 125 and 126 of his report. While it might have been possible to describe block 34 as “just a box” having “certain features,” (N.T. 6/20/23 at 27:18-24,) the patentee did not do so. Thus, any analysis of the accused product under the function-way-result test must describe and determine whether the “way” the accused product synchronizes data streams differs substantially from the disclosed “way.”

Given all of the above, I conclude that Genuine Enabling has not provided a basis to reconsider my Daubert ruling. Dr. Fernald’s analysis shows only that the Bluetooth module must achieve a certain result—data streams synchronized to a common bit-rate clock—to satisfy other requirements of the system, and does not show how, i.e. the “way,” that result is achieved. Genuine Enabling’s patent did not grant it ownership of “every conceivable way” of meeting the requirements of the Bluetooth specification. Mas-Hamilton, 156 F.3d at 1214. Absent a demonstration of how the Bluetooth module achieves data streams synchronized to a common bit-rate clock, a conclusion

that the claimed and accused structures function in substantially the same way cannot reliably follow.

Genuine Enabling attempts to compensate for Dr. Fernald's lack of detail by pointing to sections in his report demonstrating that logic circuits built using different components (called "gates") can perform the same "operation." (Fernald Report ¶¶ 55-64.) In Dr. Fernald's view, such circuits should be considered "equivalent." (Id. ¶ 56.) Dr. Fernald repeats the phrase "same operation" in reference to block 34 of Figure 4A and the accused Bluetooth module, and concludes from this fact that the two structures are equivalent. (Id. ¶ 135.) To the extent Genuine Enabling is arguing that all logic circuits that can be used interchangeably are equivalent, this would be inconsistent with the function-way-result test, as interchangeability "goes to the function or result of these systems, and begs the issue of the way in which ... [those] systems actually work." Toro, 355 F.3d at 1324. "Almost by definition, two structures that perform the same function may be substituted for one another." Chiuminatta, 145 F.3d at 1309-10. "Such evidence does not obviate the statutory mandate to compare the accused structure to the corresponding structure." Id. (See also N.T. 6/20/23 at 59:17-22 ("Once you identify a specific way that something is being accomplished, ... the various logic designs that could implement that specific way are considered equivalent" (emphasis added)).)

Finally, Genuine Enabling argues that my prior Daubert ruling inappropriately required Dr. Fernald to identify specific components (a CODEC and data selector) in the accused Bluetooth modules. But my prior ruling only suggested that identifying equivalents to a CODEC and a data selector was an "example" of one method by which Dr. Fernald might have established that the Bluetooth controllers

synchronize data streams to a bit-rate clock in a similar “way” to block 34 of Figure 4A. (Daubert Opinion, ECF No. 303, at 13.) Other methods of analysis might have been possible, but other methods also do not appear in Dr. Fernald’s report.

For these reasons, I conclude that Genuine Enabling has not demonstrated a sufficient ground for reconsidering my prior ruling that Dr. Fernald lacks a reliable basis to offer the ultimate opinion that the claimed and accused structures are equivalent.⁸

IV. CONCLUSION

For the reasons set out above, Genuine Enabling’s motion for reargument will be denied.⁹

⁸ Genuine Enabling also complains that Sony failed to adequately set out its Daubert position until its reply. Because Genuine Enabling has had several opportunities to clarify its position and respond to Sony’s arguments (namely, at oral argument on the original Daubert motion, in its motion for reargument brief, in Dr. Fernald’s new declaration, and at the hearing on its motion for reargument), Genuine Enabling’s criticism is unhelpful. Moreover, Sony’s opening brief was sufficient to put Genuine Enabling on notice of the nature of the challenge and did not lead to unfair surprise.

⁹ Some of the parties’ arguments on the adequacy of Dr. Fernald’s equivalency analysis are directed to the sufficiency of evidence rather than the reliability of expert testimony. (Compare Sony’s Response at 5 (“Because the Court relied on Dr. Fernald’s own factual contentions regarding both how the logic design at block 34 and how the Accused Bluetooth module allegedly synchronize the streams to a bit-rate clock, and then concluded as a matter of law his opinions were insufficient, there is no genuine dispute of material fact.”), with Fed R. Civ. P. 56(a) (“The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact ...”).) In general, sufficiency-of-the-evidence questions should not be answered by viewing an expert’s report in isolation but require a

54a

An appropriate order follows.

more fulsome record such as that available on a motion for summary judgment. See Bradley v. Pittsburgh Bd. of Educ., 913 F.2d 1064, 1069-70 (3d Cir. 1990). Nothing in this opinion precludes Genuine Enabling from offering additional evidence at summary judgment or trial that the accused and claimed structures are equivalent. In addition, I have not excluded any of Dr. Fernald's testimony of a technical or factual nature about how the claimed and accused structures operate or his opinions about how equivalence is viewed in the art.

**APPENDIX D: DISTRICT COURT *DAUBERT*
OPINION, FILED NOVEMBER 28, 2022**

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

**GENUINE ENABLING
TECHNOLOGY LLC,**

Plaintiff,

v.

SONY CORPORATION *et al.*,

Defendants.

Civil Action

No. 17-cv-135

MEMORANDUM OPINION

GOLDBERG, J.

November 28, 2022

In this patent infringement lawsuit, Plaintiff Genuine Enabling Technology, LLC (“Genuine Enabling”) asserts that video game controllers and consoles sold by Defendants Sony Corporation and related entities (collectively “Sony”) infringe U.S. Patent No. 6,219,730 (the ‘730 patent). Each party has identified an engineering and a damages expert. Before me are four motions to exclude these experts’ testimony pursuant to Federal Rule of Evidence 702 and Daubert v. Merrell Dow Pharmaceuticals, Inc., 509 U.S. 579 (1993). For the reasons that follow, these motions will be granted in part and denied in part.

I. FACTUAL AND PROCEDURAL BACKGROUND

A. Genuine Enabling's Claimed Invention

The '730 patent describes an invention for transmitting multiple data streams from a user input device such as a mouse or keyboard to a computer over a single communication link. According to the patent's specification, sending multiple data streams over a single communication link is advantageous because it makes efficient use of computer hardware. ('730 patent, col. 1.)

The patent refers to two of these data streams as the "input stream" and "user input stream," respectively. Despite the different names, both are streams of inputted data and both may originate with the user. The "input stream" derives from what the patent terms an "input signal," and the "user input stream" is produced by what the patent calls a "user input means."

To transmit the two data streams over a single communication link, the "input stream" and "user input stream" are synchronized and combined into a "combined data stream." ('730 patent, cols. 3-6.) The component of the invention that handles synchronizing and combining is referred to, in some claims, as an "encoding means," and in others as a "framer." (See, e.g., claims 1, 16.)

Genuine Enabling alleges that Sony's accused products infringe claims 10, 14, 16, 18, 21, and 23. Claim 16 is illustrative of these claims and reads:

An apparatus linked to a computer by a communication link, functioning as a user input device and additionally receiving at least one input signal, comprising:

a user input device producing a user input stream;
an input port receiving at least one input signal;
a converter receiving the at least one input signal for producing an input stream; and
a framer synchronizing the user input stream with the input stream and encoding the same into a combined data stream transferable by the communication link.

(’730 patent, claim 16.)

B. Sony’s Accused Products

Sony’s allegedly infringing products consist of hardware used to play video games. These include game controllers (the input device held by the user) and consoles (the computer and associated hardware designed to play the game). (Complaint ¶ 24.)

The accused controllers transmit information from buttons, accelerometers, and other sensors to the accused consoles. According to Genuine Enabling, the stream of data produced by button presses constitutes a “user input stream,” the signal produced by an accelerometer is an “input signal,” and the digitized accelerometer data is an “input stream.” These two data streams are transmitted over a single wireless (Bluetooth) communication link. Genuine Enabling asserts that components of the accused controllers that synchronize and combine the two data streams for transmission correspond to the “encoding means” and “framer” limitations.

C. Claim Construction

On December 3, 2019, I held a Markman hearing to construe terms in the asserted claims, three of which are relevant to the present Daubert disputes.

1. “Encoding Means” and “Framer”

I construed the terms “encoding means” and “framer” as “means-plus-function” terms under 35 U.S.C. § 112(f).¹ A means-plus-function term “cover[s] the corresponding structure, material, or acts described in the specification and equivalents thereof.” *Id.* I determined that the “function” performed by both the “framer” and “encoding means” is “[s]ynchronizing the user input stream with the input stream and encoding the user input stream and the input stream into a combined data stream.” (Claim Construction Op. 3/9/2020, ECF No. 112, at 27.) I also found that the corresponding structure is “[t]he logic design at block 34 in Figure 4A,” and, accordingly, the terms “framer” and “encoding means” cover “[t]he logic design at block 34 in Figure 4A and equivalents thereof.”

2. “User Input Means”

Some claims in the ’730 patent refer to a “user input means” that produces the “user input stream” described above. I construed “user input means” as a means-plus-function term with a function of “[p]roducing a digital stream, called the user input stream” and a structure of “[a] sensor translating user-initiated actuations and an encoder and equivalents thereof.”

3. “Input Signal”

As described above, the invention converts an “input signal” into an “input stream,” which is one of the data streams combined for transmission to the

¹ When the ’730 patent issued, this provision was codified at 35 U.S.C. § 112 ¶ 6. Because the language did not change between the two codifications, this opinion will use the current one at 35 U.S.C. § 112(f).

computer. I construed “input signal” to mean “[a] signal having an audio or higher frequency.”

D. The Federal Circuit’s Nintendo Decision

After I construed the term “input signal,” the Federal Circuit construed that term in an appeal from another lawsuit brought in the Western District of Washington by Genuine Enabling. Genuine Enabling Tech. LLC v. Nintendo Co., 29 F.4th 1365 (Fed. Cir. 2022). Because the meaning of a claim term is a question of law, the Federal Circuit’s construction is binding on me to the extent it does not depend on factual findings that differ between the Nintendo and Sony lawsuits. See Intel Corp. v. Qualcomm Inc., 21 F.4th 801, 808 (Fed. Cir. 2021). The Federal Circuit construed “input signal,” as I did, to mean “a signal having an audio or higher frequency.”

II. EXPERT OPINIONS

Each side plans to offer the testimony of an engineering expert and a damages expert. Genuine Enabling’s experts are Dr. Kenneth Fernald (engineering) and Gregory Urbanchuk (damages). Sony’s experts are Dr. Gregory Welch (engineering) and Dr. Pallavi Seth (damages). These experts’ challenged opinions are described infra in connection with each Daubert dispute.

III. LEGAL STANDARD

Expert opinion testimony must comply with Federal Rule of Evidence 702. That Rule requires, among other things, that the proposed testimony “help the trier of fact to understand the evidence or to determine a fact in issue” and that it be “the product

of reliable principles and methods.” Fed. R. Evid. 702(a), (c). The proponent of expert testimony bears the burden of establishing that these requirements are met. See Bardo v. Norfolk Southern Ry. Co., 459 F. Supp. 3d 618, 624 (M.D. Pa. 2020). Rule 702 “has a liberal policy of admissibility.” Pineda v. Ford Motor Co. 520 F.3d 237, 243 (3d Cir. 2008).

A motion to exclude evidence “is not a proper vehicle for a party to ask the Court to weigh the sufficiency of the evidence to support a particular claim or defense, because that is the function of a motion for summary judgment, with its accompanying and crucial procedural safeguards.” Bowers v. NCAA 563 F. Supp. 2d 508, 532 (D.N.J. 2008) (alterations and quotation marks omitted). To be admissible, evidence need not be sufficient to prove a party’s case. United States v. Kemp, 500 F.3d 257, 295 (3d Cir. 2007). “Where there is a logical basis for an expert’s opinion testimony, the credibility and weight of that testimony is to be determined by the jury, not the trial judge.” Breidor v. Sears, 722 F.2d 1134, 1138-39 (3d Cir. 1983). If the underlying facts are disputed, “[a]n expert is ... permitted to base his opinion on a particular version of disputed facts and the weight to be accorded to that opinion is for the jury.” Walker v. Gordon, 46 F. App’x 691, 695-96 (3d Cir. Sept. 17, 2002); see also Fed. R. Evid. 703 (“An expert may base an opinion on facts or data in the case that the expert has been made aware of or personally observed.”).

IV. DISCUSSION

A. Dr. Fernald's Analysis of the "Encoding Means" and "Framer" Limitations

Dr. Fernald opines that Sony's accused products meet the "encoding means" limitation (for some claims) and "framer" limitation (for others). Sony asks that these opinions be excluded.

1. Challenged Opinion

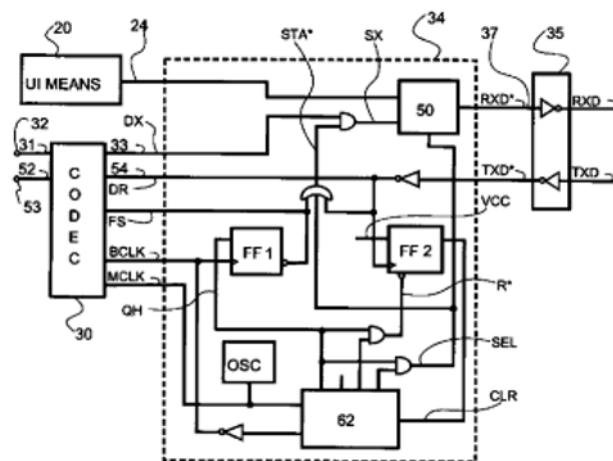
As stated above, I construed "encoding means" and "framer" as means-plus-function terms having the function "[s]ynchronizing the user input stream with the input stream and encoding the user input stream and the input stream into a combined data stream" and structure "[t]he logic design at block 34 in Figure 4A and equivalents thereof." Because I construed these terms to have the same meaning, I will refer to both as a "framer."

According to Dr. Fernald, the Bluetooth module in each accused controller meets the definition of a framer because: (1) it synchronizes and combines a user input stream with an input stream; and (2) it is structurally equivalent to Block 34 in Figure 4A. Dr. Fernald determined that the Bluetooth controller is structurally equivalent to Block 34 in Figure 4A using the "function, way, result" test, under which a structure in an accused product is equivalent to a claimed structure if "the two [structures] perform the identical function in substantially the same way, with substantially the same result." Traxcell Tech. LLC v. Sprint Comms. Co. 15 F.4th 1121, 1129 (Fed. Cir. 2021).

Sony challenges only the "way" prong of Dr. Fernald's analysis. Because the "synchronizing"

aspect of the claimed function best illustrates Sony's objection, I will focus on that aspect. I begin by summarizing Dr. Fernald's "way" opinion regarding both the claimed and accused structures. I then summarize the basis for Dr. Fernald's opinion that the two ways are substantially similar.

'730 Patent's Claimed "Way": Dr. Fernald's report first describes the "way" Block 34 of Figure 4A in the '730 patent synchronizes the user input stream with the input stream. For reference, that figure is depicted below:



(Fig. 4A.) "Block 34" is indicated with a dashed line. The "user input stream" is wire 24 and the "input stream" is wire 33. The combined data stream exits Block 34 on wire 37. The component 50 is a "data selector."

According to Dr. Fernald's report, the "way" Block 34 synchronizes the user input stream with the input stream is by "sampling both streams using a common bit-rate clock." (Fernald Infringement Report ¶ 124.) First, Block 34 synchronizes the input stream to the bit-rate clock by "feeding [the bit-rate clock] to the CODEC," which "caus[es]" the output of the CODEC—

that is, the input stream—“to clock on rising edges of” the bit-rate clock. (*Id.* ¶ 126 n.39.) Second, Block 34 synchronizes the user input stream to the same bit-rate clock using the data selector. The data selector “normally select[s] the input stream” but can alternately “sample[] [the user input] stream,” and stores data from both streams in the output stream. (*Id.* ¶ 125.) This sampling process “synchronizes the [user input] stream data to the [bit-rate] clock, and hence to the similarly synchronized input stream” (*Id.* ¶ 126.)

As I understand this description, Dr. Fernald opines that Block 34 uses one bit-rate clock to drive two processes: one that generates the input stream using a CODEC and one that samples the user input stream using a data selector. The output of each process is therefore synchronized to that same bit-rate clock, and, thus, the two outputs are synchronized.

But at oral argument, Genuine Enabling argued for a claimed “way” that was much broader than described above as it included fewer details. Specifically, referencing a discrete sentence from Dr. Fernald’s voluminous report, Genuine Enabling focused on the following phrase:

[T]he logic of block 34 ... **synchronizes each of the bits of the input stream and user input stream ... to the rising edge of the [bit-rate] clock ..., thereby synchronizing the two streams together.**

(Fernald Infringement Report ¶ 125 (emphasis added); Tr. Oral Argument, 6/21/22, at 43:16-21 (referencing slides).) This sentence includes the common bit-rate clock but omits the CODEC, the data selector, and the process of sampling. The difference

between these two “ways” is discussed in greater detail below.

Sony’s Accused’s Products’ “Way”: Dr. Fernald’s report does not expressly state the “way” in which the accused Bluetooth module synchronizes the input stream and user input stream. It is therefore unclear whether the report offers an opinion on what that “way” is. In its briefing and at oral argument, Genuine Enabling identifies the following sentence from the report as the accused “way”: “The Bluetooth modules in the accused Sony controllers ... synchronize the user input stream with the input stream by synchronizing both streams to a common bit clock.” (Fernald Infringement Report ¶ 127.)

To arrive at the conclusion that the Bluetooth module “synchroniz[es] both streams to a common bit clock,” Dr. Fernald refers to an industry-wide specification for the Bluetooth protocol. According to Dr. Fernald, to comply with the specification, the accused Bluetooth module must perform steps called “CRC generation” and “whitening.” (*Id.* ¶¶ 127-128 & n.40.) Both steps “use digital shift registers,” and, therefore, “[f]or either process to operate properly, the incoming [data] must **be synchronized** to the same bit clock used for shifting these shift registers[.]” (*Id.* ¶ 131 (emphasis added).) From this, Dr. Fernald reasons that the data supplied to the CRC generation and whitening steps must be “synchronized to a bit-rate clock.” (*Id.* ¶ 129.) Thus, according to Dr. Fernald, “the Bluetooth modules in the accused Sony controllers necessarily synchronize the user input stream with the input stream.” (*Id.*)

In a footnote, Dr. Fernald clarifies that he is “not suggesting that the CRC generation or data whitening logic is part of the encoding means or framer, but only

that the **existence** of such bitstream processing operations is evidence that the bitstream **is synchronized** to a bit clock.” (Fernald Infringement Report ¶ 131 n.46 (emphasis added).) Dr. Fernald does not identify the circuitry in the Bluetooth module that synchronizes the user input stream with the input stream. Rather, his report reasons that because certain required steps in the Bluetooth module only work if the data streams are synchronized, circuitry must exist to perform such synchronizing. Consistent with this reasoning, Dr. Fernald testified at his deposition that he “didn’t have the schematics for the Bluetooth chips.” (Fernald Tr. 9/1/21 at 107:14.)

Substantial Similarity: Dr. Fernald’s report then states that the claimed and accused structures are equivalent:

[T]he “encoding means” and “framer” in the Bluetooth modules of the accused Sony controllers synchronizes the user input stream with the input stream. Further, the logic in the Bluetooth modules perform[s] the same operation, specifically synchronizing the two streams to a common bit clock, as the logic design in block 34 of Figure 4A, and hence is structurally equivalent to the logic design of block 34.

(Fernald Infringement Report ¶ 135.) In introducing his analysis, Dr. Fernald’s report also states that those two structures will be shown to operate “in substantially the same way.” (*Id.* ¶ 104.) The report’s conclusion does not repeat this reference to the “way” or state how the two “ways” have been shown to be substantially similar. (*Id.* ¶ 135.)

At oral argument on the Daubert motions, Genuine Enabling took the position that in the field of

electrical engineering, an analysis of whether the “ways” are substantially similar is unnecessary because all ways of achieving a given result are equivalent. (See Tr. Oral Argument, 6/21/22, 45-46 (referencing slides).) For support, Genuine Enabling relied on paragraphs of Dr. Fernald’s report that highlight the use of algebraic properties to transform simple digital circuits into equivalent ones. (Fernald Infringement Report ¶¶ 56-57.) The report states that “a [person of ordinary skill in the art] would understand that logic structural equivalence relies on a comparison of the operation performed by the two logic designs, rather than a gate-by-gate and connection-by-connection comparison.” (Id. ¶ 64.) While the report does not state that all “ways” are equivalent if they achieve the same result, Dr. Fernald testified in deposition that:

[T]he way equivalency is understood by one skilled in the art and logic is, if you can show that the Bluetooth module and Block 34 are basically producing the same result effectively, that is indicative of that—the structural equivalent, because it’s just the fluid nature of logic. There’s just so many different ways of doing the same thing in logic design, and they’re all considered equivalent to one skilled in the art.

(Fernald Tr. 9/1/21 at 107.)

2. Sony’s First Objection:
Insufficient Analysis of the “Way”
Prong of Structural Equivalence

Sony argues that Dr. Fernald’s analysis of the “encoding means” and “framer” limitations should be excluded because Dr. Fernald does not analyze the “way” prong of structural equivalence. While Sony

does not identify which requirement of Rule 702 this alleged deficiency violates, it cites to the Federal Circuit's nonprecedential opinion in Medtronic Inc. v. Boston Sci. Corp., 558 F.App'x 998 (Fed. Cir. March 11, 2014), which held that it was proper to exclude an expert's opinion under the "reliability" requirement of Rule 702(c) because the expert's infringement analysis was based on "conclusory statements." Id. at 1000. Genuine Enabling does not contest that failing to correctly analyze structural equivalence could be a basis for exclusion, but responds that Dr. Fernald's testimony is "reliable" under Daubert.

Genuine Enabling's "All Ways Are Equivalent" Argument: At oral argument, Genuine Enabling contended that in the field of electrical engineering, an expert need not separately analyze the "way" prong of structural equivalence because all ways are equivalent if they achieve the same result.

Expert testimony may only be admitted if "the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue." Fed. R. Evid. 702(a). Opinion testimony that is not "helpful" is not admissible, United States v. Gibbs, 190 F.3d 188, 213 (3d Cir. 1999), and, in particular, testimony consisting of "conclusory assertions" and "bald conclusion[s]"—as in "an expert's testimony that 'it is so'"—does not assist the factfinder in understanding the evidence or determining facts in issue. Barnes Foundation v. Township of Lower Merion, 982 F. Supp. 970, 1008-09 (E.D. Pa. 1997); see also Mooring Capital Fund, LLC v. Phoenix Central, Inc., No. 06-cv-6, 2009 WL 4263359, at *5 (W.D. Okla. Feb. 12, 2009) ("[A]n expert's opinions are not admissible merely because the expert says, in effect, 'trust me, I know.'"). An "expert must have 'good grounds' for his or her belief." Schneider ex

rel. Est. of Schneider v. Fried, 320 F.3d 396, 404 (3d Cir. 2003).

With this precedent in mind, I conclude that expert analysis of the “way” prong of functional equivalence based on a broad assertion that all “ways” are equivalent would not help the factfinder understand the claimed equivalence or determine whether the accused device operates in a substantially similar way as the claimed one. More specifically, such a broad assertion would not help the factfinder: (1) understand the way the claimed structure works; (2) understand the way the accused structure works; (3) understand the “differences” between the claimed and accused structure; or (4) understand whether those “differences” are “insubstantial.” See Odetics, Inc. v. Storage Tech. Corp., 185 F.3d 1259, 1267 (Fed. Cir. 1999). The factfinder would therefore be left with no understanding of the “way” portion of Dr. Fernald’s opinion.

Genuine Enabling presses that I should consider the statement in Dr. Fernald’s report that “a [person of ordinary skill in the art] would understand that logic structural equivalence relies on a comparison of the operation preformed by the two logic designs” (Fernald Infringement Report ¶ 64.) It is true that the perspective of one skilled in the art “should be considered in a [§ 112(f)] equivalence determination.” IMS Tech. Inc. v. Haas Automation Inc., 206 F.3d 1422, 1437 (Fed. Cir. 2000). For example, IMS Tech. involved testimony that “a floppy disk drive and a tape cassette” are considered interchangeable in the art. Id. at 1437. But Genuine Enabling proposes to offer expert testimony that is far broader and vaguer than that in IMS Tech.—that is, a blanket assertion that all structures are considered interchangeable if they

achieve the same result. This is true even when considering those paragraphs of Dr. Fernald's report that describe how simple circuits can be algebraically equivalent. Dr. Fernald does not apply those principles to the accused product or even reference them by analogy. Rather, those paragraphs in his report only provide examples of Genuine Enabling's broad position that similar results imply similar ways

Ultimately, Dr. Fernald's assertion that the two structures are equivalent because they "perform the same operation, specifically synchronizing the two streams to a common bit clock" is "an expert's testimony that 'it is so,'" which is not admissible. Barnes Foundation, 982 F. Supp. at 1008-09. (Fernald Infringement Report ¶ 135.)

Dr. Fernald's "Way" Analysis: Having concluded that Genuine Enabling may not rely on Dr. Fernald's blanket assertion that all "ways" are equivalent, I next examine whether Dr. Fernald's report nonetheless contains a sufficient analysis of the "way" prong to support a conclusion that the claimed and accused structures meet the function-way-result test for structural equivalence. This task is complicated by Genuine Enabling's inconsistent positions as to how much detail is included in the "way" Block 34 of Figure 4A operates.

Dr. Fernald's report identifies the "way" as "sampling both streams using a common bit-rate clock," using a CODEC to sample the input stream and a data selector to sample the user input stream. (Fernald Infringement Report ¶¶ 124-26.) But the report contains no discussion, or even a conclusion, that the accused Bluetooth module operates similarly to that "way." For example, Dr. Fernald's discussion of the Bluetooth module does not mention the

components involved in the claimed “way” (the CODEC and the data selector). He also does not address whether the Bluetooth module contains components that are similar to a CODEC and a data selector, or operate similarly to a CODEC and a data selector. Dr. Fernald therefore offers no basis to render an opinion that the accused Bluetooth module operates in a substantially similar way to “sampling both streams using a common bit-rate clock.”

At oral argument, Genuine Enabling argued that the “way” Block 34 of Figure 4A operates is by “synchroniz[ing]” (as opposed to sampling) “each of the bits of the input stream and user input stream ... to the rising edge of the BCLK clock ..., thereby synchronizing the two streams together.” (Fernald Infringement Report ¶ 125 (emphasis added); Tr. Oral Argument, 6/21/22, at 43:16-21 (referencing slides).) This explanation is much broader than the one in Dr. Fernald’s report because it omits several details: the data selector, the CODEC, the process of sampling, and the use of a common bit-rate clock to drive two operations. While it is permissible for a party to argue that the “way” a structure operates should be framed at a high level of generality, see 5B Chisum on Patents § 18.04b (2022), the assertion that a structure operates in a given way is a proposition that needs factual support. See Mylan Institutional LLC v. Aurobindo Pharma Ltd. 857 F.3d 858, 869 (Fed. Cir. 2017) (noting that facts “may at trial indicate a different ‘way’ ”). Dr. Fernald’s report contains no discussion as to whether the claimed “way” may be framed as broadly as Genuine Enabling posited at oral argument, nor does the report actually draw this conclusion. In particular, there is no assertion, or even discussion, that the data selector, CODEC, and

sampling operation are sufficiently insubstantial that they may be omitted from the “way.”

Dr. Fernald’s report also does not support that the accused structure operates in a way that is substantially similar to “synchroniz[ing] each of the bits of the input stream and user input stream ... to the rising edge of the BCLK clock ..., thereby synchronizing the two streams together.” In fact, as Sony points out, Dr. Fernald’s report does not even draw the conclusion that these two ways are substantially similar, instead jumping to the ultimate conclusion that the two structures are equivalent because they “perform the same operation.” (Fernald Report ¶ 135.)

Finally, to the extent Dr. Fernald’s report could be read as impliedly concluding that the claimed and accused ways are substantially similar, that conclusion is still not supported. Dr. Fernald’s report determines that the accused Bluetooth module must result in a combined data stream that is synchronized to a bit-rate clock for certain later steps (CRC generation and whitening) to operate correctly. That is, Dr. Fernald discusses only the result that must be achieved, not how it is achieved. Sony does not argue that it is necessarily improper for an expert working without schematics to reason backward from a specification to determine what steps must have been performed to meet the specification. But the problem with Dr. Fernald’s analysis is that he only works backward as far as the result that is achieved, not how it was achieved. There is no discussion in Dr. Fernald’s report of where or how in the Bluetooth module the streams become synchronized. Because there is no information about the “way” in which the streams become synchronized, a factfinder would receive no factual support regarding why that “way” is

substantially similar to the operation of Block 34 of Figure 4A.

For these reasons, I conclude that Dr. Fernald's ultimate conclusion that Block 34 of Figure 4A and the accused Bluetooth modules meet the function-way-result test for structural equivalency does not meet the helpfulness and reliability requirements of Rule 702. I will grant Sony's Motion to exclude that conclusion from Dr. Fernald's testimony. I make no determination regarding the other challenged portions of Dr. Fernald's proposed testimony, including Dr. Fernald's description of Block 34 of Figure 4A, his description of Bluetooth technology, and his inferences about what features must be contained in the accused Bluetooth modules to implement the specification.

3. Sony's Second Objection: Failure to Analyze Every Component

Sony next objects that Dr. Fernald does not incorporate every component of Block 34 of Figure 4A in his equivalency analysis.

"[A] component-by-component analysis of structural equivalence [is not required] under [§ 112(f)]." Odetics, 185 F.3d at 1267-68. While an expert's equivalency analysis might be impeached at trial for omitting "critical factors," cf. Mylan 857 F.3d at 868, admissibility does not require an expert to consider "every possible factor" an adversary might think relevant, Pfizer Inc. v. Teva Pharm. USA, Inc., 461 F. Supp. 2d 271, 274 (D.N.J. 2006).

Dr. Fernald justifies his selection of relevant components by tracing the signal paths of the user input stream and input stream through the data selector to the combined data stream and explaining how the circuit produces the SEL signal that controls

the data selector. The accuracy of this description is for the factfinder.

Sony argues that whether an equivalent structure to Block 34 of Figure 4A must include all components is an issue of claim construction and, therefore, Genuine Enabling “waived” the issue by not raising it at the Markman hearing. But “[w]hether an accused device infringes a [§ 112(f)] claim as an equivalent is a question of fact.” Odetics, 185 F.3d at 1268. Genuine Enabling therefore did not waive this argument by not raising it at the Markman hearing.

Accordingly, I will deny Sony’s Daubert motion as to this ground.

4. Sony’s Third Objection: Use of Figure 4B

Sony next argues that Dr. Fernald’s proposed testimony does not “fit” the case because he references Figure 4B in addition to Figure 4A. Figure 4B “shows the timing waveform of the critical signals involved in FIG. 4A” and “[t]he timing waveform for signals SEL, CLR, FS, QH, R*, TXD*, and RXD* are depicted in FIG. 4B, in relation to bit clock BCLK.” (’730 patent, col. 3.)

Dr. Fernald opines that Figure 4B reflects “a more specific embodiment” of the structure in Figure 4A and references Figure 4B to discern properties of that embodiment. For example, Dr. Fernald uses the timing diagram in Figure 4B to infer that Block 34 of Figure 4A “plac[es] the stream values into predetermined locations in the combined data stream” and “sampl[es] both streams using a common bit-rate clock.” (Fernald Infringement Report ¶¶ 102, 124.)

Because the specification states that Figure 4B is included to further describe the circuit depicted in

Figure 4A, it is not improper for Dr. Fernald to reference Figure 4B in analyzing Block 34 of Figure 4A. While Sony argues that Dr. Fernald misuses Figure 4B, Sony does not say how, and, in any event, this alleged error may be addressed on cross examination. I will therefore deny Sony's Motion as to this ground.

B. Dr. Fernald's Validity Analysis of Claim 14

1. Challenged Opinion

Dr. Fernald also authored a separate report on the validity of the asserted claims. Sony challenges Dr. Fernald's analysis of claim 14, which reads:

A programming method, executed by a computer communicatively coupled via a communication link to a user input means having means for synchronizing and encoding a user input stream and at least one additional input signal into a combined data stream, comprising the steps of:

initializing the communication link;

servicing a single resource service interrupt for receiving the combined data stream; and

recovering from the combined data stream respective information of the user input means and of the at least one additional input signal.

(emphasis added). As noted above, I construed "user input means" as a means-plus-function term with a function of "[p]roducing a digital stream, called the user input stream" and a structure of "[a] sensor translating user-initiated actuations and an encoder and equivalents thereof." In his validity report, Dr. Fernald writes that "the term 'user input means' in

claim 14 should be read as ‘user input apparatus,’” and this is the construction he uses in his analysis.

2. Sony’s Objection: Use of a Different Construction for “User Input Means”

Sony objects that the construction Dr. Fernald uses for “user input means” in claim 14 differs from my construction of “user input means.” Sony therefore asks that any of Dr. Fernald’s analysis that relies on his different construction be excluded.

Genuine Enabling does not dispute that Dr. Fernald uses a construction for “user input means” that differs from my construction. Instead, Genuine Enabling argues that I should modify my construction because “user input means” in claim 14 has a different meaning than it does in claim 1.

The meaning of a claim term is a question of law for the court to decide. Markman v. Westview Instruments, Inc. 517 U.S. 370, 385, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). “[A]lthough a district court has great latitude in how it conducts the claim construction process, the parties must be involved,” and a court may not issue a new construction without affording each party an opportunity to be heard on the matter. TNS Media Research v. Tivo Research & Analytics, Inc., 629 F. App’x 916, 939 (Fed. Cir. 2015). Because the present dispute arises in the context of a motion to exclude expert testimony rather than to construe a claim term, I will not now rule on the meaning of “user input means” in claim 14 or decide whether Genuine Enabling forfeited its present contention by not raising it at the Markman hearing.

If Dr. Fernald’s construction of “user input means” in claim 14 is ultimately determined to be incorrect, Dr. Fernald may not inform the jury of his incorrect

construction, as the jury is “not free to consider its own meanings for the disputed terms but must apply the [court’s] construction of the terms[.]” Sulzer Textil A.G. v. Picanol N.V. 358 F.3d 1356, 1367 (Fed. Cir. 2004). I therefore hold under advisement that portion of Sony’s Motion, pending possible future resolution of the claim construction issue. See TNS Media Research, 629 F. App’x at 939 (parties must be “afforded the opportunity to present ... claim construction arguments before the district court ... decide[s] ... claim construction”).

Sony also asks that the totality of Dr. Fernald’s analysis of claim 14 be excluded because it rests on an incorrect claim construction. Assuming Dr. Fernald’s construction is incorrect, Sony does not explain how that error affects the remainder of Dr. Fernald’s proposed testimony. While testimony based on an incorrect claim construction may sometimes be “unhelpful to the trier of fact” and thus excludable, TQ Delta, LLC v. ADTRAN, Inc., No. 14-cv-954, 2019 U.S. Dist. LEXIS 188930, at *3, 2019 WL 7667461 (D. Del. Oct. 31, 2019), Sony has not shown how substituting a correct construction of “user input means” for Dr. Fernald’s purportedly incorrect one would change any part of Dr. Fernald’s reasoning. In fact, Sony offers no discussion of the substance of Dr. Fernald’s testimony. I will therefore deny Sony’s Motion to exclude the remainder of Dr. Fernald’s analysis of the validity of claim 14 at this time.

C. Dr. Welch’s Use of “Plaintiff’s Construction” of Certain Terms in His Validity Analysis

1. Challenged Opinion

Sony’s engineering expert Dr. Gregory Welch’s report reviews Genuine Enabling’s infringement

contentions and opines that Genuine Enabling “has broadly interpreted the Asserted Claims in order to accuse Sony’s products of infringement.” (Welch Validity Report ¶ 167.) Dr. Welch explains that he has “considered, where appropriate, Plaintiff’s infringement contentions to determine the scope of the asserted claims as interpreted by the Plaintiff.” (Id. ¶ 134.) Specifically, in Dr. Welch’s opinion, “if the Asserted Claims are really as broad as Plaintiff contends, then they are plainly invalid over the prior art.” (Id. ¶ 167.) Dr. Welch uses, by way of example, what he believes to be Genuine Enabling’s construction of “encoding means” to find an overlap between the invention and a prior art reference:

I understand the Court has construed the term “encoding means” as “the logic design at block 34 in Figure 4A and equivalents thereof” performing the function “synchronizing the user input stream with the input stream and encoding the user input stream and the input stream into a combined data stream.” ...

I also understand Plaintiff has alleged that simply including button press data and accelerometer data in the same Bluetooth packet infringes this limitation. Plaintiff’s Final Infringement Contentions, at pp. 24-29.

...

... [I]f this claim limitation is as broad as Plaintiff’s infringement theory, then [prior art reference] Rosenberg discloses this limitation. ...

(Id. ¶ 194-96.)

2. Genuine Enabling's Objection:
Use of Incorrect Claim
Construction

Genuine Enabling objects to Dr. Welch's reference to "Plaintiff's interpretation" of the claim terms. In Genuine Enabling's view, Dr. Welch's opinion reflects a claim construction other than this Court's construction. Sony responds that Dr. Welch's proposed testimony supports an argument in the alternative: that if Genuine Enabling's contention that the claims encompass the accused product is accepted, it follows that those claims encompass the prior art.

Genuine Enabling is correct, as a general matter, that the jury is "not free to consider its own meanings for the disputed terms but must apply the [court's] construction of the terms[.]" Sulzer Textil, 358 F.3d at 1367. To the extent Dr. Welch intends to testify that the jury should accept one claim construction over another, such testimony is not admissible.

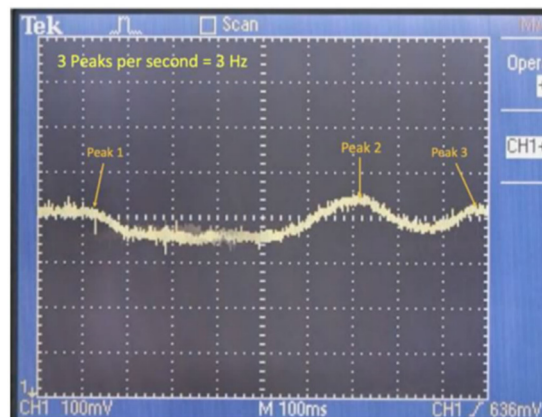
But Dr. Welch is not prohibited from opining on the significance of Genuine Enabling's evidence by explaining what that evidence shows about the relationship between the asserted claims and the prior art. See F.R.E. 703 (permitting an expert to base an opinion on "facts or data in the case"); Odyssey Wireless, Inc. v. Apple Inc., No. 15-cv-01735, 2016 WL 7644790, at *3 (S.D. Cal. Sept. 14, 2016) (denying motion to exclude expert testimony on similar grounds as raised here). The present record is insufficient for me to determine whether Dr. Welch's proposed opinions will be supported by the evidence adduced at trial. I will therefore deny Genuine Enabling's Motion as to this ground without prejudice to be renewed at trial if necessary.

**D. Dr. Welch's Infringement Analysis
Based on the Frequency of the
"Input Signal"**

1. Challenged Opinion

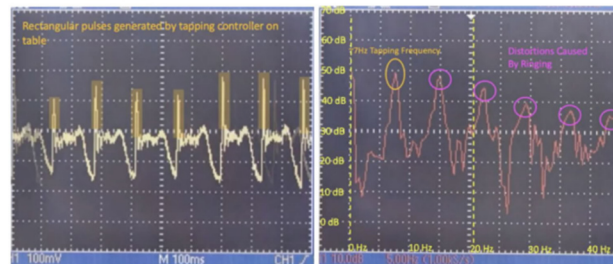
As noted above, I construed the term "input signal" to mean "[a] signal having an audio or higher frequency." Dr. Welch's rebuttal report concludes that the accused products do not infringe because none of the signals sent from the controller to the console have an audio or higher frequency, which Sony contends to be 20 Hz. (1 Hz is 1 cycle per second.) The next dispute involves Dr. Welch's handling of signals that contain multiple frequencies.

Dr. Welch acknowledges that most "real" signals contain "a range of frequencies" as opposed to just one. (Welch Rebuttal Report ¶¶ 32, 37.) When describing his approach to measuring the signals in the accused products, however, Dr. Welch states that he is seeking to measure "the fundamental frequency," "the actual frequency," and the frequency that "is the dominant energy." (Id. ¶¶ 236, 285 (emphasis in original).) For example, Dr. Welch analyzes the signal depicted below to determine whether it has a 20 Hz or higher frequency:



(Id. ¶ 213.) Dr. Welch measures the signal’s frequency by counting the peaks (“Peak 1,” “Peak 2,” and “Peak 3”) and dividing by the duration of the recording (1 second) to yield a frequency of 3 Hz. Because 3 Hz is less than 20 Hz, Dr. Welch concludes that this signal does not meet the definition of an “input signal.” This approach inherently yields a single number regardless of whether the signal is made up of one or multiple frequencies.

Dr. Welch also examines some measured signals using a mathematical operation called the “Fourier transform,” which shows the extent to which multiple frequencies contribute to the overall makeup of a signal. The two images below show a signal measured by Dr. Welch (left) and the result of applying a Fourier transform (right):



(Id. ¶¶ 251, 253.) The Fourier transform graph shows frequencies greater than 20 Hz, indicated by circled peaks right of the 20 Hz gridline. Dr. Welch opines that those higher-frequency components should be disregarded for two reasons. The first, which Genuine Enabling does not challenge here, is that those higher-frequency components correspond to “distortions, aberrations, [and] ringing” rather than the signal itself. (Id. ¶ 256.) The second reason, which Genuine

Enabling does take issue with, is that the graph on the left (the original signal) shows that “the frequency of the ... signal [is] approximately 7 Hz,” such that components other than 7 Hz should be disregarded. (Id.)

2. Genuine Enabling’s Objection:
Use of Incorrect Claim
Construction

Genuine Enabling argues that Dr. Welch’s approach of assigning a single frequency to each signal contradicts my claim construction. In Genuine Enabling’s view, the construction “[a] signal having an audio or higher frequency” should be read to mean a signal having any frequency component that is an audio or higher frequency. Genuine Enabling argues that expert testimony using an incorrect claim construction is not “helpful” and should therefore be excluded under Rule 702(a). See TQ Delta, 2019 U.S. Dist. LEXIS 188930, at *3, 2019 WL 7667461.

Sony responds that Dr. Welch’s approach of assigning just one frequency to each signal is an issue of methodology, not claim construction. In Sony’s view, because Dr. Welch’s methodology of measuring signals has not been challenged as unreliable, it is up to the factfinder to decide whether they accept a methodology that yields a single frequency or a methodology that yields multiple frequencies.

I agree with Genuine Enabling that whether the phrase “having an audio or higher frequency” may refer to any frequency component is a question of claim construction, not methodology. The issue of whether the word “having” in “having an audio or higher frequency” may refer to any frequency component is a question of the meaning of the claim term (compare “a car having a flat tire” or “a family

having an income of \$50,000 or less”). The disagreement is not how Dr. Welch performs his measurements but what Dr. Welch is seeking to measure. This is an issue of claim construction even though the disputed term comes not from the claim itself but from a definition supplied by a party. See TNS Media Research, 629 F. App’x at 938 (finding the district court should have construed the phrase “at a given time” appearing in a construction but not in the claim itself).

While I agree with Genuine Enabling that the meaning of “having an audio or higher frequency” is a question of claim construction, I disagree that my prior Markman opinion answers that question. The phrase “having an audio or higher frequency” is ambiguous as to whether it may refer to any frequency component or the signal’s “actual” frequency.² Further, I have reviewed the briefs and hearing transcript from the Markman proceeding, and the issue of signals containing multiple frequencies was not raised. I will therefore deny Genuine Enabling’s Motion without prejudice pending possible future resolution of the claim construction issue. See TNS Media Research, 629 F. App’x at 939 (requiring notice and an opportunity to be heard before construing claims).

**E. Dr. Welch’s Enablement Analysis
Based on Bluetooth Technology**

1. Challenged Opinion

Sony’s accused products use Bluetooth as the communication link between the controller and the console. Bluetooth is a standard for wireless communication.

² The Federal Circuit’s construction, which is the same as mine, also does not answer this question.

Dr. Welch opines that the asserted claims are not enabled. To reach this conclusion, Dr. Welch applies the rule that a patent's specification must enable "the full scope of the claimed invention" and assumes that Bluetooth communication meets the claim term "communication means." Dr. Welch opines that the specification would not enable one skilled in the art to use "a wireless (e.g., Bluetooth) format" as the communication means because "[t]he logic design of the framer (34) shown in Fig. 4A is simply too inflexible to handle the latency and other issues that Bluetooth systems must be able to accommodate." (Welch Validity Report ¶ 169) He thus concludes that "if the Asserted Claims are broad enough to encompass Bluetooth, then they are invalid for failing to meet the enablement requirement." (*Id.* ¶ 171.)

2. Genuine Enabling's Objection:
Reference to Technology Post-
Dating the Invention

Genuine Enabling objects that Dr. Welch's proposed testimony is not "helpful" because it suggests two requirement for validity that do not exist. The first is a requirement to enable one skilled in the art to practice the claimed invention with a technology appearing after the patent application was filed—which Genuine Enabling argues includes Bluetooth. The second is a requirement to enable one skilled in the art to build the accused product.

As a matter of substantive patent law, the enablement requirement is based only on the state of the art at the time the application was filed, even if later-emerging technology turns out to fall within the scope of the claim. *In re Hogan*, 559 F.2d 595, 605-07 (C.C.P.A. 1977). Thus, the fact that the accused products use Bluetooth and are alleged to fall within

the scope of the claim is “irrelevant” to the question of whether the asserted patent must enable one skilled in the art to use the invention with Bluetooth. See id.

Sony responds that, in contrast to later-arising technology, technology that is “nascent” at the time of filing (which Sony contends includes Bluetooth) “must be enabled with a ‘specific and useful teaching.’” Chiron Corp. v. Genentech, Inc., 363 F.3d 1247, 1254 (Fed. Cir. 2004) (quoting Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1368 (Fed. Cir. 1997)). However, the cases cited by Sony apply to a different situation. Chiron dealt with the question of whether an earlier application sufficiently enabled a later patent to claim the benefit of the earlier priority date. 363 F.3d at 1254. Genentech, by contrast, observed that where the invention itself is a nascent technology, greater detail is required in the specification to enable it, on the ground that an artisan’s background knowledge of science is less able to fill the gaps. See 108 F.3d at 1367-68. Neither Chiron nor Genentech suggests that an applicant must reach out to enable any nascent developments that might improve the claimed invention.

Nevertheless, I cannot rule on Genuine Enabling’s motion on the present record. The state of the art as of the filing date (June 20, 1998) is disputed, and the parties have offered conflicting evidence. In particular, Sony has offered evidence that wireless technology that would later be incorporated into the Bluetooth specification was known in the art as of the filing date, even though the Bluetooth specification itself had not been published. I will therefore grant in part and deny in part Genuine Enabling’s Motion as to this ground at this time. Dr. Welch must base his enablement analysis on the state of the art as it existed on the filing date. Whether that state of the art

included Bluetooth technology is a factual question that I do not answer at this time.

F. Dr. Welch’s Rebuttal of Dr. Fernald’s Infringement Analysis

1. Challenged Opinion

Two concepts in patent law use the word “equivalent.” The first is structural equivalence, which allows certain claim terms to cover “structure ... described in the specification and equivalents thereof.” 35 U.S.C. § 112(f). The second is the doctrine of equivalents, a judicially created doctrine under which “a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is ‘equivalence’ between the elements of the accused product or process and the claimed elements of the patented invention.” Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 21 (1997). Both forms of equivalence may be analyzed under tests called “function-way-result,” although the two same-named tests differ slightly. Compare Applied Med. Res. Corp. v. United States Surgical Corp., 448 F.3d 1324, 1333 (Fed. Cir. 2006), with Dawn Equip. Co. v. Ky. Farms Inc., 140 F.3d 1009, 1016 (Fed. Cir. 1998).

Genuine Enabling’s expert Dr. Fernald’s report asserts that the accused Sony products literally infringe Genuine Enabling’s patent, using, in certain places, a function-way-result test for structural equivalence. Dr. Welch authored a rebuttal report in which he argues that the accused products do not infringe, also using a function-way-result test in places.

**2. Genuine Enabling’s Objection:
Confusion of “Structural**

Equivalence” with the “Doctrine
of Equivalents”

Genuine Enabling argues that Dr. Welch’s rebuttal testimony should be excluded because it uses the function-way-result test from the doctrine of equivalents rather than the one for structural equivalence.

Assuming Genuine Enabling’s characterization of Dr. Welch’s rebuttal report is correct, it is not a reason to exclude testimony. Dr. Welch is not required to mirror Dr. Fernald’s analytical framework, and, even if Dr. Welch did quote the wrong test, Genuine Enabling offers no explanation for why the error would affect the reliability or helpfulness of his analysis. I will therefore deny Genuine Enabling’s Motion as to this ground.

**G. Mr. Urbanchuk’s Opinion That
Genuine Enabling and Sony Would
Equally Divide Profits from the ’730
Patent**

1. Challenged Opinion

Mr. Urbanchuk calculates Genuine Enabling’s damages using a “hypothetical negotiation” between Genuine Enabling and Sony in which Sony would obtain a license to the ’730 patent. See Lucent Techs., Inc. v. Gateway, Inc., 580 F.3d 1301, 1324 (Fed. Cir. 2009). He first calculates the value of the ’730 patent to Sony by comparing Sony’s gross profit between two versions of its controllers, then estimates how the hypothetical negotiators would divide that profit based on the bargaining positions of the parties and the importance to each of closing the deal, incorporating a set of factors known as the “Georgia-Pacific factors.” See Georgia-Pacific Corp. v. United States Plywood Corp., 318 F. Supp. 1116 (S.D.N.Y.

1970). These factors include: “[t]he nature and scope of the license, as exclusive or non-exclusive ...”; “[t]he licensor’s established policy and marketing program to maintain his patent monopoly by not licensing others ...”; and “[t]he commercial relationship between the licensor and licensee ...”; among many others. *Id.* at 1120.

Mr. Urbanchuk’s report touches on each Georgia-Pacific factor but concludes that relevant data is unavailable for some. For example, Mr. Urbanchuk decides that no contracts provided comparable royalties; he thus excludes that factor from his analysis. Mr. Urbanchuk ultimately concludes: “Based on the preceding, Sony would have agreed to share a significant portion of the ... expected profits related to the ’730 Patent[] from sales of the Accused Controllers. ... Based on my analysis of the Georgia-Pacific Factors, it is my opinion that the parties would have agreed ... to a 50/50 split of the ... expected profits related to the ’730 Patents from sales of the Accused Controllers.” (Urbanchuk Supp. 49-50.)

2. Sony’s Objection: Lack of Support for a 50/50 Profit Split

Sony argues that Mr. Urbanchuk’s valuation opinion should be excluded because Mr. Urbanchuk’s conclusion that Genuine Enabling and Sony would divide profits 50/50 lacks support.

Expert testimony that “fails to tie the [expert’s] theory [of damages] to the facts of the case ... must be excluded.” Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d 1292, 1315 (Fed. Cir. 2011). A plaintiff may not prove damages using a “rule of thumb” that the patentee and alleged infringer would divide profits 25/75. Similarly, an expert may not rely on the “Nash Bargaining Theorem” to derive a 50/50 profit split

without analyzing whether, on the facts of the case, the assumptions underlying the theorem are satisfied. Virnetx, Inc. v. Cisco Sys., Inc., 767 F.3d 1308, 1332 (Fed. Cir. 2014).

Neither of those defects applies to Mr. Urbanchuk's proposed testimony: Mr. Urbanchuk does not rely on a rule of thumb, and he does not use the Nash Bargaining Theorem. Instead, he uses the Georgia-Pacific factors, which "properly tie the reasonable royalty calculation to the facts of the hypothetical negotiation at issue." Uniloc, 632 F.3d at 1317. Sony's objection is not that these factors are improper but that the connection Mr. Urbanchuk attempts to draw between the factors and his ultimate conclusion is too thin.

The reasons for excluding "rule of thumb" testimony do not apply to expert testimony based on the Georgia-Pacific factors. A rule of thumb is an "arbitrary, general rule, unrelated to the facts of [the] case" and "taints the jury's damages calculation." Uniloc, 632 F.3d at 1318. A party who asks the jury to award damages based on an improper consideration risks "mislead[ing] the jury into awarding an unduly high royalty." See Ericsson, Inc. v. D-Link Systems, Inc. 773 F.3d 1201, 1227 (Fed. Cir. 2014). But testimony based on proper considerations, albeit ones that may prove incorrect at trial, does not invite the jury to disregard its responsibility to ground its damages award in the evidence. If the expert's reasoning is unsound, its unsoundness can be uncovered through cross examination.

Sony takes issue with the fact that Mr. Urbanchuk discerned no relevant evidence for the quantitative Georgia-Pacific factors, thus leading him to weigh only the qualitative ones. In particular, Sony

contends that Mr. Urbanchuk should not have excluded comparator licenses postdating the hypothetical negotiation. See M2M Sols. LLC v. Sierra Wireless Am., Inc., No. 14-cv-1102, 2020 WL 7767639, at *17 (D. Del. Dec. 4, 2020) (holding that comparator licenses postdating the hypothetical negotiation may be considered). But an expert is not required to “consider every possible factor to render a ‘reliable’ opinion.” MicroStrategy Inc. v. Bus. Objects, S.A., 429 F.3d 1344, 1355 (Fed. Cir. 2005). The fact that Mr. Urbanchuk could have considered other evidence therefore does not make his opinion inadmissible.

Because Mr. Urbanchuk’s analysis rests on proper factors closely tethered to the facts of the case, and considering the “strong preference for admitting any evidence that may assist the trier of fact,” Pineda, 520 F.3d at 243, I find that Mr. Urbanchuk’s proposed testimony meets the threshold for admissibility under Daubert. See Glielmi v. Raymond Corp., No. 09-cv-5734, 2012 WL 924844, at *7 (D.N.J. March 19, 2012) (“[G]aps or inconsistencies in [an] expert’s reasoning go [to the] weight of the evidence[,] not [its] admissibility[.]”).

I will therefore deny Sony’s Motion as to this ground.

H. Mr. Urbanchuk’s Opinion That Royalties for Non-Infringing Games May Be Included in Damages

1. Challenged Opinion

Although Sony earned revenue from sales of video games that could be played with the accused products, it is undisputed that the games themselves did not infringe. Mr. Urbanchuk nevertheless incorporates a small (1%) share of Sony’s profits from the sale of some non-infringing games in his damages calculation.

To reach this result, Mr. Urbanchuk first describes how features of the accused videogame hardware allegedly derived from the '730 patent increased Sony's ability to sell non-infringing games. Specifically, "Sony's use of the invention claimed in the '730 Patent provided the functionality of allowing a gamer to use a wireless controller with motion control, vibration feedback, and voice." (Urbanchuk Supplemental Report 43.) Mr. Urbanchuk thus determines that "there is a functional relationship between the infringing consoles and controllers, and the non-infringing games." (Id.)

Second, Mr. Urbanchuk opines that the value to Sony of selling consoles includes the value of obtaining an increased ability to sell games that run on those consoles. In Mr. Urbanchuk's opinion, the increased ability to sell games represents most or all of the value of console sales because the hardware is otherwise sold at a loss. "The video game industry is a platform-based industry that follows a razor-blade model—i.e., manufacture and sell consoles at a loss to drive the sale of video games." (Id.)

Combining these two considerations, Mr. Urbanchuk concludes that "the Plaintiff would likely have wanted, and the Defendants would likely have paid, a royalty on the collateral sale of games utilizing the features enabled by the '730 Patent." (Id. at 44.) Mr. Urbanchuk estimates this royalty at 1% of "the sales of games incorporating the motion and voice functionality enabled by the '730 Patent." (Id. at 51.)

2. Sony's Objection: Lack of Apportionment of Royalties to Infringing Products

Sony argues that it is impermissible for Mr. Urbanchuk to calculate damages based on sales of

non-infringing games. In Sony's view, whether to include sales of non-infringing products in a damages calculation must be analyzed under the "entire market value rule," which permits consideration of "unpatented components normally sold with the patented components" only in limited circumstances. See Rite-Hite Corp. v. Kelley Co., Inc., 56 F.3d 1538, 1550, (Fed. Cir. 1995). Because the requirements of that rule are not met, Sony argues that Mr. Urbanchuk's valuation should be excluded.

Genuine Enabling disagrees that the entire market value rule is applicable. In Genuine Enabling's view, the analysis should proceed under the law applicable to "convoyed sales." See Interactive Pictures Corp. v. Infinite Pictures, Inc., 274 F.3d 1371, 1385 (Fed. Cir. 2001) ("The jury was entitled to rely on evidence of bundling and convoyed sales in determining the proper scope of the royalty base.").

"[I]n the context of a utility patent, it is only the patented technology that is taken from the owner, so the value to be determined is only the value that the infringing features contribute to the value of an accused product." Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., 904 F.3d 965, 977 (Fed. Cir. 2018). "[W]here multi-component products are accused of infringement, the royalty base should not be larger than the smallest salable unit embodying the patented invention." Id. Even then, "the patentee must estimate what portion of that smallest salable unit is attributable to the patented technology when the smallest salable unit itself contains several non-infringing features." Id.

Consideration of "bundling and convoyed sales" is appropriate in some cases. See Fujifilm Corp. v. Benun, 605 F.3d 1366, 1373 (Fed. Cir. 2010). The

closest analogy is Deere & Co. v. Int'l Harvester Co., 710 F.2d 1551 (Fed. Cir. 1983), in which it was permissible for the trial court to base its damages calculation in part on “anticipated collateral sales of an admittedly noninfringing product.” Id. at 1559. Other non-precedential decisions have limited consideration of non-infringing sales where evidence did not establish that “the patents ... drove demand” for the non-infringing products. SUNOCO Partners Mktg. & Terminals L.P. v. Powder Springs Logistics, LLC, No. 17-cv-1390, 2020 WL 7330715, at *7 (D. Del. Jan. 13, 2020); Finjan, Inc. v. Blue Coat Sys., Inc., No. 13-cv-03999, 2015 WL 4272870, at *9 (N.D. Cal. July 14, 2015); Zimmer Surgical, Inc. v. Stryker Corp., 365 F. Supp. 3d 466, 491 (D. Del. 2019).

Mr. Urbanchuk’s opinion is that part of the value to Sony of selling a console is the increased opportunity to later sell games—and that the value of an increased opportunity to sell games is partly reflected in the dollar value of Sony’s actual game sales. The present question is not whether Genuine Enabling will present sufficient evidence to meet its burden of production as to these damages; it is whether Mr. Urbanchuk offers a “reliable ... method[]” supported by “sufficient facts or data” to conclude that the value to Sony of a console sale included the value of an increased opportunity to sell games. See Walker, 46 F. App’x at 692 (sufficiency not at issue in a motion to exclude testimony).

Mr. Urbanchuk primarily bases his opinion that sales of consoles drove sales of games on the usual practices of the video games industry, for which he provides substantial background. For example, Mr. Urbanchuk quotes an investor that, in the video game industry, “hardware is sold at a loss, and only by selling software units (its complementary goods) do

platform holders recoup this investment and generate a profit over time.” (Urbanchuk Supplemental Report 9-10.) He also quotes Sony’s Director of Business Insights and Strategy that “[i]f a console does well, then sales of accessories and software, [i.e.] games[,] also do well.” (Id. at 10.) Mr. Urbanchuk corroborates this general proposition with financial information showing that Sony initially sold the PlayStation 2 at a loss. (Id.) Similar numbers are provided for the PlayStation 3, along with a quote from an industry commentator that “Sony’s loss per unit” on the product was “remarkable.” (Id. at 17.)

Mr. Urbanchuk also offers facts to tie Sony’s increased ability to sell games to the features enabled by the ’730 patent as opposed to the consoles’ other features. Specifically, Mr. Urbanchuk only includes in his assessment of per-game royalties games that used features he considers to be enabled by the ’730 patent. (Whether the ’730 patent did in fact enable those features is an engineering issue beyond Mr. Urbanchuk’s expertise.)

The above analysis, if credited, could provide a reliable means for inferring that Sony would be willing to pay some portion of its revenue on noninfringing games in order to obtain the right to sell the infringing consoles. Whether this is sufficient evidence to support a jury verdict for “bundling and conveyed sales” is not presently at issue. Daubert’s reliability requirement does not provide a basis for excluding Mr. Urbanchuk’s proposed testimony, and I will therefore deny Sony’s Motion as to this ground.

I. Mr. Urbanchuk's Setting of the Hypothetical Negotiation

1. Challenged Opinion

Mr. Urbanchuk bases his damages calculation on a hypothetical negotiation between Genuine Enabling and Sony taking place in November 2006. Mr. Urbanchuk chose November 2006 because that is when Sony began selling the PlayStation 3 in the United States, then with the "SixAxis" controller. Although the SixAxis controller is not an accused product, Genuine Enabling contends that the SixAxis controller did, in fact, infringe, and is only not accused because the infringement occurred before the statute of limitations.

2. Sony's First Objection: Incorrect Date for the Hypothetical Negotiation

Sony objects to Mr. Urbanchuk's use of November 2006 as the date for the hypothetical negotiation because, in Sony's view, the correct date is April 2008, the date the first accused controller was sold. Sony further argues that a damages analysis based on the wrong date is not "help[ful]" and should be excluded. See Fed. R. Evid. 702(a).

"The correct determination of [the] date [of the hypothetical negotiation] is essential for properly assessing damages." Integra Lifesciences I, Ltd. v. Merck KGaA, 331 F.3d 860, 870 (Fed. Cir. 2003). "In general, the date of the hypothetical negotiation is the date that the infringement began." LaserDynamics, Inc. v. Quanta Comput., Inc., 694 F.3d 51, 75 (Fed. Cir. 2012).

Neither party cites authority that conclusively resolves whether, in a case in which actual

infringement by non-accused products allegedly began before the statute of limitations, the date of the hypothetical negotiation is the date of first infringement by the non-accused product or the date of first infringement by an accused product. In LaserDynamics, the hypothetical negotiation date for induced infringement was the first date of actual infringement by the person induced, even though the alleged inducer had no knowledge of the infringement and thus no liability at the time. 694 F.3d at 76. In WangLabs, Inc. v. Toshiba Corp., the hypothetical negotiation date occurred when the patent was issued (as the accused products were already being sold at the time), even though the infringer did not receive notice of the patent until later. 993 F.2d 858, 870 (Fed. Cir. 1993). Neither of those cases involved two products, one accused and one not accused. The Federal Circuit did make the general observation that “the six-year limitation on recovery of past damages under 35 U.S.C. § 286 does not preclude the hypothetical negotiation date from taking place on the date infringement began, even if damages cannot be collected until some time later.” LaserDynamics, 694 F.3d at 75.

Closer to the present facts is Applied Medical Resources Corp. v. U.S. Surgical Corp., 435 F.3d 1356 (Fed. Cir. 2006). The issue in Applied Medical was collateral estoppel: whether a determination of a reasonable royalty in one lawsuit over one product was preclusive of the reasonable royalty in a second lawsuit involving the same patent but a different product. In holding that estoppel did not apply, the Federal Circuit stated that “the infringements requiring compensation began at separate and distinct times” and would thus have involved different hypothetical negotiations. Id. at 1361-62. However, the

opinion later qualifies that statement by noting that the two products counted as separate infringements because they were “vastly different” and “involved different infringement issues.” Id. at 1362. Under different facts, “two products, even if not identical, may present the same damages analysis.” Id. at 1363. And the Court noted that the statute of limitations could, as in WangLabs, shift the date of the hypothetical negotiation to a date other than that of first infringement. Id. at 1364.

Although Applied Medical did not reach the issue presented here, it is clear from the Federal Circuit’s reasoning that whether the sale of an earlier infringing but not accused product may be used as the date of the hypothetical negotiation turns on the facts of the case and, in particular, the similarity of the two products. This is consistent with the general principle that patent damages measure the “value of what was taken.” Power Integrations, 904 F.3d at 977. If a patentee can prove that its patent was essential to the launch of an entire product line, the fact that the first product in that line was sold before the statute of limitations would not necessarily preclude accurate consideration of the infringer’s need to use the patent pre-launch, “even if damages cannot be collected until some time later.” LaserDynamics, 694 F.3d at 75.

Accordingly, I find that the date of the hypothetical negotiation turns on disputed facts, which potentially include whether the SixAxis controller was an infringing product and the degree of similarity between the SixAxis and the accused products. These factual disputes cannot be resolved on a motion to exclude testimony. I will therefore deny Sony’s Motion as to this ground.

3. Sony's Second Objection:
Incorrect Parties to the
Hypothetical Negotiation

Sony finally objects that Mr. Urbanchuk's proposed testimony uses Genuine Enabling as one of the parties even though Genuine Enabling did not exist at the time. Sony contends that Mr. Urbanchuk should have used the patentee, Nghi Nho Nguyen.

"[T]he hypothetical negotiation takes place between the patentee and infringer at the time infringement began." Oracle Am., Inc. v. Google Inc., 798 F. Supp. 2d 1111, 1117 (N.D. Cal. 2011). If the current plaintiff was not the patentee at the time, it is improper to use the current plaintiff as the hypothetical negotiator. Id. Accordingly, I will grant Sony's Motion in part as to this ground: Mr. Urbanchuk's testimony must reflect that Nguyen is the hypothetical negotiator, not Genuine Enabling.

However, Sony fails to show how, if at all, changing the hypothetical negotiator from Genuine Enabling to Nguyen would affect Mr. Urbanchuk's calculations. While Sony presents some arguments that the difference could matter (such as that Nguyen is apparently "not greedy"), none so clearly undermines Mr. Urbanchuk's analysis to warrant exclusion of his testimony. I will therefore deny Sony's Motion to the extent it seeks exclusion of any of Mr. Urbanchuk's testimony.

J. Dr. Seth's Damages Analysis Based on Sony's License to Use Bluetooth

1. Challenged Opinion

Dr. Seth is Sony's damages expert. A relevant factor in estimating damages for patent infringement is the royalties the infringer paid for licenses that are

comparable to a hypothetical license for the infringed patent. Bio-Rad Labs., Inc. v. 10X Genomics, Inc. 967 F.3d 1353, 1372 (Fed. Cir. 2020). Dr. Seth considers the royalties Sony paid for the use of Bluetooth technology and concludes that, because Sony paid \$220,000 for Bluetooth, Sony would have paid no more than that for the right to use the '730 patent. (Seth Report ¶ 63.)

Bluetooth is a technology for wireless communication. See Bluetooth Special Interest Group, “A Developer’s Guide to Bluetooth Technology,” <https://www.bluetooth.com/blog/a-developers-guide-to-bluetooth/>. According to Dr. Seth, Sony can only derive benefit from the '730 patent if Sony also uses Bluetooth in its products because Sony cannot transmit “multiple user input data streams ... over the Accused Controllers’ Bluetooth connection to the Accused Consoles” if the Bluetooth link is removed. Dr. Seth therefore concludes that both “a license to the '730 Patent and a license to Bluetooth ... are equally necessary” to achieve “that specific functionality.” (Seth Report ¶ 64.)

A manufacturer seeking to use Bluetooth technology in its product must become a member of the Bluetooth Special Interest Group and qualify its products with that organization. (Seth Report ¶¶ 68, 71.) The Bluetooth Special Interest Group has “over 36,000” members, and companies can join the organization for a fee. (Id. ¶ 68.) Sony and its related entities would have paid a total of between \$110,000 and \$220,000 for membership in the organization and qualification of the accused products. (Id. ¶ 78.) Using a principle termed the “symmetry axiom,” Dr. Seth concludes that Sony would have paid equal value for two blocking technologies, making \$220,000 an “upper bound” for the value of a license for the '730 patent. (Id. ¶¶ 64, 65 n.140)

2. Genuine Enabling's First
Objection: Misunderstanding of
the Technological Relationship
Between Bluetooth and the '730
Patent

Genuine Enabling first argues that Dr. Seth's proposed valuation testimony should be excluded because Dr. Seth fails to demonstrate that Bluetooth is "technologically ... []comparable" to the '730 patent. See Bio Rad, 967 F.3d at 1373. Genuine Enabling contends that Dr. Seth inaccurately assumed that all elements of the '730 patent are practiced on the Bluetooth modules of the accused controllers.

Genuine Enabling's argument rests on a mischaracterization of Dr. Seth's report, which does not assume that all steps necessary to infringe the '730 patent are performed in the Bluetooth module. Rather, Dr. Seth opines that Bluetooth is technologically comparable to the '730 patent because both are equally necessary to transmit a combined data stream from the controller to the console. Moreover, Dr. Seth is not Sony's engineering expert, and a Daubert motion directed to an economics expert is not an appropriate vehicle to test the sufficiency of evidence on the technical relationship between Bluetooth and the '730 patent. See Walker, 46 F. App'x at 692 (sufficiency not at issue on a motion to exclude evidence).

I will therefore deny Genuine Enabling's Motion as to this ground.

3. Genuine Enabling's Second
Objection: Failure to Analyze
Economic Comparability

Genuine Enabling next argues that Dr. Seth's valuation analysis should be excluded because Dr.

Seth fails to show that Sony's license to use Bluetooth technology is economically comparable to a hypothetical license for the '730 patent.

While damages testimony based on comparator licenses requires that those licenses be, in fact, "comparable" to a hypothetical license for the asserted patent, "the issue of comparability is often one of sufficiency of the evidence, not admissibility." Bio-Rad, 967 F.3d at 1373. Daubert requires only that "there ... be a basis in fact to associate the royalty rates used in prior licenses to the particular hypothetical negotiation at issue in the case." Uniloc USA, Inc. v. Microsoft Corp., 632 F.3d at 1317. Once that threshold is met, "[t]he degree of comparability of ... license agreements ... [is] [a] factual issue[] best addressed by cross examination and not by exclusion." ActiveVideo Networks, Inc. v. Verizon Comms., Inc., 694 F.3d 1312, 1333 (Fed. Cir. 2012).

I conclude that Dr. Seth has met that minimal threshold. She opines that removal of either Bluetooth or the '730 patent from the accused products would render them inoperable and offers an economic justification for why the licensors of those two technologies would split the profits accruing from the combination. I will therefore deny Genuine Enabling's argument to the extent it seeks to preclude Dr. Seth from placing any reliance on Sony's licensing of Bluetooth in rendering her opinion.

However, mindful that the threshold for admissibility is not high, I do find that Dr. Seth's ultimate conclusion that \$220,000 is an "upper bound" for the royalty Sony would have paid for the '730 patent goes farther than Uniloc allows. According to Dr. Seth, Sony obtained the right to use Bluetooth technology by paying, along with 36,000 other

companies, a flat fee for membership in an organization and qualification of its products. Dr. Seth then concludes that Sony would have paid no more than that same flat fee for the '730 patent because both are necessary to transmit a combined data stream from the accused controllers to the accused consoles—essentially, that both are necessary for the product to work.

Dr. Seth does not attempt to account for the stark differences between a technology available to all manufacturers equally on a flat fee and Sony's hypothetical negotiation with a single patentholder. "Testimony relying on licenses must account for ... distinguishing facts when invoking them to value the patented invention." Ericsson, Inc. v. D-Link Systems, Inc., 773 F.3d 1201, 1227 (Fed. Cir. 2014). In fact, Dr. Seth's analysis could be copied verbatim to measure the value of any technology in any product that also requires Bluetooth, on the theory that licensors of blocking technologies would share profits equally. Dr. Seth's "upper bound" conclusion is therefore "detached from the facts of [this] case" and must be excluded. ART+COM Innovationpool GmbH v. Google, Inc., 155 F. Supp. 3d 489, 515 (D. Del. 2016).

In its briefing, Sony points out a fact not stated in Dr. Seth's report: that, under Genuine Enabling's infringement theory, the Bluetooth module of the accused products itself is used to satisfy some of the elements of the asserted claims. However, this observation differs from Dr. Seth's actual reasoning, which, as noted, is based on the fact that both Bluetooth and the '730 patent are blocking technologies, not on the physical portion of the product in which those technologies are utilized. Significantly, Dr. Seth herself does not rely on the physical

proximity of the two technologies to argue that the two licenses would be economically comparable.

I will therefore grant Genuine Enabling's Motion but only to the extent that Dr. Seth is precluded from testifying that Sony's royalty for Bluetooth technology is an "upper bound" to the royalty Sony would have paid for the '730 patent merely because both are blocking technologies. Dr. Seth is not otherwise precluded from referencing Sony's license for Bluetooth technology, incorporating it in her valuation analysis, or arguing that it is indicative of the value of the '730 patent to Sony.

K. Dr. Seth's Analysis of Other Licenses

1. Challenged Opinion

Dr. Seth also surveys other licenses Sony purchased related to the accused products. Dr. Seth does not derive a valuation number from these licenses but opines that they are "consistent" with the valuation derived from Sony's Bluetooth license. (Seth Report ¶ 83.)

2. Genuine Enabling's Objection:
Failure to Analyze Technological
and Economic Comparability

As with Dr. Seth's analysis of Sony's Bluetooth license, Genuine Enabling argues that Dr. Seth's analysis of these licenses should be excluded because Dr. Seth did not adequately consider whether these licenses are technologically and economically comparable to a hypothetical license for the '730 patent.

Technological comparability is an engineering issue not properly directed to Dr. Seth. As to economic comparability, for each comparator license, Dr. Seth evaluates whether the time frame and territory are

comparable. Where available, Dr. Seth evaluates the term of the license and the scope of products covered. Where these factors differ, Dr. Seth explains how the difference would affect the comparison. This analysis is sufficiently reliable to support the limited purpose for which Dr. Seth uses these licenses.

I will therefore deny Genuine Enabling's Motion as to this ground.

V. CONCLUSION

For the reasons given, the Motions to Exclude expert testimony are granted in part and denied in part as described above.

An appropriate order follows.

**APPENDIX E: DISTRICT COURT *MARKMAN*
OPINION, FILED MARCH 9, 2020**

UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

GENUINE ENABLING TECHNOLOGY, LLC, Plaintiff, v. SONY CORPORATION, et al., Defendants.	: : : : : : : : : : :	Civil Action No. 17-cv-135
---	--	--

Goldberg, J.

March 9, 2020

MEMORANDUM OPINION

Plaintiff Genuine Enabling Technology LLC (“GET”) alleges that Defendants Sony Corporation and Sony Interactive Entertainment LLC (collectively, “Sony”) have infringed GET’s U.S. Patent No. 6,219,730 through the development, manufacture, and sale of video game products, such as console systems and controllers. The parties seek construction of eleven of the patent’s disputed terms pursuant to Markman v. Westview Instruments, Inc., 52 F.3d 967, 976 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996).¹

¹ On May 18, 2017, Chief Judge D. Brooks Smith of the United States Court of Appeals for the Third Circuit designated

I. FACTUAL AND PROCEDURAL BACKGROUND²**A. The Invention**

On April 17, 2001, the United States Patent and Trademark Office (“PTO”) issued U.S. Patent No. 6,219,730 (the “’730 Patent”), entitled “Method and Apparatus for Producing a Combined Data Stream and Recovering Therefrom the Respective User Input Stream and at Least One Input Signal,” to Nghi Nho Nguyen.³

GET’s action alleging infringement of this patent centers on how Sony’s hand-held video game controllers communicate information to the video game console. In the simplest terms, when a player moves the hand-held controller, it communicates a signal to the video game console so that the character on the screen will also move. The controller is also able to simultaneously communicate a separate signal to the console when the player pushes a button. These two signals, as GET alleges, are different types—the signal from the player’s push of a button is “slow-varying” and the signal from the movement of the controller is higher frequency or a faster signal. GET asserts that, before the claimed invention, a slow-varying signal and a higher frequency signal could not be simultaneously received by a computer, or, in this case, a video game console, without colliding. “The inventor [of the ‘730 Patent] solved . . . this problem of being able to keep those [signals] in synchrony or

me as a visiting judge for the United States District Court for the District of Delaware, pursuant to 28 U.S.C. § 292(b), to handle this and other District of Delaware cases.

² The following facts are derived from the Complaint, the ‘730 Patent, and the parties’ claim construction briefs.

³ The inventor and patentee, Nghi Nho Nguyen, is also the owner and sole employee of GET.

coordinated in timing and communicate it to the gaming console. So that the gaming console receives both pieces of information, the push button information as well as the movement information, and can then process it for the game. So the player then visually sees whatever it is he or she did at the game controller.” (Markman Hearing Tr., 12/3/19, at 8:8–21.) It is on the basis of this capability that GET alleges infringement of the ‘730 Patent.

Additional relevant background is detailed in the ‘730 Patent itself. As it states, computers utilize user input devices to receive their users’ input. They also use “various kinds of input/output [(“I/O”)] cards or devices to handle I/O signals or information.” (‘730 Patent, col. 1, lines 16–17.) Typical user input devices are the mouse, the trackball, or the keyboard, and common I/O cards include “the sound card handling I/O speech signals and the fax/modem device transferring information over the telephone line.” (Id. at col. 1, lines 20–22.)

These devices and cards require and share “common computer resources such as the direct memory access (DMA) channels and the interrupt request services (IRQ).” (Id. at col. 1, lines 22– 24.) However, computer resources for each card or each device have to be “configured, or assigned, to prearranged memory locations that are limited in number.” (Id. at col. 1, lines 26–27.) At the time that the ‘730 Patent was granted, configuration setup for computer resources was “cumbersome” and “sometimes cause[d] conflict in running software.” (Id. at col. 1, lines 28–20.) Although “plug-and-play technology” existed to “alleviate the configuration mechanism,” it did not solve the problem of limited resources shared among cards and devices. (Id. at col. 1, lines 30–33.) The claimed invention seeks to do so:

As computer technology advances, more cards and devices are offered for richer sets of functions; efficient use of computer resources becomes critical. Furthermore, a conventional computer requires that its user be close to its display screen in order to see and control what is shown on the screen. If somehow the user could issue commands to her computer and receive its responses remotely, she would gain a new freedom, such as walking around or staying in bed, while using the computer. The present invention offers a new kind of [user input device] utilizing the computer resources efficiently and enabling a mode of remote interaction between the computer and its user.

(Id. at col. 1, lines 33–44.) The ‘730 Patent’s “new kind of user input device” “receiv[es]/transmit[s] additional I/O signals transferred to/from the computer, without using any computer resources except those available to the [user input device.]” (Id. at col. 1, lines 46–51.)

B. Claim Construction

GET initiated an action for infringement of the ‘730 Patent on February 8, 2017, alleging direct infringement, inducement of infringement, and contributory infringement. GET asserts that Sony has infringed, and continues to infringe, at least one of the claims of the ‘730 Patent by “making using selling, offering for sale and/or importing into the United States user input devices and video game consoles, including [the Sony PlayStation® 3 console system, the Sony PlayStation® 4 console system, the Sony DualShock® 3 controller, and the Sony DualShock® 4 controller].” (Compl. ¶¶ 22–24.) For example, GET alleges that the Sony DualShock® 3 controller is a

user input device that communicates via Bluetooth with the “PlayStation 3 Console” and meets every element of the ‘730 Patent’s claim 16. (Id. at ¶ 23–24.) Sony denies infringement and asserts that the ‘730 Patent is invalid.

On July 13, 2019, GET submitted its opening claim construction brief regarding disputed terms in the following claims of the ‘730 Patent:

1. A user input apparatus operatively coupled to a computer via a communication means additionally receiving at least one input signal, comprising: user input means for producing a user input stream; input means for producing the at least one input signal; converting means for receiving the at least one input signal and producing therefrom an input stream; and encoding means for synchronizing the user input stream with the input stream and encoding the same into a combined data stream transferable by the communication means.⁴

10. The apparatus of claim 1 wherein the input means is an input transducer.

14. A programming method, executed by a computer communicatively coupled via a communication link to a user input means having means for synchronizing and encoding a user input means and at least one additional input signal into a combined data stream, comprising the steps of: initializing

⁴ GET explicitly states that it is not asserting an infringement theory based on claim 1. (Markman Hearing Tr., 12/3/19, at 67:24–68:19.) However, Sony argues that claim 1 is in dispute, specifically regarding the term, “input means for producing at least one input signal,” discussed infra.

the communication link; servicing a single resource service interrupt for receiving the combined data stream; and recovering from the combined data stream respective information of the user input means and of the at least one additional input signal.

16. An apparatus linked to a computer by a communication link, functioning as a user input device and additionally receiving at least one input signal, comprising: a user input device producing a user input stream; an input port receiving at least one input signal; a converter receiving the at least one input signal for producing an input stream; and a framer synchronizing the user input stream with the input stream and encoding the same into a combined data stream transferable by the communication link.

17. The apparatus of claim 16 further comprises means for receiving an output stream from the computer via the communication link and means for converting the output stream into at least one signal.

18. The apparatus of claim 16 wherein the converter further comprises an output port wherein the framer further receives an output stream from the computer via the communication link, the output stream being further received and converted by the converter into at least one input signal going to the output port.

21. A user input apparatus operatively coupled to a computer via a communication link receiving user input signals and

additionally at least one digital input signal comprising: a user input device for producing a user input stream; an input port for producing the at least one digital input signal; and a framer for keeping the user input stream and the at least one digital input signal in synchrony and encoding the same into a combined data stream transferable to the computer by the communication link.

22. The apparatus of claim 21 wherein the framer further receives output information from the computer to provide at least one input signal.

23. The apparatus of claim 22 further comprises an output transducer converting the at least one output signal into output energy.

(Id. at col. 7, line 13–col. 8, line 4, 26–27; id. at col. 8, line 37–col. 10, line 15.)

I held a Markman hearing regarding these disputed terms on December 3, 2019. Having fully reviewed the parties’ briefing on these terms, I now set forth their construction.

II. LEGAL STANDARD

Claim construction is the first step in the infringement analysis. At claim construction, the court defines the meaning and scope of the disputed claim terms. See Markman, 52 F.3d at 976. Claim construction is an issue of law for the court to decide. Id.

Following claim construction, the court’s interpretations are used by the factfinder to

determine whether there has been infringement, by comparing the asserted claims with the accused device or prior art. Id.

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*) (internal quotation marks omitted). Thus, the focus of a court’s analysis must therefore begin and remain on the language of the claims, “for it is that language that the patentee chose to use to ‘particularly point[] out and distinctly claim[] the subject matter which the patentee regards as his invention.’” Interactive Gift Express, Inc. v. Compuserve, Inc., 256 F.3d 1323, 1331 (Fed. Cir. 2001). There is a “heavy presumption” that the terms of a claim have their ordinary and customary meaning. Texas Digital Sys., Inc. v. Telegenix, Inc., 308 F.3d 1193, 1202 (Fed. Cir. 2002). That ordinary meaning “is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application.” Phillips, 415 F.3d at 1313.

Generally, a person of ordinary skill in the art (“POSA”) would not understand the ordinary and customary meaning of a claim term in isolation. As such, the ordinary meaning may be derived from a variety of sources including intrinsic evidence, such as the claim language, the written description, drawings, and the prosecution history; as well as extrinsic evidence, such as dictionaries, treatises, or expert testimony. Dow Chem. Co. v. Sumitomo Chem. Co., Ltd., 257 F.3d 1364, 1373 (Fed. Cir. 2001).

The “most significant source” of authority is “the intrinsic evidence of record, i.e., the patent itself,

including the claims, the patent specification⁵ and, if in evidence, the prosecution history.” Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996); see also Phillips, 415 F.3d at 1313 (holding that a POSA is deemed to read the claim terms in the context of the entire patent, including the specification). The specification “is the single best guide to the meaning of a disputed term” and is usually dispositive as to their meaning. Vitronics, 90 F.3d at 1582. Although it is improper to import limitations from the specification into the claims, “one may look to the written description to define a term already in a claim limitation, for a claim must be read in view of the specification of which it is a part.” Renishaw PLC v. Marposs Societa’ per Azioni, 158 F.3d 1243, 1248 (Fed. Cir. 1998). On occasion, “the specification may reveal a special definition given to a claim term . . . that differs from the meaning it would otherwise possess. In such cases, the inventor’s lexicography governs.” Phillips, 415 F.3d at 1316. The specification may also reveal an intentional disclaimer, or disavowal, of claim scope by the inventor . . . [, which] is regarded as dispositive.” Id. “The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.” Renishaw, 158 F.3d at 1250.

The court “should also consider the patent’s prosecution history, if it is in evidence.” Markman, 52 F.3d at 980. This consists of “the complete record of proceedings before the Patent Office and includes the

⁵ The specification is “that part of a patent application which precedes the claim and in which the inventor specifies, describes, and discloses the invention in detail.” McCarthy’s Desk Encyclopedia of Intellectual Property 408 (2d ed. 1995).

prior art cited during examination.” Phillips, 415 F.3d at 1317. “Like the specification, the prosecution history provides evidence of how the [PTO] and the inventor understood the patent.” Id. at 1317. Nonetheless, it is the least probative form of intrinsic evidence because it “represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation.” Id.

If ambiguity still exists after considering all intrinsic evidence, the court may rely on extrinsic evidence, which is “all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises.” Markman, 52 F.3d at 980. “[D]ictionaries, and especially technical dictionaries, . . . have been properly recognized as among the many tools that can assist the court in determining the meaning of particular terminology.” Phillips, 415 F.3d at 1318. Additionally, expert testimony can provide background on the technology at issue, explain how it works, speak to what a POSA would understand, and establish that a particular term has a particular meaning in the pertinent field. Id. Notably, however, extrinsic evidence is “less significant than the intrinsic record in determining ‘the legally operative meaning of claim language.’” C.R. Bard, Inc. v. U.S. Surgical Corp., 388 F.3d 858, 862 (Fed. Cir. 2004) (quoting Vanderlande Indus. Nederland BV v. Int’l Trade Comm’n, 366 F.3d 1311, 1318 (Fed. Cir. 2004)).

III. DISCUSSION

Eleven claim terms in the ‘730 Patent are disputed. The parties disagree on the correct construction of the following terms: (1) “input signal”; (2) “combined data stream”; (3) “input means for

producing at least one input signal”; (4) “framer”; (5) “converter”; (6) “communication means”; (7) “means for receiving an output stream from the computer via the communication link”; (8) “user input means”; (9) “encoding means”; (10) “means for converting the output stream into at least one output signal”; and (11) “converting means.”

A. “Input Signal”

The first disputed claim term is “input signal.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
10, 14, 16–18, 21–23	A signal having an audio or higher frequency. (Pl.’s Opening Claim Constr. Br., Ex. 2, at 2.)	A signal that comes from a source different from those of motion and selection units. (<u>Markman</u> Hearing Tr., 12/3/19, at 47:2–5; id. at 55:1–25.)

The parties’ dispute over this construction centers on whether GET disavowed the scope of the term during prosecution. Both parties rely primarily on the prosecution history in support of their proposed constructions.

Like the specification, the prosecution history may be useful in revealing either a special meaning assigned by the patentee to the term or a disclaimer clarifying what the claims do not cover. Phillips, 415 F.3d at 1317. Thus, examination of a patent’s prosecution history and the application of prosecution disclaimer is a helpful tool during claim construction as it “ensures that claims are not construed one way in order to obtain their allowance and in a different way against accused infringers.” Chimie v. PPG Indus., Inc., 402 F.3d 1371, 1384 (Fed. Cir. 2005).

However, a court's reliance on prosecution history must be tempered with the recognition that a "prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation." Phillips, 415 F.3d at 1317. A prosecution history "often lacks the clarity of the specification and thus is less useful for claim construction purposes." Id. Prosecution disclaimer is not appropriate in instances "where the alleged disavowal of claim scope is ambiguous," or where remarks made by an inventor to overcome a rejection may be viewed "as amenable to multiple reasonable interpretations." Omega Eng'g, Inc. v. Raytek Corp., 334 F.3d 1314, 1324 (Fed. Cir. 2003) (citing N. Telecom Ltd. v. Samsung Elec. Co., 215 F.3d 1281, 1293–95 (Fed. Cir. 2000)). Rather, "for prosecution disclaimer to attach, [Federal Circuit] precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable." Id. at 1325–26; Cordis Corp. v. Medtronic Ave, Inc., 511 F.3d 1157, 1177 (Fed. Cir. 2008) (reiterating that "arguments made to distinguish prior art references" will be considered disavowals "only if they constitute clear and unmistakable surrenders of subject matter").

Here, the parties agree that, during prosecution, the patentee, Nghi Nho Nguyen, refined his invention and limited the scope of the claims. Their only dispute is what, in fact, was disavowed.

Consistent with its proposed construction, GET acknowledges that during prosecution the patentee limited "input signal" to those signals that have a higher frequency than the prior art—specifically, an audio frequency or higher. Sony argues that the patentee further limited "input signal," describing the "high frequency input signal" claimed by the invention

as coming from “a source different from those of motion and selection units.” (Defs.’ Responsive Claim Constr. Br. at 5.)

The PTO originally rejected the ‘730 Patent over U.S. Patent No. 5,990,866 (“Yollin”) in part because of the claim term “input signal”: “Yollin teaches the invention substantially as claimed including . . . an input for delivering at-least-one input signal [i.e., input information received from motion translation unit 102, user selection unit 104 and physiological response sensor(s)]” (‘730 Patent File History, Office Action dated March 20, 2000, ECF No. 67-3, at 53.) In response, the patentee submitted the following in an attempt to differentiate his invention from Yollin:

Yollin’s invention, . . . utilizes various implementations and configurations for receiving input from motion translation unit 102, user selection unit 104 and physiological response sensor(s) 106, and for processing their information prior to communication to the host system However, Yollin only uses the configuration to receive the slow varying signal coming from the physiological response sensor(s). Yollin is not motivated and does not anticipate their use for receiving signals containing audio or higher frequencies in place of the physiological response sensor(s). **The high frequency input signal, which comes from a source different from those of motion and selection units, will run asynchronously relative to, and collide with, the other signals.** Yollin’s invention does not teach or suggest any approach for receiving and recovering that kind of input signal. Yollin’s

invention utilizes . . . a controller to receive positional change information, user selection information and physiological change information to generate . . . a composite control signal but does not anticipate its use with signals containing audio or higher frequencies. Using a controller to generate the composite control signal out of the information changes, which are slow-varying, is standard and not worth mentioned [sic] in Yollin's description. Difficulties will arise when one signal runs asynchronously relative to another signal and fast. Yollin's patent does not teach or suggest any method for the controller to receive and recover such signals. In contrast, this invention describes, in its representative embodiments, how to combine the data from a UID (mouse) and from a high-frequency signal, via a framer, which is unique and novel.

(‘730 Patent File History, Response dated September 20, 2000, ECF No. 67-3, at 70–71 (emphasis added).)

Sony relies on the single statement set forth above in bold to support its scope disavowal argument. Sony posits that, based on this phrase, the construction of “input signal” should explicitly exclude signals coming from motion or selection units. Sony contends that, as a result of this disavowal, GET cannot now claim that the invention includes video game controllers with accelerometers or, in other words, motion sensors. (Markman Hearing Tr., 12/3/19, 10:10–13 (“When you move the controller, the accelerometer in the controller, that’s the thing that actually figures out the position that you’re moving to, the movement, that’s a higher . . . frequency signal.”).)

GET responds that the patentee did not distinguish the prior art based on whether the sensor was a motion or selection unit, but rather based on the speed or frequency of the signals. GET maintains that during prosecution the patentee repeatedly characterized “input signal” as a signal “containing an audio or higher frequency.” (Pl.’s Opening Claim Constr. Br. at 17.)

I agree with GET’s proposed construction. The following portions of the prosecution history reflect that the patentee’s explanation distinguishing Yollin is focused on the frequency of the input signals, not the type of sensors:

Yollin only uses the configuration to receive the slow varying signal coming from the physiological response sensor(s). Yollin is not motivated and does not anticipate their use for receiving signals containing audio or higher frequencies

Difficulties will arise when one signal runs asynchronously relative to another signal and fast. Yollin’s patent does not teach or suggest any method for the controller to receive and recover such signals. In contrast, this invention describes, in its representative embodiments, how to combine the data from a UID (mouse) and from a high-frequency signal, via a framer, which is unique and novel.

(‘730 Patent File History, Response dated September 20, 2000, ECF No. 67-3, at 70–71.)

When read in the context of the patentee’s full response, I conclude that the scope of “input signal” is not limited to signals from sources different from “motion and selection units.” The patentee’s statement

to the PTO was that the “high frequency input signal” in *his* invention comes from a source different from the “motion and selection units” in *Yollin’s* invention because the high frequency input signal claimed by the ‘730 Patent “will run asynchronously relative to, and collide with” the slow varying signals produced by the motion and selection units claimed in *Yollin*. (*Id.*) This is because *Yollin’s* invention embodies a configuration for receiving only slow varying signals from motion and selection units and physiological response sensors and does not teach a method for receiving signals containing audio or higher frequencies. The ‘730 Patent teaches such a method. Therefore, the claimed invention’s description of how to combine data from slow varying and higher frequency signals is the basis for its distinction from *Yollin*.

GET also argues that, in a prior Patent Trial and Appeal Board (“PTAB”) *inter partes* review proceeding (“IPR”) involving the ‘730 Patent, the PTAB construed “input signal” as a signal “having an audio or higher frequency.” (Sony IPR Decision, dated March 14, 2018, ECF No. 67-6, at 11.) The PTAB’s construction is not binding on this Court, but, “where the construction is similar to that of a district court’s review,” it is appropriate for me to take the PTAB’s claim construction into consideration. SunPower Corp. v. PanelClaw, Inc., No. 12-1633, 2016 WL 1293479, at *6 (D. Del. April 1, 2016).

Here, I find the PTAB’s reasoning to be persuasive. The issue of whether there was disavowal of the scope of “input signal” during prosecution was also before the PTAB. (Sony IPR Decision, dated March 14, 2018, ECF No. 67-6, at 9.) In concluding that the arguments in the prosecution history “clearly and unmistakably disavow any interpretation of

‘input signal’ that encompasses a signal that is slow-varying and not a high-frequency signal (i.e., audio or higher frequency),” the PTAB also relied on statements by the patentee distinguishing Yollin from the ‘730 Patent. (*Id.* at 10–11.) The PTAB likewise interpreted “input signal” as “a signal ‘having an audio or higher frequency.’” (*Id.* at 11.)

Based on my review of the prosecution history, I will adopt GET’s proposed construction of **“input signal”** as **“A signal having an audio or higher frequency.”**

B. “Combined Data Stream”

The second claim term in dispute is “combined data stream.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
10, 14, 16–18, 21–23	No construction necessary. Alternatively, a data stream resulting from synchronizing and merging the user input stream and the input stream. (Pl.’s Opening Claim Constr. Br., Ex. 2, at 6.)	A data stream including data from the user input stream and the input stream without a distinct identification of each source. (Defs.’ Responsive Claim Constr. Br. at 7.)

The focus of the parties’ dispute on this term pertains to Sony’s addition of “without distinct identification of each source” to its proposed construction.

GET relies on the claim language to support its argument that no construction of this term is necessary, arguing that each independent claim (1, 14, 16, 21) defines “combined data stream.” (Id. at col. 8, lines 1–2 (“synchronizing the user input stream with the input stream and encoding the same into a combined data stream”); id. at col. 8, lines 39–41 (“synchronizing and encoding a user input stream and at least one input signal into a combined data stream”); id. at col. 9, lines 7–9 (“a combined data stream containing synchronized and encoded information of a user input means and of at least one additional input signal”).)

GET also argues that the specification is consistent with the definition of “combined data stream” as taught by these claims. (‘730 Patent, Abstract (“A communication program method, by which a computer receives a combined data stream resulted from two sources, one from a [user input device] another from an additional input signal, recovers from such stream the respective information of the two sources.”); id. at col. 2, lines 63–67 (“Another object of the invention provides a method for receiving a combined data stream, resulted from a [user input device] and from an input signal, and for recovering therefrom the respective information of the [user input device] and of the input signal.”).)

Sony responds that GET limited the scope of this claim term in the prosecution history when distinguishing U.S. Patent No. 5,870,080 (“Burnett et al.”). In support of this alleged disavowal, Sony points to the following statements in response to the PTO’s rejection of the ‘730 Patent over Burnett et al.:

Burnet et al.’s invention uses two
[multiplexers/demultiplexers] placed at its

both ends in order to interleave, and later separate, the two signals of the mouse and of the transceiver In contrast, this invention implements a framer in place of the first [multiplexer/demultiplexer] to combine the two signals into a combined data stream which is communicated to the computer without needing the second [multiplexer/demultiplexer]. Thus, this invention does not use the [multiplexer/demultiplexer] 107 shown in Fig. 3, and consequently does not modify the computer between its port 125 and bus 101.

Burnett et al.'s invention, by relying on the second [multiplexer/demultiplexer] 107 to separate the two sources of signals, **receives their data with distinct identification of each source**, therefore requires and maintains the number of resources needed for both devices, of the mouse and of the transceiver. In contrast, this invention's computer method of receiving the combined data stream received at port 103 **without first identifying the data**, whether mouse's or transceiver's. It therefore uses only a single resource to receive the combined data.

(“730 Patent File History, Response dated September 20, 2000, ECF No. 67-3, at 68–69 (emphasis added).) Sony contends, based on the bolded phrases set forth above, that the data from the user input stream and the input stream combine “without a distinct identification of each source.” GET responds that there is no language in the specification to support this limitation and that the patentee's distinction of Burnett et al. was based on the structure or type of device used to receive the two signals, not the content

of the signals and whether the combined signal had information about its source. For the following reasons, I agree with GET.

My initial focus must be on the language of the claims. Interactive Gift Express, Inc. v. Compuserve, Inc., 256 F.3d 1323, 1331 (Fed. Cir. 2001). Here, the claims define “combined data stream.” (See, e.g., ‘730 Patent, col. 8, lines 1–2 (“synchronizing the user input stream with the input stream and encoding the same into a combined data stream”).) Moreover, the specification does not teach a requirement or limitation that the data stream is combined “without a distinct identification of each source.” Rather, it clearly states that the data from the two streams (input stream and user input stream) can be recovered by the computer after transmission. (Id. at col. 7, lines 47–51 (“[A] communication method by which a computer, receiving a combined data stream associated with two sources of information, one from a user input means and another from an input signal, recovers from such data the respective information of the two sources.”).)

Additionally, I conclude that the patentee did not clearly and unmistakably disavow the scope of the claim term in his distinction of the Burnett et al. patent. See Cordis Corp. v. Medtronic Ave, Inc., 511 F.3d 1157, 1177 (Fed. Cir. 2008) (reiterating that “arguments made to distinguish prior art references” will be considered disavowals “only if they constitute clear and unmistakable surrenders of subject matter”). Sony reads the patentee’s remarks out of context. The focus of the patentee’s response regarding Burnett et al. is the claimed invention’s structure, that is, the ‘730 Patent’s use of a framer instead of a multiplexer/demultiplexer at each end. (‘730 Patent File History, Response dated September

20, 2000, ECF No. 67-3, at 69 (“In contrast, this invention implements a framer in place of the first [multiplexer/demultiplexer] to combine the two signals into a combined data stream which is communicated to the computer without needing the second [multiplexer/demultiplexer].”).) As characterized by the patentee, the multiplexer/demultiplexers at the receiving end of Burnett et al.’s invention separate or split the combined signal so that each data component can be received by its own computer resource. The claimed invention is different because the combined data stream is received by a common computer resource and the respective input streams are recovered after they are received by the computer.

Finally, the patentee’s explanation that Burnett et al.’s invention “receives [its] data with distinct identification of each source [and] therefore requires and maintains the number of resources needed for both devices” is not a comment on the content of the combined data stream in the claimed invention. Rather, it is an explanation of how Burnett et al.’s invention receives data based on each source’s distinct identity. The patentee distinguishes his invention on this basis—the claimed invention allows a computer to receive the combined data stream without needing to first identify which data is which so that a single resource on a computer can be shared between the two data sources. This reading is supported by the goals of the invention set forth in the specification—to utilize computer resources more efficiently by providing “an apparatus functioning as a [user input device] to a computer while receiving/transmitting additional [input/output] signals transferred to/from the computer without using any computer resources

except those available to the [user input device].” (‘730 Patent, col. 1, lines 43–44, 46–50.)

Based on the definition of “combined data stream” recited in the claims and my review of the prosecution history, I conclude that **no construction is necessary** for the term **“combined data stream.”**

C. “Input Means for Producing at Least One Input Signal”

The third claim term in dispute is “input means for producing at least one input signal.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
10	The input means is an input transducer. (Pl.’s Opening Claim Constr. Br., Ex. 2, at 17.)	Function: Producing at least one input signal. Structure: An input transducer that is part of a microphone or fax/modem device. (<u>Markman</u> Hearing Tr., 12/3/19, at 72:20–73:1.)

The parties disagree on whether this claim term should be construed as a means-plus-function limitation and, therefore, governed by 35 U.S.C. § 112(f) (formerly, § 112, ¶ 6). Specifically, their dispute centers on whether “input means” should be construed as recited in independent claim 1, in light of GET’s argument that it is only asserting dependent claim 10 for purposes of infringement.

In construing claim terms, a court must consider whether they qualify as “mean-plus-function”

limitations. Means-plus-function claim elements are interpreted according to 35 U.S.C. § 112(f):

An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

The statute establishes a two-step process for courts to follow in construing means-plus-function limitations: (1) construe the function recited; and (2) determine what structures the specification discloses to perform that function. Kemco Sales, Inc. v. Control Papers Co., 208 F.3d 1352, 1361 (Fed. Cir. 2000). When the specification discloses “distinct and alternative structures for performing the claimed function,” the proper construction embraces each such structure. Creo Prods., Inc. v. Presstek, Inc., 305 F.3d 1337, 1346 (Fed. Cir. 2002); see also Ergo Licensing, LLC v. Carefusion 303, Inc., 673 F.3d 1361, 1363 (Fed. Cir. 2012).

The Federal Circuit has emphasized that the “essential inquiry” in determining whether a term is governed by the means-plus-function strictures of 35 U.S.C. § 112(f) is “whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure.” Williamson v. Citrix Online, LLC, 792 F.3d 1339, 1348 (Fed. Cir. 2015). However, absence of the word “means” in the claim term creates a rebuttable presumption that § 112(f) does not apply. TEK Global, S.R.L. v. Sealant Sys. Int’l, Inc., 920 F.3d 777, 785 (Fed. Cir. 2019); Williamson, 792 F.3d at 1348–49

(abandoning the heightened standard applied to the presumption flowing from the absence of the word “means”). The presumption can be overcome, and § 112(f) will apply to the term at issue, if the challenging party demonstrates that the term “fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” *Id.* at 1349 (internal quotation marks omitted). Conversely, presence of the word “means” creates a rebuttable presumption that § 112(f) applies to the term, unless the challenging party demonstrates that the term recites sufficiently definite structure.

Here, GET recognizes that use of the word “means” in the claim term creates a rebuttable presumption that § 112(f) applies. However, GET claims that the presumption is overcome because claim 10 provides sufficiently definite meaning as the name for structure. See *Williamson*, 792 F.3d at 1348. Claim 10 teaches “[t]he apparatus of claim 1 wherein the input means is an input transducer.” (‘730 Patent, col. 8, lines 26–27.) Therefore, GET argues that the structure of “input means” is an input transducer.

Sony responds that, because there is no dispute that “input means,” as recited in independent claim 1, is a means-plus-function term, “input means,” as recited in dependent claim 10, should also be construed under § 112(f). Sony further argues that, in order to prove infringement as to dependent claim 10, GET must prove each element of independent claim 1, and, as such, I must consider the construction of “input means” in claim 1, when construing the term in claim 10. In claim 1, Sony explains that the function of “input means”—“producing at least one input signal”—is performed by the structure disclosed in the specification, a microphone and fax/modem device.

Sony acknowledges that the structure of claim 10 is an “input transducer” but argues that it must be limited to the microphone or fax/modem device because claim 10 cannot be broader than claim 1.

For several reasons, I disagree that “input means,” as recited in claim 10, is a means-plus-function limitation. First, GET represented at the Markman hearing that it is not asserting claim 1 for purposes of infringement. (Markman Hearing Tr., 12/3/19, 67:24–68:19.) I will, therefore, only consider the term “input means for producing at least one input signal” as taught by claim 10. Claim 10 explicitly recites the structure for performing the function of “input means”—an input transducer. Sony admits this point and even includes “input transducer” in its proposed construction.

Moreover, construing “input means” as “the input means is an input transducer” does not make dependent claim 10 broader than independent claim 1. Sony construes the structure of “input means” in claim 1 as a microphone or fax/modem device and, therefore, limits “input means” in claim 10 to “an input transducer that is part of a microphone or fax/modem device.” However, by doing so, Sony attempts to restrict the claimed invention to its specific examples or preferred embodiments, when the scope was not limited during prosecution. (‘730 Patent, col. 2, lines 48–51 (“The inventive apparatus *may* integrate means to handle the I/O signals, *such as* the microphone) (emphasis added); *id.* at col. 1, lines 64–67 (“*For example, one inventive apparatus* handling the I/O telephone signals effectively functions as a fax/modem device and at the same time as a UID.”) (emphasis added).)

Federal Circuit precedent prohibits Sony's suggested restriction. See B.E. Technology, L.L.C. v. Sony Mobile Communications (USA) Inc., 657 F. App'x 982, 988 (Fed. Cir. 2016) ("B.E. contends that the Board's construction is incorrect because it is broader than the examples depicted in the patent; however, we have rejected the notion that claim terms are limited to the embodiments disclosed in the specification, absent redefinition or disclaimer." (citing Phillips, 415 F.3d at 1316, 1323); Kinik v. Int'l Trade Commission, 362 F.3d 1359, 1364–65 (Fed. Cir. 2004) ("[W]hen the specification describes the invention in broad terms, accompanied by specific examples or embodiments, the claims are generally not restricted to the specific examples or preferred embodiments unless that scope was limited during prosecution."); Dow Chem. Co. v. United States, 226 F.3d 1334, 1342 (Fed. Cir. 2000) (as a general rule claims of a patent are not limited to the preferred embodiment); Intel Corp. v. United States Int'l Trade Comm'n, 946 F.2d 821, 836 (Fed. Cir. 1991).

Because claim 10 recites sufficiently definite structure as to "input means"—an input transducer, I conclude that § 112(f) does not apply to the claim term. I also conclude that "input transducer" is not restricted to the specific examples of a microphone or fax/modem device as described in the specification.

Based on my analysis of the claim language and GET's representation that it only asserts claim 10 for purposes of infringement, I will adopt GET's proposed construction of **"inputs means for producing at least one input signal"** as **"The input means is an input transducer."**

D. "Framer"

The fourth claim term in dispute is "framer."

Claims	GET'S Proposed Construction	Sony's Proposed Construction
16, 17, 18, 21, 22, 23	Circuitry that creates a frame, which is a digital data unit to be transmitted via a communication link. (Pl.'s Opening Claim Constr. Br., Ex. 2, at 10.)	Function: (1) synchronizing the user input stream with the input stream, and (2) encoding the user input stream and the input stream into a combined data stream. Structure: The logic design at block 34 of Figure 4A. (Defs.' Responsive Claim Constr. Br. at 17.)

The parties' dispute centers on whether "framer" connotes sufficiently definite structure to a POSA. As such, the parties rely primarily on extrinsic expert testimony.⁶

⁶ "In most situations, an analysis of the intrinsic evidence alone will resolve any ambiguity in a disputed claim term. In such circumstances, it is improper to rely on extrinsic evidence." Vitronics, 90 F.3d at 1583. In other words, "[i]n those cases where the public record unambiguously describes the scope of the patented invention, reliance on any extrinsic evidence is improper." Id. Rather, the public record of the patentee's claims is comprised of the claims, specification, and file history, and it is that record on which the public and competitors are entitled to rely to ascertain the scope of the patentee's claimed invention. Id. "Allowing the public record to be altered or changed by extrinsic evidence introduced at trial, such as expert testimony, would make this right meaningless." Id. Where the intrinsic record is unclear, however, reliance on extrinsic evidence is appropriate. Intel Corp. v. Broadcom Corp., 172 F. Supp. 2d 515, 527 (D. Del.

Here, the parties agree that the absence of the phrase “means for” in the claim term creates a rebuttable presumption that § 112(f) does not apply. However, as discussed, “the essential inquiry is not merely the presence or absence of the word ‘means’ but whether the words of the claim are understood by persons of ordinary skill in the art to have sufficiently definite meaning as the name for structure.” Williamson, 792 F.3d at 1348. The presumption may be overcome if the challenging party demonstrates that the claim term “fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function.” Id. at 1349 (internal quotation marks omitted).

GET argues that Sony cannot demonstrate that “framer” fails to recite sufficiently definite structure because “the ‘730 Patent clearly points to a structure—a circuit—when it uses the term ‘framer.’ Figure 4A, described as one embodiment of the invention, depicts a logic diagram that shows the components and connections of the circuit designated as ‘framer 34.’” (Pl.’s Opening Claim Constr. Br. at 4.)

GET also relies on the declaration of its expert Dr. Kenneth W. Fernald to prove this point. Dr. Fernald asserts that a POSA at the time of the ‘730 Patent

2001). A court may look to expert and inventor testimony, dictionaries, and learned treatises. Novartis Corp. v. Teva Pharms. USA, Inc., 565 F. Supp. 2d 595, 607 (D.N.J. 2008). “[B]ecause extrinsic evidence can help educate the court regarding the field of the invention and can help the court determine what a person of ordinary skill in the art would understand claim terms to mean, it is permissible for the district court in its sound discretion to admit and use such evidence.” Phillips, 415 F.3d at 1319. In exercising that discretion, however, the court “should keep in mind the flaws inherent in [extrinsic evidence] and assess that evidence accordingly.” Id.

understood “framing” to generally refer to “the concept of transforming data into a format that can be recognized by the receiver of the data.” (Fernald Decl., ECF No. 71, at ¶ 5.) He goes on to explain that a POSA would have understood “framing” to be achieved by a “frame”:

[A] block to be transmitted generally includes the data (generally called the payload) and additional information that allows the receiving computer to recognize the frame, such as a preamble bit of pattern at the beginning, potentially a postamble bit pattern at the end, and possible additional information relating to data link procedures. The exact format of the frame depends on which data link control procedure is used. This recognizable block is referred to as a “frame.”

(Id.) Dr. Fernald, therefore, concludes that a POSA would have understood a “framer” to be “a circuit that creates a frame, such creation being referred to as ‘framing.’” (Id.)

Sony points to both intrinsic and extrinsic evidence in response. Sony presses that the claims do not recite any structure for “framer” and, instead, recite the term only in relation to its function. Sony also argues that statements made by the patentee during prosecution that describe the framer in the claimed invention as “unique and novel” demonstrate that a POSA would not have understood its structure. (‘730 Patent File History, Response dated September 20, 2000, ECF No. 67-3, at 70–71 (“In contrast, this invention describes, in its representative embodiments, how to combine the data from a UID

(mouse) and from a high-frequency signal, *via a framer, which is unique and novel.*” (emphasis added).)

Additionally, Sony relies on extrinsic evidence to demonstrate that “framer” does not connote sufficiently definite structure. Sony does not dispute that a POSA would have understood the concept of “framing” or “frame” at the time of the ‘730 Patent. Instead, Sony argues that Dr. Fernald’s testimony does not provide a reasonably well understood meaning for “framer,” which is, in fact, the claim term. Sony asserts that Dr. Fernald’s testimony (1) failed to “introduce any other evidence, such as dictionary definitions, suggesting that [framer] is a term commonly understood by [a POSA] to denote a device or class of devices”; (2) failed to “explain with any degree of definiteness what structure or class of structures a [POSA] would understand the term to encompass”; (3) failed to “offer any structural limitation that might serve to cabin the scope of the functional term”; and (4) “did little more than opine that a skilled artisan would understand the functional term [framer] to be any structure capable of performing the claimed function.” (Defs.’ Responsive Claim Constr. Br. at 17–18 (citations omitted) (internal quotation marks omitted).) Sony relies on Diebold Nixdorf, Inc. v. Int’l Trade Commission, 899 F.3d 1291 (Fed. Cir. 2018) to support the argument that these flaws in GET’s expert testimony demonstrate that “framer” fails to connote sufficiently definite structure.

Finally, Sony cites to the testimony of its own expert, Dr. Gregory F. Welch, who explains that “framer” was not commonly understood to connote any definite structure or class of structures to a POSA. (Welch Decl., ECF No. 78, at ¶¶ 22–23 (“I have never seen nor heard of the word ‘framer’ used in the context

of user input devices, the word ‘framer’ was not commonly used in such contexts Claims 16 and 21 of the ‘730 Patent would connote no less structure to a [POSA] had those claims used the word ‘means for’ in place of ‘framer’ in Claim 16 or ‘framer for’ in Claim 21.”.) As explained by Dr. Welch, “the use of the word ‘framer’ and ‘framer for’ connotes no additional information to a [POSA] about the structure or class of structures that is to perform the recited functions than if the claims instead recited ‘means for.’” (*Id.* at ¶ 23.)

For the following reasons, I agree that “framer” fails to connote sufficiently definite structure to a POSA and that § 112(f) applies to that term. First, the disclosure of Figure 4A (showing the components and connections of “framer 34”) is not alone sufficient to impart structure to the claim term. See *MTD Prods. Inc. v. Iancu*, 933 F.3d 1336, 1342–43 (Fed. Cir. 2019) (“Just as it is improper to import[] limitations from the specification into the claims, however, a preferred embodiment disclosed in the specification cannot impart structure to a term that otherwise has none. . . . As with all lexicography, [i]t is not enough for a patentee to simply disclose a single embodiment. Rather, the patentee must clearly express an intent to redefine the term.” (internal quotation marks omitted)). And the claims recite “framer” only in relation to its function, not its structure. (‘730 Patent, col. 8, lines 61–63 (“a framer synchronizing the user input stream with the input stream and encoding the same into a combined data stream transferable by the communication link”); *id.* at col. 10, lines 5–8 (“a framer for keeping the user input stream and the at least one digital input signal in synchrony and encoding the same into a combined data stream

transferable to the computer by the communication link.”).

Second, based on the prosecution history, I conclude that the ‘730 Patent fails to convey to a POSA the structure or class of structures known as “framers” because the patentee explicitly stated during prosecution that the framer used “to combine the data from a UID (mouse) and from a high-frequency signal” in the claimed invention was “unique and novel,” a characterization also recognized by the PTO Examiner. (‘730 Patent File History, Response dated September 20, 2000, ECF No. 67-3, at 70–71; PTO Examiner Correspondence, ECF No. 67-3, at 145) (“Your invention, as far as I understand, is a user-interface (UI) with a *novel* framer that combines 2 different signals from 2 different sources.”) (emphasis added).)

GET offers no response to these arguments, relying solely on the testimony of its expert and four documents introduced for the first time in its Reply Brief that it claims represent “framers” on the market at the time of the ‘730 Patent in the field of data communications. (Pl.’s Reply Claim Constr. Br., Ex. 8–11.) GET argues that the field of invention of the ‘730 Patent includes data communications and, therefore, a POSA would have known about these other framers. However, the specification recites the following as the field of the claimed invention: “[t]his invention relates to computer user-input devices including pointing devices, especially to those handling additional input/output signals.” (‘730 Patent, col. 1, lines 8–11.) This description does not expressly include the broad term “data communications,” and GET’s expert, Dr. Fernald, does not address whether it should. In fact, Dr. Fernald’s description of a POSA makes no mention of “data communications.” (See Fernald Decl., ECF No.

71, at ¶ 4.) And Sony's expert, Dr. Welch, although asked directly whether data communications was the relevant field of invention, was unwilling to characterize it as such. (Welch Dep., ECF No. 84-1, at 17:2–18:10.)

Finally, I find that Dr. Fernald's testimony is insufficient to demonstrate that a POSA would have understood the structure or class of structures referred to by "framer" in the claimed invention. Diebold Nixdorf, Inc. v. Int'l Trade Commission, 899 F.3d 1291 (Fed. Cir. 2018), is instructive on this point. In Diebold, the Federal Circuit reversed a decision of the United States International Trade Commission declining to apply § 112(f) to the claim term "cheque standby unit." See 899 F.3d at 1298. The Court concluded that the claims of the patent at issue did not recite any structure for the term, describing it "solely in relation to its function and location in the apparatus." Id. The Court rejected expert testimony declaring that a POSA would readily understand that a "cheque standby unit" was a "structure in an ATM that temporarily holds checks pending the customer confirming the deposit." Id. at 1300. The Court's reason for doing so was the lack of any other evidence, such as dictionary definitions, suggesting that a "cheque standby unit" is a term commonly understood by a POSA to denote a device or class of devices. Id.

Here, Dr. Fernald's testimony suffers from the same deficiencies as the expert's testimony in Diebold. Dr. Fernald's testimony does not provide a reasonably well understood meaning for "framer." He defines "framing" and "frame" but offers no support, by way of dictionary definitions or other extrinsic evidence, for his assumption that a POSA who understands "framing" and "frame" would, therefore, understand that a "framer" was "a circuitry that creates a frame."

(Fernald Decl., ECF No. 71, at ¶ 5.) As the expert in Diebold, Dr. Fernald does little more than opine that a POSA would understand “framer” to be any structure that performs the function of “framing” and, therefore, fails to cabin the scope of the functional term. (Id. (“A framer is a circuit that creates a frame, such creation being referred to as ‘framing.’”)) This is not sufficient to support a *definite* structural meaning of “framer.” See Diebold, 899 F.3d at 1298.

Based on my analysis of the intrinsic and extrinsic evidence identified by the parties, I conclude that § 112(f) applies to “framer” because a POSA would not have understood the term to connote sufficiently definite structure at the time of the ‘730 Patent. I will, therefore, adopt Sony’s proposed construction of **“framer”** as **“Function: Synchronizing the user input stream with the input stream and encoding the user input stream and the input stream into a combined**

data stream; Structure: The logic design at block 34 in Figure 4A⁷ and equivalents thereof.”⁸

E. “Converter”

The fifth claim term in dispute is “converter.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
16, 18	A circuit for converting a digital stream into an output signal, such as, for example, the decoder	The converter in Claim 18 refers to the same converter component of Claim 16 and, in the

⁷ As discussed further *infra*, and in relation to the term “encoding means,” the ‘730 Patent discloses only one type of structure to perform the function of “framer”—the logic design at block 34 in Figure 4A. Therefore, based on Bennett Marine, Inc. v. Lenco Marine, Inc., 549 F. App’x 947 (Fed. Cir. 2013), I will construe the structure of “framer” as “the logic design at block 34 in Figure 4A and equivalents thereof.” *See id.* at 954-55 (“The ‘780 patent discloses only one specific type of circuit to perform the part of the function required by the fifth limitation. In such a situation, the corresponding structure should be limited to that structure and its equivalents. . . . [T]he ‘780 patent does not disclose alternatives to the circuit shown in figure 2, such as, for example, a general class of known switches. . . . Bennett has not identified any evidence showing that any circuit other than the circuit disclosed in figure 2 was known and capable of performing the function required by the fifth limitation.”); *see also J&M Corp. v. Harley-Davidson, Inc.*, 269 F.3d 1360, 1367 (Fed. Cir. 2001) (“The literal scope of a properly construed means-plus-function limitation does not extend to all means for performing a certain function. Rather, the scope of such claim language is sharply limited to the structure disclosed in the specification and its equivalents.”).

⁸ I will also construe the structure of “framer” to include equivalents thereof as discussed *infra* in Section F. *See* 35 U.S.C. § 112(f) (“[S]uch claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”).

	part of a codec; ‘converter’ in Claim 18 does not necessarily refer to the same converter of Claim 16. (Pl.’s Opening Claim Constr. Br., Ex. 2, at 8.)	alternative, a codec. (Defs.’ Responsive Claim Constr. Br. at 20); (see also <u>Markman</u> Hearing Tr., 12/3/19, at 89:21–90:25.)
--	--	--

The parties’ dispute focuses on whether the converter disclosed in claim 18 is the same as the converter in claim 16.

Independent Claim 16 teaches an apparatus comprising, in pertinent part, “a converter receiving the at least one input signal for producing an input stream.” (‘730 Patent, col. 8, lines 59–60.) The parties agree that this claim term requires no construction because the meaning of “converter” is readily understood by a POSA without the need for clarification and it connotes sufficiently definite structure—a device that converts data or signals from one form to another. (See Pl.’s Opening Claim Constr. Br. at 18; Defs.’ Responsive Claim Constr. Br., Ex. 6, at 120.) However, the parties dispute the construction of “converter” in claim 18. Claim 18, which is dependent on claim 16, teaches:

the apparatus of claim 16 **wherein the converter further comprises an output port** wherein the framer further receives an output stream from the computer via the communication link, the output stream being further received and converted by the converter into at least one input signal going to the output port.

(‘730 Patent, col. 9, lines 1–5 (emphasis added).)

Because claim 16 is an independent claim, it must be at least as broad as claim 18, which depends from it. See Alcon Research, LTD v. Apotex Inc., 687 F.3d 1362, 1367 (Fed. Cir. 2012). Moreover, “the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.” Phillips, 415 F.3d at 1314–15. This “presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim.” SunRace Roots Enter. Co., Ltd. v. SRAM Corp., 336 F.3d 1298, 1303 (Fed. Cir. 2003).

GET argues that the “converter” disclosed in claim 18 does not necessarily refer to the same converter in claim 16 because, as made clear by the specification, the converter in claim 16 performs as an analog-to-digital converter, converting at least one input signal into an input stream, and the converter in claim 18 performs as a digital-to-analog converter, converting an output stream into at least one output signal. (Pl.’s Opening Claim Constr. Br. at 13.) Sony responds that “the antecedent basis for ‘the converter’ in claim 18 is the converter of claim 16 and, therefore, they refer to the same thing.” (Defs.’ Responsive Claim Constr. Br. at 20.)

I disagree with Sony for several reasons. First, the parties do not dispute that “converter” is understood by POSAs to evoke a sufficiently definite structure or class of structures that convert data or signals from one form to another. Therefore, § 112(f) does not apply to the term in question.

The parties have also agreed that no construction of “converter” in claim 16 is necessary. Thus, the converter in claim 16 is construed based on the readily understood meaning taught by the claim language—a converter that must be able to convert an input signal into an input stream.

Claim 18, on the other hand, refers to the apparatus of claim 16, but with a limitation—the converter must also be able to convert an output stream into at least one output signal. (‘730 Patent, col. 9, lines 1–5.) This claim language demonstrates that claim 18 does not necessarily refer to the same converter as claim 16. If it did, then claim 18 would become superfluous. That is, if the converter disclosed in claim 16 was required to perform as not only an analog-to-digital converter, but also a digital-to-analog converter, then there would be no need to disclose the additional digital-to-analog function of the converter in a separate claim, i.e. claim 18. See Seachange Int’l, Inc. v. C-COR, Inc., 413 F.3d 1361, 1368 (Fed. Cir. 2005) (quoting Karlin Tech. Inc. v. Surgical Dynamics, Inc., 177 F.3d 968, 971–72 (Fed. Cir. 1999)) (“The doctrine of claim differentiation stems from ‘the common sense notation that different words or phrases used in separate claims are presumed to indicate that the claims have different meanings and scope.’”); Tandon Corp. v. U.S. Int’l Trade Comm’n, 831 F.2d 1017, 1023 (Fed. Cir. 1987) (“To the extent that the absence of such difference in meaning and scope would make a claim superfluous, the doctrine of claim differentiation states the presumption that the difference between the claims is significant.”).

As it stands, based on the claim language, the converter in independent claim 16 must, at least, perform as an analog-to-digital converter, but it is not

limited to only this function. The converter in dependent claim 18 is thus limited. It must be able to perform both analog-to-digital and digital-to-analog conversions.

This reading of the claim language, and the conclusion that the converter in claim 18 does not necessarily refer to the same converter as claim 16, is also supported by the specification. In the preferred embodiments, the specification states, in pertinent part, that “[o]ne embodiment of the present invention, having the functional block diagram depicted by FIG. 2A, comprises . . . a signal converting means called converter 30” (‘730 Patent, col. 4, lines 1–5.) In Figures 2A, 2B, and 2C, converter 30 “converts input signal 31, delivered by input 32, into input stream 33 representative of the input signal.” (*Id.* at col. 4, lines 12–13.) Figure 2C “additionally shows converter 30 receiving output stream 54 from framer 34 to produce output signal 52 going out via output 53 to the external device.” (*Id.* at col. 4, lines 16–19.) In other words, converter 30, in Figure 2C, performs an additional function to the converter 30 depicted in Figures 2A and 2B—it also converts an output stream from the framer into an output signal via an output port to an external device.⁹

⁹ Sony also offers, as an alternative construction, that “converter” in claim 18 is a “codec.” “[A] ‘codec’ is a combined analog-to-digital converter and digital-to-analog converter. The analog-to-digital conversion is referred to as ‘encoding,’ and the digital-to-analog conversion is referred to as ‘decoding.’” (See Fernald Decl., ECF No. 71, at ¶ 7.) Yet, the converter taught by claim 18 is broader than the example or preferred embodiment of a “codec” disclosed in the specification. (See ‘730 Patent, col. 4, lines 41–52 (“FIG. 3A illustrates one implementation of the embodiment of the invention that receives and transmits analog I/O signals while transferring data to/from the computer via the

Based on these multiple examples or alternative embodiments of “converter” disclosed in the specification, I conclude that the converter in broader, independent claim 16 and its claimed function are not limited to the converter disclosed in dependent claim 18. See Intel Corp., 946 F.2d at 836 (“Where a specification does not require a limitation, that limitation should not be read from the specification into the claims.”); see also Katz v. AT&T Corp., 63 F. Supp. 2d 583, 591 (E.D. Pa. 1999) (“[I]f a term is used in a variety of ways by the patentee in the specification, this may be indicative of the breadth of the term, rather than a limited definition.”).

Therefore, I will construe **“converter”** in claim 18 as **“A circuit for converting (1) the at least one input signal into an input stream and (2) an**

RS-232 cable. It utilizes all the elements shown in FIG. 2A and further includes the feature of receiving an output information sent from the computer via line TXD of the RS-232. Framer 34 serializes such output information to become signal 54, which is converted by converter 30 into output signal 52 to output 53. Converter 30 [in this preferred embodiment] is a codec”; id. at col. 5, lines 7-11 (“FIG. 4A, the codec TP3054, in place of converter 30, converts output information 54, sent from the computer via line TXD, into output signal 52 entering output 53. Concurrently, the codec also converts input signal 31, delivered by input 32, into serial stream 33.”).). I will not limit the construction of “converter” to an example without a disclaimer. See, e.g., B.E. Technology, L.L.C., 657 F. App’x at 988 (“B.E. contends that the Board’s construction is incorrect because it is broader than the examples depicted in the patent; however, we have rejected the notion that claim terms are limited to the embodiments disclosed in the specification, absent redefinition or disclaimer.”).

output stream into the at least one output signal.”¹⁰

F. Terms Which the Parties Do Not Dispute are Means-Plus-Function

The parties do not dispute that § 112(f) applies to the remaining disputed claim terms but offer different proposed constructions. Two issues of construction are common to these remaining terms. The first issue is whether each means-plus-function limitation should be construed to include equivalents thereof. The second issue is whether the construction of these terms should specify that each corresponding structure may be implemented by integrated circuit technology or microprocessor-based design. I address each of these issues in turn here.

Regarding the first issue of construction, § 112(f) explicitly permits GET to pursue a literal infringement theory based on the equivalent of any term construed under this provision. 35 U.S.C. § 112(f) (“[S]uch claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.”). Sony agrees but raises the concern that jurors may be

¹⁰ For the reasons discussed *supra*, I disagree with the parties’ constructions. The converter in claim 18 is not necessarily the same as the converter in claim 16. Therefore, I decline to adopt Sony’s proposed construction. GET’s construction, on the other hand, accounts for only part of the function of the converter disclosed in claim 18. Claim 18’s converter not only converts an output stream into an output signal, but it also performs the function of the converter disclosed in claim 16—converting an input signal into an input stream. (’730 Patent, col. 9, lines 1-5 (“The apparatus of claim 16 *wherein the converter further comprises* an output port”) (emphasis added).) Therefore, I also decline to adopt GET’s proposed construction.

confused or misled if equivalents are expressly included in the construction of all means-plus-function limitations without any explanation of how to find equivalents. Sony advocates, instead, for a jury instruction on the right to equivalents, along with a description of how to perform the analysis. GET responds that courts typically include “and equivalents thereof” or similar language in their constructions of means-plus-function limitations. (Pl.’s Reply Claim Constr. Br. at 8.) GET also insists that any potential juror confusion can be addressed through jury instructions and that an omission of equivalents risks prejudice if the jury neglects to apply the law.

I conclude that GET is entitled to pursue a literal infringement theory based on equivalent structures for means-plus-function limitations pursuant to § 112(f). The parties will have an opportunity to propose jury instructions on how to perform this infringement analysis. As such, I will construe each means-plus-function limitation to include “equivalents thereof.”

GET also argues that, based on language in the specification, the construction of all means-plus-function limitations should specify that the corresponding structures may be implemented by an integrated circuit or microprocessor. (Pl.’s Opening Claim Constr. Br. at 7 (citing ‘730 Patent, col. 7, lines 16–23 and *id.* at col. 2, lines 53–58).)

However, the specification characterizes these methods as alternatives or preferred embodiments of the inventive apparatus. (‘730 Patent, col. 2, lines 53–60 (“The inventive apparatus *may* be implemented, *at least partially*, by integrated circuit (IC) technology The inventive apparatus *may* be implemented, *at least partially*, by a microprocessor-based design”

(emphasis added); see also id. at col. 7, lines 16–23 (“Also, the IC technology, using the PLDs, the gate arrays, the ASICs, *or* the mixed-signal ICs, *can* integrate many elements of the apparatus into at least one IC device. *For instance*, a combination of the framer, the codec, the electronic part of the UI means, and the transceiver, can be packaged into at least one IC device. *Alternatively*, the logic of such combination can be implemented by a microprocessor, such as part DSP56xxx from Motorola.” (emphasis added).) Claims are generally not restricted to or construed as the specific examples or preferred embodiments disclosed in the specification, unless there is evidence of scope disavowal. See, e.g., Kinik, 362 F.3d at 1364–5; Dow Chem. Co. v. United States, 226 F.3d at 1342; Intel Corp., 946 F.2d at 836.

Accordingly, I will not construe the structure of the remaining means-plus-function limitations to include examples or preferred embodiments of the inventive apparatus, such as an integrated circuit or microprocessor.

1. “Communication Means”

The sixth claim term in dispute is “communication means.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
10	Function: Communicating data between the user input apparatus and the computer. Structure: A wired or wireless transceiver (such as, for example, IR or RF)	Function: Communicating data between the user input apparatus and the computer.

	transceiver compatible with a communication protocol, including without limitation transceivers using RS-232 or USB communication protocols and equivalents thereto; may be implemented by integrated circuit or microprocessor-based design. (Pl.'s Opening Claim Constr. Br., Ex. 2, at 2.)	Structure: A transceiver compatible with RS-232 or USB communication protocols. (Defs.' Responsive Claim Constr. Br. at 11, 11 n.4.)
--	---	--

The parties agree that § 112(f) applies to this term. The primary dispute between them is whether to limit the structure of “communication means” to a transceiver compatible with RS-232 or USB communication protocols.

GET argues that the communication means may be either a wired or wireless transceiver as stated in the specification. (‘730 Patent, col. 2, lines 37–39 (“The transmission of the communication signals may be wired (via cable) or wireless (via electromagnetic wave).”).) Sony does not dispute that the structure for performing the function of “communication means” is a transceiver, but it limits the construction to transceivers compatible with RS-232 or USB communication protocols. GET responds that transceivers compatible with RS-232 or USB communication protocols are alternative embodiments or examples and, by limiting the structure of “communication means” to these examples, Sony excludes specific embodiments of the invention disclosed in the specification.

On this construction, I agree with GET. The specification explicitly discloses in the preferred embodiments both wired and wireless transceivers for performing the function of “communication means.” (Id. at col. 4, lines 33–40 (“[C]ommunication means 35 is a wireless transceiver which transmits/receives the electromagnetic signals forming link 36, while at port 38 there is a compatible wireless transceiver to receive/transmit the same signals. *Two typical wireless transceivers* are the infrared-light (IR) . . . and the radio frequency (RF)”) (emphasis added); id. at col. 4, lines 41–44 (“FIG. 3A illustrates one implementation of the embodiment of the invention that receives and transmits analog I/O signals while transferring data to/from the computer via the RS-232 cable.”); id. at col. 2, lines 34–36 (“*Two examples of communication protocols* used by a UID are the popular RS-232 and the newly standardized Universal Serial Bus (USB).”) (emphasis added).¹¹ By limiting the structure of “communication means” to transceivers compatible with RS-232 or USB communication protocols, I would be improperly reading out preferred embodiments of the claimed invention. (Id. at col. 4, lines 33–40.)

Moreover, I will not restrict the claim term to the alternative transceivers disclosed in the specification when there is no disclaimer or disavowal in the file history. See, e.g., Kinik, 362 F.3d at 1364–65 (“[W]hen the specification describes the invention in broad terms, accompanied by specific examples or embodiments, the claims are generally not restricted to the specific examples or preferred embodiments

¹¹ Both the RS-232 and USB communication protocols are for wired transmission of data. (Markman Hearing Tr., 12/3/19, at 95:9-11.)

unless that scope was limited during prosecution.”); see also Bennett Marine, Inc. v. Lenco Marine, Inc., 549 F. App’x 947, 954–55 (Fed. Cir. 2013) (limiting the structure of a means-plus-function limitation to the circuit disclosed in figure 2 because the patent did not disclose alternatives).

Therefore, I will adopt, in part, GET’s proposed construction of **“communication means”** as **“Function: Communicating data between the user input apparatus and the computer; Structure: A wired or wireless transceiver and equivalents thereof.”**¹²

2. “Means for Receiving an Output Stream from the Computer Via the Communication Link”

The seventh disputed claim term is “means for receiving an output stream from the computer via the communication link.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
17	Function: Receiving an output stream from the computer via the communication link. Structure: A wired or wireless transceiver and equivalents thereto; may be implemented by integrated circuit technology or	Function: Receiving an output stream from the computer via the communication link. Structure: A transceiver compatible with

¹² I decline to adopt the remainder of GET’s proposed construction of this term for the reasons discussed supra in Section F.

	microprocessor-based design. (Pl.'s Opening Claim Constr. Br., Ex. 2, at 7.)	RS-232 or USB communication protocols. (Defs.' Responsive Claim Constr. Br. at 19.)
--	--	---

This term, as agreed to by the parties, is governed by § 112(f). The parties propose the same construction for the function of this term, and their proposed structures, although differently construed, are dependent upon my analysis of the structure of “communication means.” Therefore, for the same reasons discussed supra regarding “communication means,” I will adopt, in part, GET’s proposed construction of **“means for receiving an output stream from the computer via the communication link”** as **“Function: Receiving an output stream from the computer via the communication link; Structure: A wired or wireless transceiver and equivalents thereof.”**

3. “User Input Means”

The eighth disputed claim term is “user input means.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
10, 14	Function: Producing a user input stream. Structure: A sensor of user-initiated actuations and an encoder and equivalents thereto; may be implemented by circuit technology or microprocessor-based	Function: Producing a digital user input stream. Structure: A mouse, trackball, keyboard, pressure tablet, or pen-based input device comprising a sensor of user-initiated

	design. (Pl.’s Opening Claim Constr. Br., Ex. 2, at 3.)	actuators and an encoder. (Defs.’ Responsive Claim Constr. Br. at 13.)
--	---	--

The parties agree that this term is also governed by § 112(f). They also mostly agree regarding the construction of the term’s function. However, Sony adds the word “digital”—“producing a *digital* user input stream.”

For the following reasons, I agree with Sony’s addition of the word “digital” to the terms construed function. Claim 1, from which claim 10 depends, teaches an apparatus comprising a “user input means for producing a user input stream.” (’730 Patent, col. 7, lines 61–64.) This claim language explicitly defines the function of the “user input means” as “producing a user input stream.” The claims do not otherwise limit the user input stream to a digital stream. However, patent claims must also “be read in view of the specification, of which they are a part.” Markman, 52 F.3d at 979 (citing Autogiro Co. of Am. v. United States, 384 F.2d 391, 397 (1967)); see also SRI Int’l v. Matsushita Elec. Corp. of Am., 775 F.2d 1107, 1121 (Fed. Cir. 1985). The specification is “highly relevant to the claim construction analysis” because it contains a written description of the invention that must be clear and complete enough to enable those of ordinary skill in the art to make and use it. Vitronics, 90 F.3d at 1582. “[W]here the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone” the specification can provide clarity. Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1325 (Fed. Cir. 2002).

Here, the specification describes the user input stream as a digital stream: “[f]unctionally a UID or UI module comprises a sensor translating a user-initiated actuation into electrical signals, and an encoder converting such signals into a digital stream, called the [user input] stream . . .” (Id. at col. 3, lines 56–59.) GET, in fact, relies on this portion of the specification to support its construction of the structure of “user input means.” (Pl.’s Opening Claim Constr. Br. at 9–10.) GET cannot rely on these select disclosures in the specification when construing one aspect of the claim term’s definition but then ignore their impact in construing another. Therefore, based on the language of the specification, I conclude that the function of “user input stream” must be construed to include “digital.”

Regarding the terms structure, the primary dispute between the parties is whether the structure should be limited to a mouse, trackball, keyboard, pressure tablet, or pen-based input device. GET argues that the specification explicitly discloses the structure of the “user input means” as “a sensor translating user-initiated actuations and an encoder.” (’730 Patent, col. 3, lines 56–59 (“Functionally, a UID or a UI module comprises a sensor translating a user-initiated actuation into electrical signals, and an encoder for converting such signals into a digital stream, called the [user input] stream.”).) Sony does not dispute that the structure of “user input means” is a sensor of user-initiated actuations and an encoder. It includes this language in its construction. However, Sony limits its construction to a mouse, trackball, keyboard, pressure tablet, or pen-based input device *comprising* a sensor and an encoder.

GET argues that Sony improperly limits the structure to examples of “user input devices in the

specification that incorporate the sensor and encoder.” (Pl.’s Opening Claim Constr. Br. at 10.) It explains that the “user input means” is the sensor and encoder of the user input device (the mouse, keyboard, or trackball) that produces the user input stream, “not the [user input device] itself.” (*Id.*) Therefore, GET asserts that Sony is attempting to incorporate structure from the written description beyond what is necessary to perform the claimed function. (*Id.* (citing Asyst Tech., Inc. v. Empak, Inc., 268 F.3d 1364, 1369–70 (Fed. Cir. 2001) and Micro Chem., Inc. v. Great Plains Chem. Co., Inc., 194 F.3d 1250, 1258 (Fed. Cir. 1999)).)

I agree that Sony is attempting to improperly limit the structure of “user input means,” the sensor and encoder, to examples disclosed in the specification. The specification explains that the user input stream produced by the sensor and encoder “follows the format of the communication link used by the associated [user input device].” (’730 Patent, col. 3, lines 60–61; see also id. at col. 3, lines 65–67 (“The inventive apparatus receives a [user input] stream coming either from a UI module or from an interface to an external [user input device].”).) The specification describes examples of typical user input devices as the mouse, trackball, keyboard, pressure tablet, and pen-based input device. (See id. at col. 1, lines 16–18; *id.* at col. 3, lines 61–65 (“In his description, the [user input stream] conforms to the Microsoft serial mouse’s asynchronous frame format . . .”).)

As discussed throughout this Memorandum Opinion, claims should not be restricted to the specific examples or preferred embodiments disclosed in the specification, unless the scope of the claim was limited during prosecution. See, e.g., Kinik, 362 F.3d at 1364–65. Here, there was no disavowal of this claim term’s

scope in the file history. Therefore, I will not limit the structure of “user input means” to the mouse, trackball, keyboard, pressure tablet, and pen-based input device comprising a sensor and encoder.

As such, I will construe “**user input means**” as **“Function: Producing a digital stream, called the user input stream; Structure: A sensor translating user-initiated actuations and an encoder and equivalents thereof.”**¹³

4. “Encoding Means”

The ninth claim term in dispute is “encoding means.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
10, 14	Function: Synchronizing the user input stream with the input stream and encoding the same into a combined data stream transferable by the communication means. Structure: A framer that implements a frame format containing data bits of the UI stream and of the additional input signal and equivalents thereto; framer 34 of Figure 4A and	Function: (1) synchronizing the user input stream with the input stream, and (2) encoding the user input stream and the input stream into a combined data stream. Structure: The logic design at block 34 of Figure 4A. (Defs.’

¹³ I decline to adopt the remainder of GET’s proposed construction of this term for the reasons discussed supra in Section F.

	equivalents thereto; may be implemented by integrated circuit technology or microprocessor-based design. (Pl.’s Opening Claim Constr. Br., Ex. 2, at 5.)	Responsive Claim Constr. Br. at 16.)
--	--	--------------------------------------

The parties agree that § 112(f) applies to this term. The central dispute between the parties is whether the structure, which performs the function of “encoding means,” is limited to the framer disclosed in Figure 4A of the ‘730 Patent.

GET argues that the evidence offered in support of its construction of “framer” is dispositive as to “encoding means” because the structure that performs the function of this term is a “framer.” GET contends that Sony’s proposed construction seeks to limit the term to a single example in the specification, which it asserts is improper when construing means-plus-function limitations.

When the patent discloses only one type of structure to perform the function of a means-plus-function limitation, the Federal Circuit has held that the construed structure of the term should be limited to the structure disclosed in the specification and its equivalents. See Bennett Marine, 549 F. App’x at 954–55. Bennett Marine involved a patent for trim tab systems used on powerboats, which disclosed only one type of circuit for performing the function of the means-plus-function limitation at issue. Id. at 949, 954. The Federal Circuit concluded that, “[i]n such a situation, the corresponding structure should be limited to that [disclosed] structure and its equivalents.” Id. at 954 (citing Mettler-Toledo, Inc. v.

B-Tek Scales, LLC, 671 F.3d 1291, 1295–6 (Fed. Cir. 2012)). In support of this conclusion, the Federal Circuit noted that the patent at issue “did not disclose alternatives to the circuit shown in figure 2, such as, for example, a general class of known switches.” Id. at 954–55 (“Bennett has not identified any evidence showing that any circuit other than the circuit disclosed in figure 2 was known and capable of performing the function required by the fifth limitation.”); see also J&M Corp. v. Harley-Davidson, Inc., 269 F.3d 1360, 1367 (Fed. Cir. 2001) (“The literal scope of a properly construed means-plus-function limitation does not extend to all means for performing a certain function. Rather, the scope of such claim language is sharply limited to the structure disclosed in the specification and its equivalents.”).

Here, the ‘730 Patent discloses only one specific structure for performing the function of “encoding means,” framer 34 identified in Figure 4A. (‘730 Patent, col. 5, lines 4–64.) GET admits that the specification identifies framer 34 as the relevant structure. (Pl.’s Opening Claim Constr. Br. at 11 (“The specification clearly identifies the structure that synchronizes the user input stream with the input stream and encodes them into a combined data stream: a framer. ‘Framer 34 keeps UI stream 24 and input stream 33 in synchrony and encodes them into combined data stream 37’ (quoting ‘730 Patent, col. 4, lines 13–16)).) For the same reasons discussed supra in regarding “framer,” I disagree that the use of “framer” in the claimed invention refers to a general class of known framers capable of performing the function of “encoding means.”

Therefore, based on my foregoing discussion of “framer” and the reasoning in Bennett Marine, I will adopt Sony’s proposed construction of **“encoding**

means” as “Function: Synchronizing the user input stream with the input stream and encoding the user input stream and the input stream into a combined data stream;¹⁴ Structure: The logic design at block 34 in Figure 4A and equivalents thereof.”

5. “Means for Converting the Output Stream Into At Least One Output Signal”

The tenth claim term in dispute is “means for converting the output stream into at least one output signal.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
17	Function: Converting the output stream into at least one output signals. Structure: A circuit for converting a digital stream into an output signal, such as, for example the decoder part of a codec, and equivalents thereto; may be implemented by integrated circuit technology or	Function: Converting the output stream into an output signal. Structure: The decoder portion of a codec. (Defs.’ Responsive Claim Constr. Br. at 20; <u>see also</u> Defs.’

¹⁴ The parties substantively agree regarding the construed function of “encoding means.” Based on this agreement and the language of claim 16, I have adopted a hybrid of the parties’ proposed constructions. (’730 Patent, col. 8, lines 61-63 (“a framer synchronizing the user input stream with the input stream and encoding the same into a combined data stream transferable by the communication link”).

	microprocessor-based design. (Pl.’s Opening Claim Constr. Br., Ex. 2, at 8.)	Sur-reply Claim Constr. Br. at 10.)
--	--	-------------------------------------

The parties agree that § 112(f) also applies to this term and do not substantively dispute the construction of the term’s function. Rather, GET disputes Sony’s limitation of the structure of the term to a preferred embodiment of the claimed invention—the decoder portion of a codec.

As discussed supra regarding “converter,” claim 18 teaches a converter that can perform the function of converting an output stream into an output signal. The specification also refers to an embodiment of the converter that performs this same function. (Id. at col. 4, lines 16–19 (“FIG. 2C additionally shows converter 30 receiving output stream 54 from framer 34 to produce output signal 52 going out via output 53 to the external device.”).)

The specification discloses a “codec” as only one embodiment of converter 30. (’730 Patent, col. 4, lines 41–52 (“FIG. 3A illustrates one implementation of the embodiment of the invention that receives and transmits analog I/O signals while transferring data to/from the computer via the RS-232 cable. It utilizes all the elements shown in FIG. 2A and further includes the feature of receiving an output information sent from the computer via line TXD of the RS-232. Framer 34 serializes such output information to become signal 54, which is converted by converter 30 into output signal 52 to output 53. Converter 30 [in this preferred embodiment] is a codec”); id. at col. 5, lines 7–11 (“FIG. 4A, the codec TP3054, in place of converter 30, converts output information 54, sent from the computer via line TXD,

into output signal 52 entering output 53. Concurrently, the codec also converts input signal 31, delivered by input 32, into serial stream 33.”.)

Because the “codec” disclosed in the specification is a preferred embodiment of the claimed invention, I will not limit the construction of “converter” to this example without a disclaimer. See, e.g., B.E. Technology, L.L.C., 657 F. App’x at 988.

Therefore, I will adopt GET’s proposed construction of **“means for converting the output stream into at least one output signal”** as **“Function: Converting the output stream into at least one output signal; Structure: A circuit for converting a digital stream into an output signal and equivalents thereof.”**¹⁵

6. “Converting Means”

The eleventh and final claim term in dispute is “converting means.”

Claims	GET’S Proposed Construction	Sony’s Proposed Construction
10	Function: Receiving the at least one input signal and producing therefrom an input stream. Structure: An analog-to-digital converter and equivalents thereto; may be implemented by integrated circuit	Function: Receiving the at least one input signal and producing therefrom an input stream. Structure: An analog-to-digital

¹⁵ I decline to adopt the remainder of GET’s proposed construction of this term for the reasons discussed supra in Section F.

	technology or microprocessor-based design. (Pl.'s Opening Claim Constr. Br., Ex. 2, at 4.)	converter. (Defs.' Responsive Claim Constr. Br. at 15.)
--	--	---

The parties again agree that § 112(f) applies to this term. Their central dispute is whether the construction of this term's structure should include "equivalents thereof" and "may be implemented by integrated circuit technology or microprocessor-based design." For the same reasons discussed supra regarding these proposed additions by GET, I will construe **"converting means"** as **"Function: Receiving the at least one input signal and producing therefrom an input stream; Structure: An analog-to-digital converter and equivalents thereof."**

IV. CONCLUSION

The claims shall be construed as set forth above and in the Claim Construction Order that follows.

161a

**APPENDIX F: FEDERAL CIRCUIT
REHEARING ORDER, FILED APRIL 23, 2026**

NOTE: This order is nonprecedential.

**United States Court of Appeals
for the Federal Circuit**

GENUINE ENABLING TECHNOLOGY LLC,
Plaintiff-Appellant

v.

**SONY GROUP CORPORATION, SONY
INTERACTIVE ENTERTAINMENT LLC,**
Defendants-Appellees

2024-1686

Appeal from the United States District Court for
the District of Delaware in No. 1:17-cv-00135-MSG,
Judge Mitchell S. Goldberg.

**ON PETITION FOR PANEL REHEARING AND
REHEARING EN BANC**

Before MOORE, *Chief Judge*, LOURIE, DYK, PROST,
REYNA, TARANTO, CHEN, HUGHES, and STOLL, *Circuit
Judges*.¹

¹ Circuit Judge Newman, Circuit Judge Cunningham, and
Circuit Judge Stark did not participate.

PER CURIAM.

ORDER

Genuine Enabling Technology LLC filed a combined petition for panel rehearing and rehearing en banc. The petition was referred to the panel that heard the appeal, and thereafter the petition was referred to the circuit judges who are in regular active service.

Upon consideration thereof,

IT IS ORDERED THAT:

The petition for panel rehearing is denied.

The petition for rehearing en banc is denied.

For the Court

[SEAL OMITTED]

April 23, 2026
Date

Jarrett B. Perlow
Clerk of Court