IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
WACO DIVISION

PARKERVISION, INC., ***Plaintiff*****,** **-v-** **MEDIATEK INC., MEDIATEK USA, INC.,** ***Defendants*****.**	§ § § § § § § § § § § §	**6:23-CV-00732-ADA**

CLAIM CONSTRUCTION ORDER AND MEMORANDUM IN SUPPORT THEREOF

Before the Court are the Parties' claim construction briefs: Defendants MediaTek Inc. and MediaTek USA, Inc.'s Opening and Reply briefs (ECF Nos. 75 and 88, respectively) and Plaintiff ParkerVision, Inc.'s Response and Sur-Reply briefs (ECF Nos. 84 and 94, respectively). The Court provided preliminary constructions for the disputed terms one day before the hearing. The Court held the *Markman* hearing on June 17, 2025. ECF No. 100. During that hearing, the Court informed the Parties of the final constructions for the disputed terms. *Id.* This Order does not alter any of those constructions.

I. DESCRIPTION OF THE ASSERTED PATENTS

Plaintiff asserts U.S. Patent Nos. 7,050,508, 7,929,638, and 8,498,593. The following sections describes each of these patents.

A. U.S. Patent No. 7,050,508

The '508 Patent is entitled "Method and system for frequency up-conversion with a variety of transmitter configurations." The '508 Patent is directed towards "methods and systems to up-convert a signal from a lower frequency to a higher frequency, and applications thereof." '508

MEDIATEK-1037
MediaTek, Inc. v. Parkervision, Inc.
IPR2025-00030

Patent at 2:9–11. In particular, the specification describes that the invention uses an information signal, which may be "shaped," to control a switch or gate such that "a signal that is harmonically rich is produced with each harmonic of the harmonically rich signal being modulated substantially the same as the [information] signal" or that has amplitudes that are proportional to the amplitude of the information signal. *Id.* at 2:30–34, 2:46–49. The specification describes that the desired harmonic (or harmonics) may be selected by using proper filtering and then transmitted. *Id.* at 2:34–35, 2:49–50. By using this approach, the specification describes that "present invention provides a more efficient means for producing a modulated carrier for transmission, uses less power, and requires fewer components." *Id.* at 15:38–40.

Claim 11, which is asserted, recites:

> 11. A method for frequency up conversion comprising:
> shaping a string of pulses from a reference signal;
> generating a string of multiple pulses from said string of pulses; and
> gating a bias signal under the control of said string of multiple pulses to generate a periodic signal having a plurality of harmonics at least one of which is at a desired frequency.

B. U.S. Patent No. 7,929,638

The '638 Patent is entitled "Wireless local area network (WLAN) using universal frequency translation technology including multi-phase embodiments." The specification describes that the universal frequency translation ("UFT") module down-converts a received electromagnetic signal and up-converts a baseband signal in preparation for transmission over the WLAN. '638 Patent at 2:35–38, 2:40–43. The specification describes that:

> WLANs exhibit multiple advantages by using UFT modules for frequency translation. These advantages include, but are not limited to: lower power consumption, longer battery life, fewer parts, lower cost, less tuning, and more effective signal transmission and reception. These advantages are possible because the UFT module enables direct frequency conversion in an efficient manner with minimal signal distortion.

Id. at 2:47–53.

Figure 71A depicts transmitter 7102, which includes control signal generator 7142, which is of particular relevance to the disputed terms for this patent. *Id.* at 40:50–51, 42:4–6.

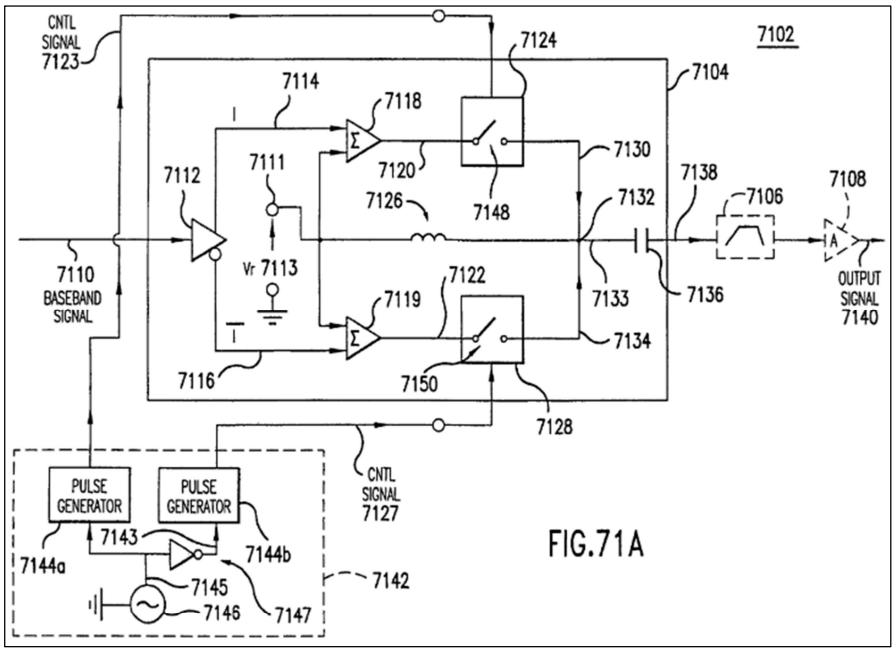
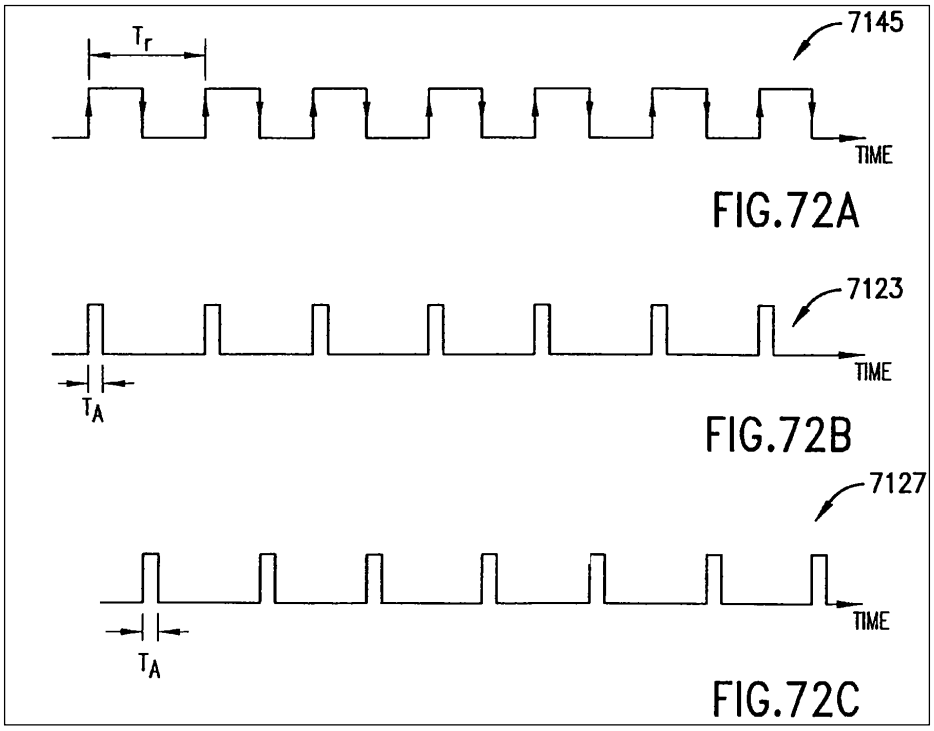


FIG.71A

The specification describes that control signal generator 7142 "generates control signals 7123 and 7127[.]" *Id.* at 42:4–6. Figure 71A depicts that control signals 7123 and 7127 are used to control UFT modules 7124 and 7128, respectively. Both control signals "have the same period T_S as a master clock signal 7145 (FIG. 72A), but have a pulse width (or aperture) of T_A." *Id.* at 42:6–9. Figures 72A, B, and C depicts exemplary waveforms for master clock signal 7145, control signal 7123, and control signal 7127, respectively.



Independent Claim 16, which does not contain any disputed terms, is below, along with dependent Claims 17, 18, and 20, which each have one disputed term.

16. A method for up-converting a baseband signal, comprising:
receiving a baseband signal at an inverter;
inverting said baseband signal to generate an inverted baseband signal;
sampling said baseband signal according to a first control signal to generate a first harmonically rich signal;
sampling said inverted baseband signal according to a second control signal to generate a second harmonically rich signal; and
combining said first harmonically rich signal and said second harmonically rich signal to generate a third harmonically rich signal.
17. The method of claim 16, wherein the first control signal and the second control signal are configured to improve energy transfer to a desired harmonic of the third harmonically rich signal.
18. The method of claim 16, wherein a pulse width of the first control signal and the second control signal is configured to improve energy transfer to a desired harmonic of the third harmonically rich signal.
20. The method of claim 19, wherein the relative amplitude of a particular harmonic image of said plurality of harmonic images can be adjusted by adjusting a pulse width of the first control signal and the second control signal.

C. U.S. Patent No. 8,498,593

The '593 Patent is entitled "Switching power supply." The "embodiments of the present invention relate to methods and systems for enhancing system parameters including efficiency in power amplification systems." '593 Patent at 1:24–27. The invention aims to improve the power efficiency of a power supply. *See id.* at 1:29–43.

The specification describes that the power supply:

> can include a switching device and an aperture generator and control module. The switching device can be configured to down-convert an input voltage and pass the down-converted input voltage to an output voltage node. The aperture generator and control module can be configured to control the switching device. In response to a power efficiency of the power supply exceeding a predetermined threshold, the aperture generator and control module can deactivate the switching device and pass the input voltage to the output voltage node.

Id. at Abstract.

Claim 9, which is asserted, recites:

> 9. A method for controlling a power supply comprising:
> down-converting, with a switching device, an input voltage to generate a down-converted voltage;
> passing the down-converted voltage to an output voltage node; and
> in response to a power efficiency of the power supplying exceeding a predetermined threshold, de-activating the switching device and passing the input voltage to the output voltage node.

II. LEGAL STANDARD

A. General principles

The general rule is that claim terms are generally given their plain-and-ordinary meaning. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014), *vacated on other grounds*, 575 U.S. 959, 959 (2015) ("There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.") (internal quotation omitted). The plain-and-ordinary

meaning of a term 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." *Phillips*, 415 F.3d at 1313.

The "only two exceptions to [the] general rule" that claim terms are construed according to their plain-and-ordinary meaning are when the patentee (1) acts as his/her own lexicographer or (2) disavows the full scope of the claim term either in the specification or during prosecution. *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). The Federal Circuit has counseled that "[t]he standards for finding lexicography and disavowal are exacting." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). To act as his/her own lexicographer, the patentee must "clearly set forth a definition of the disputed claim term" and "'clearly express an intent' to [define] the term." *Thorner,* 669 F.3d at 1365. "For a statement during prosecution to qualify as a disavowal of claim scope, it must be 'so clear as to show reasonable clarity and deliberateness,' and 'so unmistakable as to be unambiguous evidence of disclaimer.'" *Genuine Enabling Tech. LLC v. Nintendo Co.*, 29 F.4th 1365, 1374 (Fed. Cir. 2022) (quoting *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1325 (Fed. Cir. 2003)).

"Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." *Phillips*, 415 F.3d at 1317. "[D]istinguishing the claimed invention over the prior art, an applicant is indicating what a claim does not cover." *Spectrum Int'l, Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1379 (Fed. Cir. 1998). The doctrine of prosecution disclaimer precludes a patentee from recapturing a specific meaning that was previously disclaimed during prosecution. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). "[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable." *Id.* at 1325–26. Accordingly, when "an applicant's statements are amenable to multiple reasonable

interpretations, they cannot be deemed clear and unmistakable." *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

A construction of "plain and ordinary meaning" may be inadequate when a term has more than one "ordinary" meaning or when reliance on a term's "ordinary" meaning does not resolve the parties' dispute. *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co*., 521 F.3d 1351, 1361 (Fed. Cir. 2008). In that case, the Court must describe what the plain-and-ordinary meaning is. *Id.*

"Although the specification may aid the court in interpreting the meaning of disputed claim language . . ., particular embodiments and examples appearing in the specification will not generally be read into the claims." *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988). "[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

Although extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc. v. U.S. Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)). Technical dictionaries may be helpful, but they may also provide definitions that are too broad or not indicative of how the term is used in the patent. *Id.* at 1318. Expert testimony may also be helpful, but an expert's conclusory or unsupported assertions as to the meaning of a term are not. *Id.*

B. Claim differentiation

Under the doctrine of claim differentiation, a court presumes that each claim in a patent has a different scope. *Phillips*, 415 F.3d at 1314–15. The presumption is rebutted when, for

example, the "construction of an independent claim leads to a clear conclusion inconsistent with a dependent claim." *Id.* The presumption is also rebutted when there is a "contrary construction dictated by the written description or prosecution history." *Seachange Int'l., Inc. v. C-COR, Inc.*, 413 F.3d 1361, 1369 (Fed. Cir. 2005). The presumption does not apply if it serves to broaden the claims beyond their meaning in light of the specification. *Intellectual Ventures I LLC v. Motorola Mobility LLC*, 870 F.3d 1320, 1326 (Fed. Cir. 2017).

C. Indefiniteness

"[I]ndefiniteness is a question of law and in effect part of claim construction." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012). Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must "inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 901. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application was filed. *Id.* at 911.

III. LEGAL ANALYSIS

A. Term #1: "string of multiple pulses"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
#1: "string of multiple pulses" U.S. Patent No. 7,050,508, Claim 11 Proposed by Defendants	Plain-and-ordinary meaning	"a sequence of pulses containing at least n+1 pulses for every cycle of said string of pulses"

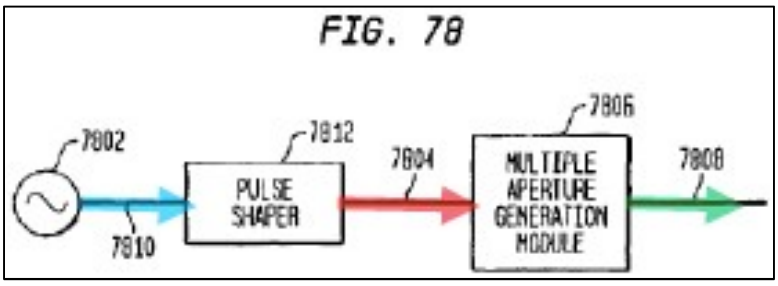
The Parties' Positions:

Defendants contend that this term is not a "common term in the relevant art." Opening at 10–11. Defendants contend that this term was absent from the ancestor patent that this patent claims priority to. *Id.* at 11. Based on that, Defendants contend that the term is a coined term, so the Court needs to consult the intrinsic evidence to determine its meaning. *Id.* (*Iridescent Networks, Inc. v. AT&T Mobility, LLC*, 933 F.3d 1345, 1353 (Fed. Cir. 2019)).

Defendants contend that the specification "makes clear" that "string of multiple pulses" is different from a "string of pulses," *i.e.*, the former has more pulses than the latter. *Id.* (citing '508 Patent at 49:54–50:5). Defendants contend that Plaintiff improperly interprets that "multiple" could mean "one," such that "string of multiple pulses" may be coextensive with a "string of pulses." *Id.* at 11–12. Defendants contend that Plaintiff's interpretation contradicts the only description of "string of multiple pulses," which "unambiguously shows that a 'string of multiple pulses' has more pulses than a 'string of pulses.'" *Id.* at 12 (citing *Wang Labs., Inc. v. Am. Online, Inc.*, 197 F.3d 1377, 1383 (Fed. Cir. 1999)). Defendants contend that, by contrast, that "n+1" their proposed construction is consistent with the specification's description of a "string of multiple pulses."

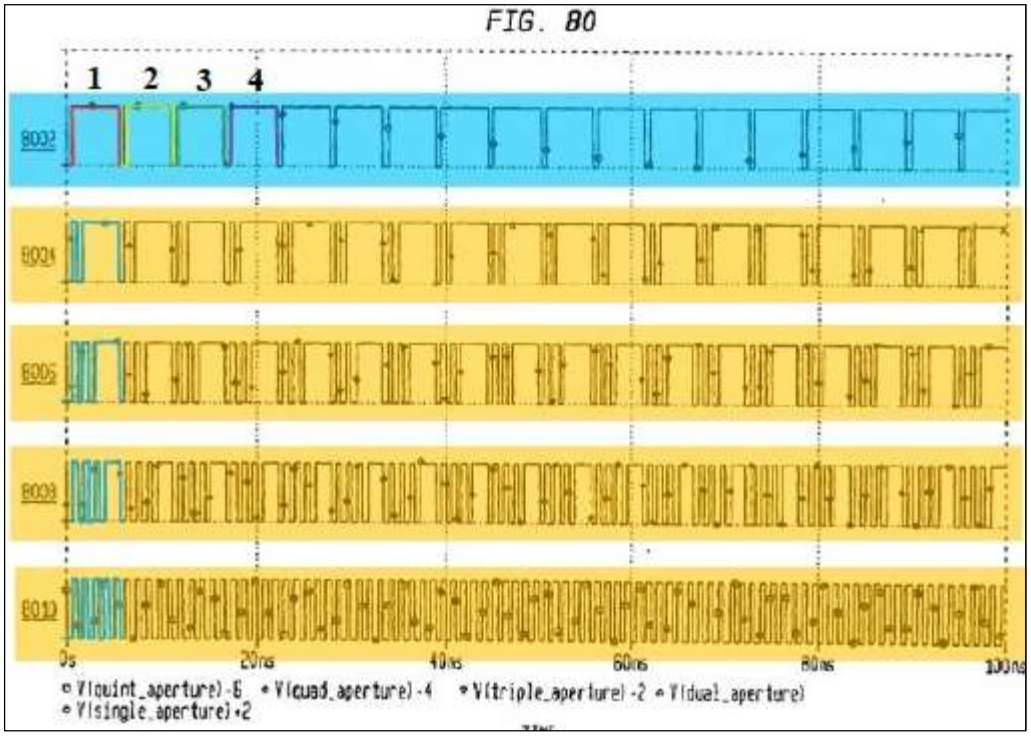
In its response, Plaintiff contends that this Court previously construed this term as plain-and-ordinary meaning. Response at 9 (citing *ParkerVision, Inc. v. Intel Corp.*, No. 6:20-cv-00562-ADA, ECF No. 61 at 13 (W.D. Tex. Jul. 22, 2021)). Plaintiff contends that the plain meaning of "string of multiple pulses" is a signal with more than one pulse. *Id.* Plaintiff contends that, rather than explaining what the wrong with the Court's prior construction, Defendants propose a construction that is very similar to Intel's construction and relies on the same flawed arguments that the Court previously rejected. *Id.*

Plaintiff contends that Defendants' proposed construction improperly excludes an embodiment. *Id.* More specifically, Plaintiff contends that Figure 78 depicts the circuitry that perform the steps in Claim 11; namely, oscillating signal 7810 (blue) is input into pulse shaper 7812, which outputs the claimed "string of pulses" 7804 (red).



Id. (citing '508 Patent at Figure 78 (annotations added by Plaintiff), 49:46–53). "String of pulses" 7804 are input into multiple aperture generation module 7806, which outputs "string of multiple pulses" 7808 (green). *Id.* (citing '508 Patent 49:46–53).

Plaintiff contends that Figure 80 depicts different pulse trains that multiple aperture generation module 7806 may output.



Id. at 11 (citing '508 Patent at Figure 80 (annotations and color added by Plaintiff), 50:6–22). Plaintiff contends that pulse train 8002 "has *one* pulse for *each* pulse of the string of pulses from the pulse shaper 7812." *Id.* (citing '508 Patent at 50:6–7) (emphases in Plaintiff's brief). Plaintiff contends that pulse trains 8004, 8006, 8008, and 8010 contain two, three, four, and five pulses, respectively, for each string of pulses (blue lines). *Id.* (citing '508 Patent at 50:6–22). Plaintiff contends that Defendants' proposed construction—which requires "*n*+1" pulses, *i.e.*, two or more, in each "string of multiple pulses"—improperly excludes pulse train 8002. *Id.*

Plaintiff contends that Defendants proposed construction also improperly imports a limitation from the specification. *Id.* at 11–12 (citing *Liebel-Flarsheim*, 358 F.3d at 906).

Plaintiff contends that if *n* in Defendants' proposed construction were equal to zero, then there would be one pulse in the string of pulses, which is depicted by pulse train 8002, thus "undermining" Defendants' proposed construction. *Id.* at 12.

In their reply, Defendants contend that Plaintiff's proposed construction for this term is really "a signal made up of more than one pulse," which has the same meaning as Claim 11's "string of pulses." Reply at 1. Defendants contend that the fact that two terms have the same meaning indicates that Plaintiff's proposed construction is incorrect. *Id.* at 1–2.

With respect to Plaintiff's argument that the Court previously construed this term in the *Intel* case, Defendants contend that the Court construed a larger phrase "generating a string of multiple pulses from said string of pulses" and Intel proposed a different construction than Defendants propose in this case. *Id.* at 1 n.1.

Defendants contend that Plaintiff does not dispute that the term is a coined term, so the Court should resort to the intrinsic evidence to determine the meaning of this term. *Id.* at 1, 2–3.

With respect to Plaintiff's argument that Defendants' proposed construction excludes pulse train 8002, Defendants contend that the specification does not describe pulse train 8002 as a "string of multiple pulses." *Id.* Rather, Defendants contend that the specification describes pulse train 8002 as having "one pulse per cycle of string of pulses 7804." *Id.* at 3 Defendants contend that the only embodiment described as a "string of multiple pulses" has "n+1 pulses for every [n] cycle of string of pulses." *Id.* (citing '508 Patent at 50:3–5).

With respect to Plaintiff's argument that Defendants' proposed construction imports a limitation from one embodiment, Defendants contend that their proposed construction is not limited to that embodiment. *Id.* Rather, Defendants contend that their proposed construction "maintains the critical distinction between 'string of pulses' and 'string of multiple pulses'—*i.e.*, that a 'string of multiple pulses' has more pulses than the 'string of pulses' from which it is generated[.]" *Id.* at 3–4.

With respect to Plaintiff's argument that when n=0, "string of multiple pulses" has the same number of pulses as the "string of pulses," Defendants contend that Plaintiff's "argument is a fallacy. No 'string of multiple pulses' would exist if there is no 'said string of pulses.'" *Id.* at 4.

In its sur-reply, Plaintiff contends that the claim language "makes clear that a first *string of pulses* is shaped from a reference signal, and a *string of multiple pulses* (the disputed term) is then generated from that first string." Sur-Reply at 1 (emphases in Plaintiff's brief). Plaintiff contends that "string of multiple pulses" "does not impose a specific pulse-per-cycle ratio." *Id.*

Plaintiff contends that Defendants' proposed construction improperly limits the claim term to an embodiment. *Id.* Plaintiff contends that Defendants "asserts—without specification support—that pulse train 8002 is 'merely a string of pulses.'" *Id.* (citing Reply at 7). Plaintiff contends that the passage that Defendants rely on is not definitional, but rather expressly describes

that the embodiment is non-limiting. *Id.* at 1–2 (citing '508 Patent at 50:1–5, 49:47–53). Plaintiff contends that the specification "treats pulse train 8002 no differently than the other 'string of multiple pulses' (pulse trains 8004, 8006, 8008, 8010) generated from string of pulses 7804." *Id.* at 2. Plaintiff contends that Defendants do not explain why the specification's recitation of "having n+1 pulses" justifies including "*at least* n+1 pulses" in their proposed construction. *Id.* Plaintiff further contends that Defendants' proposed construction adopts "for every cycle of [said] string of pulses" directly from the preferred embodiment." *Id.*

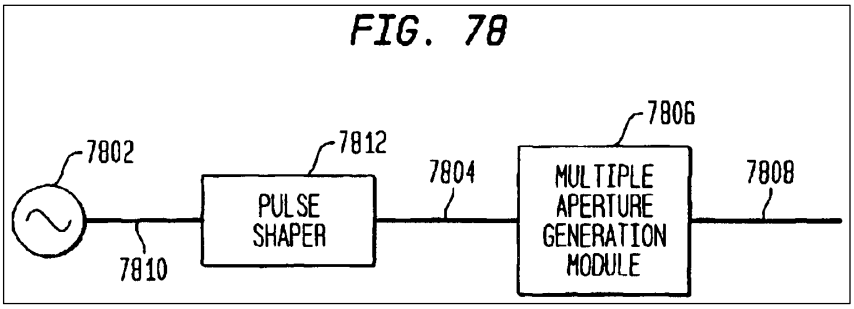
While Defendants' proposed construction is different than Intel's in the prior case, Plaintiff contends that "[b]oth constructions rely on the same flawed premise: that out of all the disclosed pulse trains, only pulse train 8002 is excluded." *Id.* at 3.

The Court's Analysis:

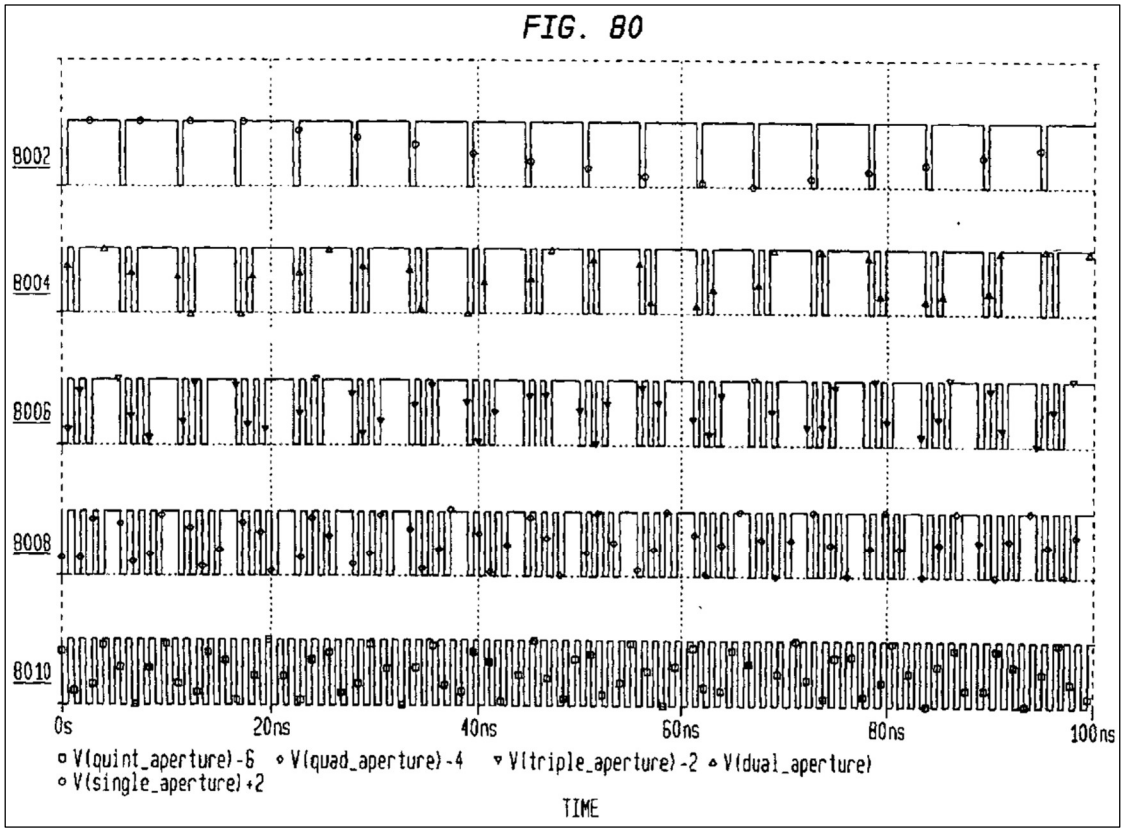
After reviewing the parties' arguments and considering the applicable law, the Court agrees with Plaintiff that this term should be construed according to its plain-and-ordinary meaning for the reasons that follow. ***First***, the "heavy presumption" is that terms should be construed according to their plain-and-ordinary meaning. *Azure Networks*, 771 F.3d at 1347. ***Second***, Defendants do not expressly allege lexicography or disclaimer, which are the only two exceptions to the general rule that a term should be construed as having its plain-and-ordinary meaning. *Thorner*, 669 F.3d at 1365.

Third, Defendants proposed construction improperly excludes an embodiment. *Oatey Co. v. IPS Corp.*, 514 F.3d 1271, 1276 (Fed. Cir. 2008) ("[w]e normally do not interpret claim terms in a way that excludes embodiments disclosed in the specification. . . . where claims can reasonably be interpreted to include a specific embodiment, it is incorrect to construe the claims to exclude

that embodiment, absent probative evidence to the contrary."). More specifically, the specification describes that a string of pulses 7804 in Figure 78 is input into multiple aperture generation module 7806, which outputs a string of multiple pulses 7808. '508 Patent at 49:50–53.



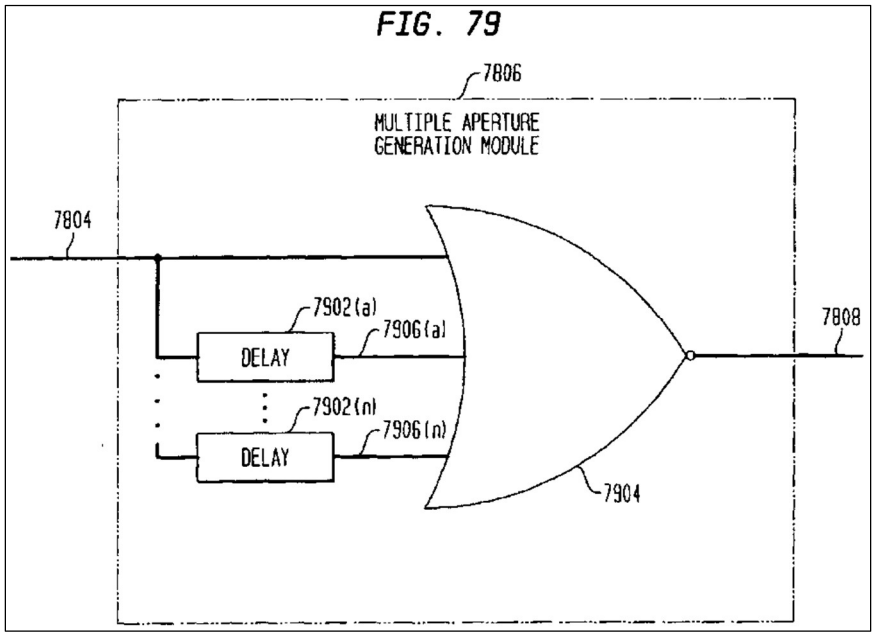
The specification further describes that the aperture generation module 7806 outputs pulse trains 8002, 8004, 8006, 8008, or 8010, which have one, two, three, four, and five pulses per cycle of string of pulses 7804, respectively. *Id.* at 50:6–22, Figure 80.



In other words, the specification expressly describes that the string of multiple pulses 7808 may be a string of one pulse, *e.g.*, pulse train 8002. As such, Defendants' proposed construction—which requires that there be at least two pulses in each string of multiple pulses—improperly excludes this embodiment. *Oatey*, 514 F.3d at 1276.

With respect to Defendants' argument that "string of multiple pulses" cannot mean "string of [one] pulse" as the scope of that term would be coextensive with the scope of "string of pulses," the Court disagrees. As described above, the specification describes that string of multiple pulses 7808 comprises one, two, three, four, and five pulses. The specification does not differentiate or otherwise describe differently when string of multiple pulses 7808 has one pulse and when it has more than one pulse. *See, e.g.*, *id.* at 50:6–22. As such, the intrinsic evidence contradicts Defendants' argument.

With respect to Defendants' argument that the only embodiment described as a "string of multiple pulses" has "n+1 pulses for every [n] cycle of string of pulses," the Court concludes that Defendants misread the specification. More specifically, the passage that Defendants cite (*id.* at 50:3–5) does not describe that there are n+1 pulses in the string of multiple pulses" for every n cycle of string of pulses. Rather, as described Figure 79, the passage recites "[w]hen string of pulses 7804 and first through n^{th} delayed strings of pulses 7906(*a*)-7906(*n*) are combined by 'NOR' gate 7904, string of multiple pulses 7808 is created having n+1 pulses for every cycle of string of pulses 7804." *Id.* at 50:1–5.



In other words, the "n" in this passage is the number of delayed strings of pulses, and ***not*** the cycle of string of pulses as Defendants assert. Therefore, Defendants' proposed construction is based on a variable, n, that is unrelated to the number of pulses in a "string a multiple pulses." As such, Defendants misread the specification and there is no intrinsic support for Defendants' proposed construction.

Fourth, the Court previously construed this term as plain-and-ordinary meaning in the prior *Intel* case and Defendants have not provided a good reason for the Court to change its construction.[1] *Intel*, No. 6:20-cv-00562-ADA, ECF No. 61 at 13.

Therefore, for the reasons described above, the Court finds that the term should be construed according to its plain-and-ordinary meaning.

[1] With respect to Defendants' argument that the term at-issue in that case is different than in this case, the disputed term in the *Intel* case ("generating a string of multiple pulses from said string of pulses") contains the disputed term in this case. *Intel*, No. 6:20-cv-00562-ADA, ECF No. 61 at 13.

B. Term #2: "the first control signal and the second control signal are configured to improve energy transfer to a desired harmonic"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
#2: "the first control signal and the second control signal are configured to improve energy transfer to a desired harmonic" U.S. Patent No. 7,929,638, Claim 17 Proposed by Defendants	Plain-and-ordinary meaning	Indefinite

The Parties' Positions:

Defendants contend that the term is indefinite because the patent does not describe "'*any technique*' for making the required measurement, and it also fails to describe any objective baseline to be used in making such a measurement." Opening at 12–13 (emphasis in Defendants' brief). Defendants contend that the specification, at most, only recites that the "amplitude" of a "desired harmonic" can be "maximized by setting the sampling aperture width" T_A to be "1/2 the period (or π radians) at the harmonic of interest." *Id.* at 13 (citing '638 Patent at 45:40–47, 45:48–46:14, Figure 72J). But Defendants contend that this description does not provide reasonable certainty because it does not describe a measurement method and objective baseline. *Id.* (citing cases).

In its response, Plaintiff contends that the term is not indefinite and a POSITA would understand that "the phrase 'configured to improve energy transfer to a desired harmonic' refers to designing the control signals to direct more energy to a selected frequency component (i.e., the 'desired harmonic') of the output." Response at 13.

Plaintiff contends that the patent "provides detailed guidance on how this is accomplished—namely, by adjusting the pulse width (or aperture) of the control signals and

selecting the harmonic number of interest." *Id.* More specifically, Plaintiff contends that the patent describes that "the relative amplitude of the frequency images [of the harmonically rich signal] is generally a function of the harmonic number and the pulse width T_A. As such, the relative amplitude of a particular harmonic . . . can be increased (or decreased) by adjusting the pulse width T_A of the control signal." *Id.* at 15 (quoting '508 Patent at 42:65–43:3 (alterations in Plaintiff's brief)). Plaintiff contends that the patent explains that "[i]n general, shorter pulse widths of T_A shift more energy into the higher frequency harmonics, and longer pulse widths of T_A shift energy into the lower frequency harmonics." *Id.* (citing '508 Patent at 43:3–6). Plaintiff contends that the patent "even provides an exemplary mathematical formula—Equation 1—that shows that the energy (represented as amplitude) at any given harmonic of the output signal is a function of the ratio T_A/T_S and the harmonic number n[.]" *Id.* (citing '508 Patent at 44:45–56). Plaintiff contends that from this equation, it is apparent that setting the T_A to half the period of the harmonic of interest maximizes energy at that harmonic. *Id.* at 17 (citing '508 Patent 45:40–44). Plaintiff contends that Figure 72J depicts that, if the desired harmonic is at 1 GHz, using a pulse width of 500 picoseconds reduces the amount of energy (*i.e.*, the amplitude) at non-desired harmonics (*e.g.*, 200 MHz) as compared to using a pulse width of 5000 picoseconds.

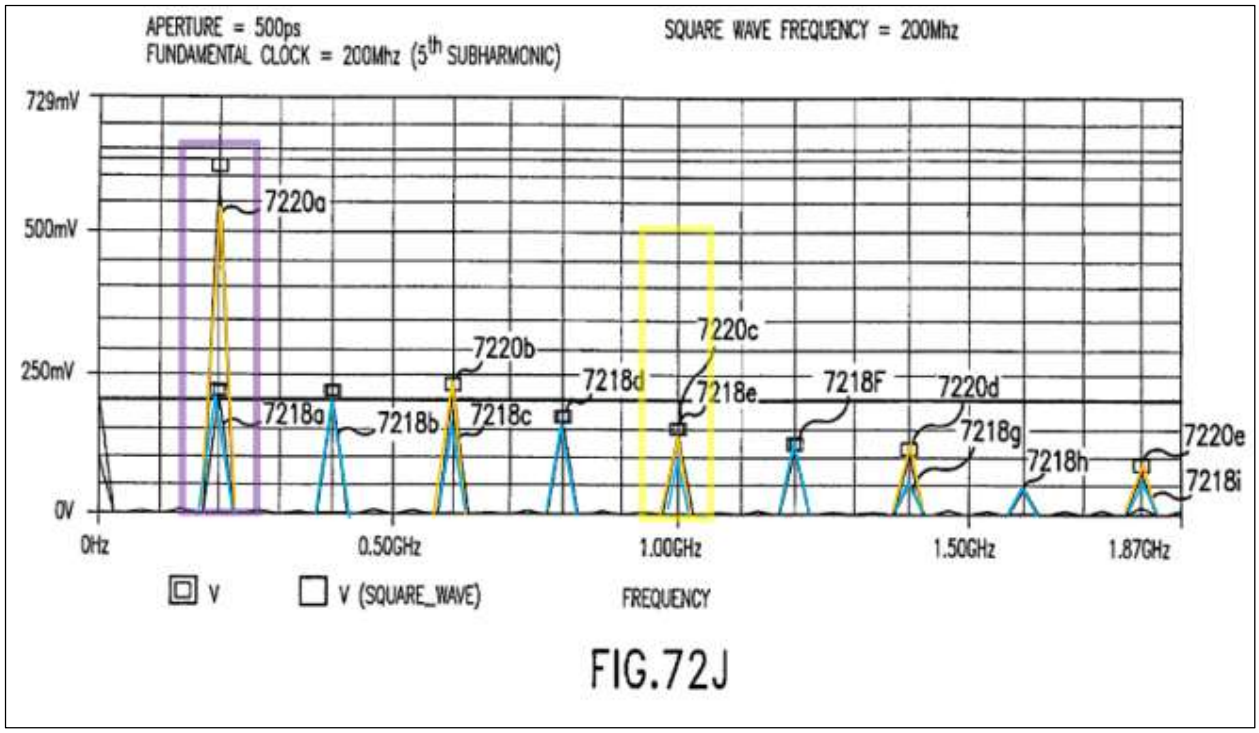


FIG.72J

Id. at 16 (annotations to Figure 72J added by Plaintiff). Based on that, Plaintiff contends that using the 500 picosecond pulse width control signal improves energy transfer to the desired harmonic. *Id.*

With respect to Defendants' argument that the term is indefinite because the patent fails to specify a technique of measurement or an objective baseline, Plaintiff contends that (1) "[t]he measurement is simply the amplitude of the desired harmonic, which can be readily determined using Fourier analysis" and (2) "[t]he baseline is any unoptimized signal, and improvement is achieved when more energy is directed to the target harmonic or when less energy is wasted at undesired frequencies." *Id.* at 17. Plaintiff contends that Figure 72J illustrates these concepts. *Id.*

In their reply, Defendants contend that Plaintiff "primarily argues that 'configured to improve energy transfer' is not indefinite because the '638 patent describes a way to 'maximize' the amplitude of a signal at a desired harmonic." Reply at 4 (citing Response at 15–16). Defendants contend that "improv[ing] energy transfer to a desired harmonic" is not the same as

"maximiz[ing]" amplitude. *Id.* Defendants contend that Plaintiff "points to, at most, one instance in the specification describing maximization of amplitude (voltage) at a harmonic of interest." *Id.* (citing Response at 15–17; '638 Patent at 45:44–46, Figure 72J). Defendants contend that, even if "maximizing" is a form of "improving," the specification does not provide any objective "baseline" to determine whether the control signals have been configured to "improve" as compared to "maximize." *Id.* at 5–6.

Defendants contend that Plaintiff "plucked" the baseline from "thin air." *Id.* at 6. Defendants contend that, according to Plaintiff's argument, a POSITA would have to "identify both an unoptimized signal and an optimized signal in a particular system." *Id.* Defendants contend that "[t]erms of degree are problematic if their baseline is unclear to those of ordinary skill in the art." *Id.* (quoting *Liberty Ammunition, Inc. v. United States*, 835 F.3d 1388, 1396–97 (Fed. Cir. 2016)). Defendants contend that Plaintiff's "'unoptimized'-baseline argument provides no objective baseline[.]" *Id.*

Defendants contend that Plaintiff's argument that "improvement is achieved [1] when more energy is directed to the target harmonic or [2] when less energy is wasted at undesired frequencies." *Id.* at 7 (citing Response at 17). With respect to the former argument, Defendants contend that the specification does not provide guidance to determine if more energy has been directed towards the target harmonic; rather, the specification only describes how to maximize the amplitude at the target harmonic. *Id.* With respect to the latter argument, Defendants contend that "'[w]asting less energy at undesired harmonics' is not the same as 'improving energy transfer to a desired harmonic'," nor does the specification say that. *Id.* Defendants contend that Figure 72J depicts that, at the harmonic of interest (1 GHz), the spectra corresponding to the two pulse widths (7218e and 7220c) are approximately the same. *Id.*

Furthermore, Defendants contend that "determining whether 'less energy is wasted' is inherently context dependent and subjective." *Id.* More specifically, Defendants contend that "[s]uch a determination would require looking at two frequency spectra to see if the amplitude at an 'undesired harmonic' is greater in the 'unoptimized' spectrum[,]" but the specification fails to "describe any objective criteria for identifying the 'unoptimized' frequency spectrum that should be used." *Id.* Defendants contend that Figure 72J depicts that the amplitudes of the undesired harmonics are approximately the same as the amplitudes in the optimized system, *e.g.*, 7218i and 7220e at the 10th harmonic. *Id.* at 7–8. Based on that, Defendants contend that whether 'less energy is wasted' depends both on which 'unoptimized' frequency spectrum is used, and which 'undesired harmonic' within that spectrum is used, making [Plaintiff's] view of the claim term doubly subjective." *Id.* at 8 (citing *Versata Software, Inc. v. Zoho Corp.*, 213 F. Supp. 829, 835–839 (W.D. Tex. 2016)).

In its sur-reply, Plaintiff contends that Defendants "fixate[] on semantics." Sur-Reply at 4. Contrary to Defendants' argument, Plaintiff contends that it never equated "maximizing" a signal with "improving energy transfer." *Id.* Rather, Plaintiff contends that it "explained that a POSITA would understand 'improving energy transfer' to encompass at least two approaches: (1) directing more energy to the desired harmonic and/or (2) wasting less energy at undesired harmonics." *Id.* (citing '638 Patent at 42:65–43:6, 44:45–46:14).

Plaintiff contends that the patent "explains that the pulse width (T_A) of the control signal determines how much energy is distributed across harmonics." *Id.* at 4–5 (citing '638 Patent at 47:36–45). Plaintiff contends that the specification further explains that the "signal amplitude of any harmonic *n* can be increased—or even maximized—by setting the sampling aperture to T_A = ½ the period of the desired harmonic." *Id.* at 5 (citing '638 Patent at 45:44–47).

Plaintiff contends that a POSITA would "understand that maximizing the amplitude at a desired harmonic is one way to improve energy transfer." *Id.* With respect to Defendants' argument that "wasting less energy at undesired harmonics" is not equivalent to improving energy transfer, Plaintiff contends that Figure 72 provides an example whether two control signals yield similar amplitude at the desired harmonic (1 GHz), but where one configuration (7218) wastes significantly less energy at undesired harmonics (200 MHz). *Id.* (citing '638 Patent at 46:6–13). Plaintiff contends that a POSITA would also understand that "delivering the same energy at the desired harmonic while wasting less elsewhere" "constitutes an improvement in energy transfer." *Id.* at 5–6.

With respect to Defendants' argument that the specification does not provide an "objective baseline or method," Plaintiff contends that the specification discloses equations that a POSITA can use to "objectively assess whether a control signal configuration directs more energy to a desired harmonic or reduces energy at undesired harmonics." *Id.* at 6. With respect to Defendants' argument that "improving energy transfer" is context-dependent, Plaintiff contends that "[a]ll engineering design involves context[,]" but "[w]hat matters is whether the patent provides enough guidance for a skilled artisan to apply the term. It does." *Id.*

The Court's Analysis:

After reviewing the parties' arguments and considering the applicable law, the Court agrees with Plaintiff that the term is not indefinite for the reasons that follow. ***First***, the Court agrees with Plaintiff that "configured to improve energy transfer to a desired harmonic" refers to configuring the first and second control signals in Figure 71A to direct more energy to the desired harmonic. Response at 13.

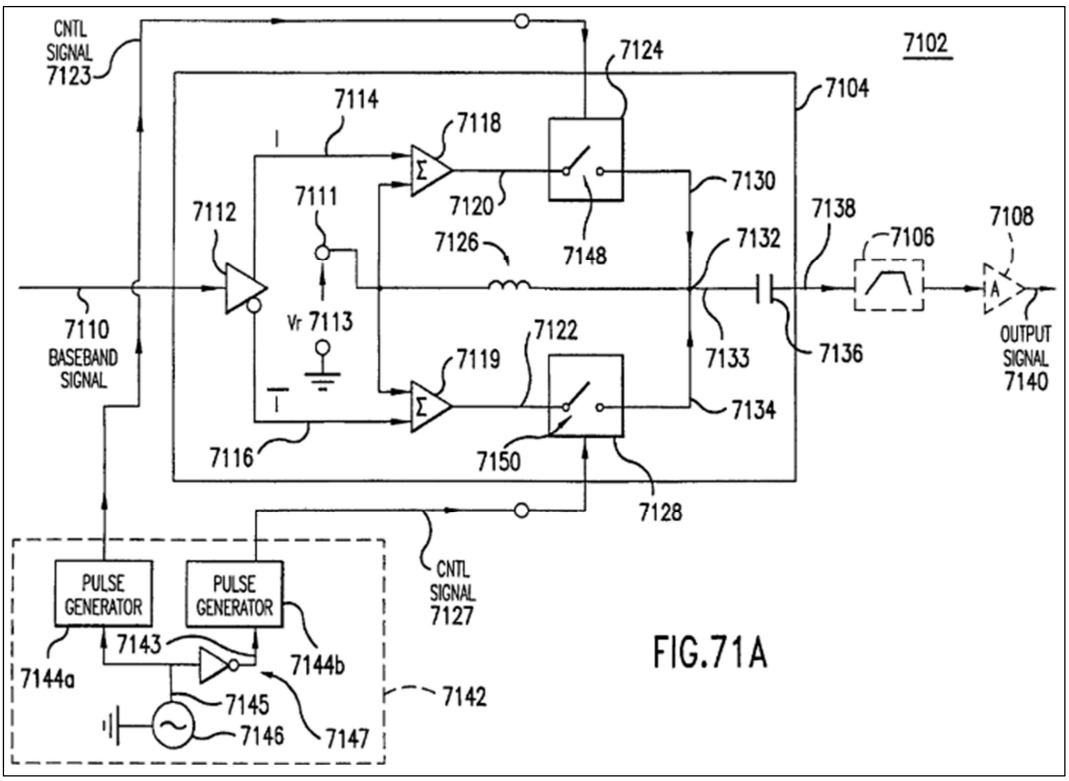


FIG.71A

The specification describes that "the relative amplitude of a particular harmonic 7152 can be increased (or decreased) by adjusting the pulse width T_A of the control signal 7123." '638 Patent at 42:67–43:3. The specification also provides guidance on how to configure control signals to direct more energy towards higher and lower frequency harmonics, namely, that "[i]n general, shorter pulse widths of T_A shift more energy into the higher frequency harmonics, and longer pulse widths of T_A shift energy into the lower frequency harmonics." *Id.* at 43:3–6.

In addition, Equation 1 in the specification shows that the "relative amplitude of the frequency images is generally a function of the harmonic number n, and the ratio of T_A/T_S." *Id.* at 44:45–56, 44:57–59. The specification explains that adjusting the T_A/T_S ratio adjusts the amplitude of the harmonic, and that setting T_A to half the period of the period of the harmonic of interest maximizes the amplitude of that harmonic. *Id.* at 44:61–63, 45:40–44.

The Court agrees with Plaintiff regarding its interpretation of what Figure 72J depicts.

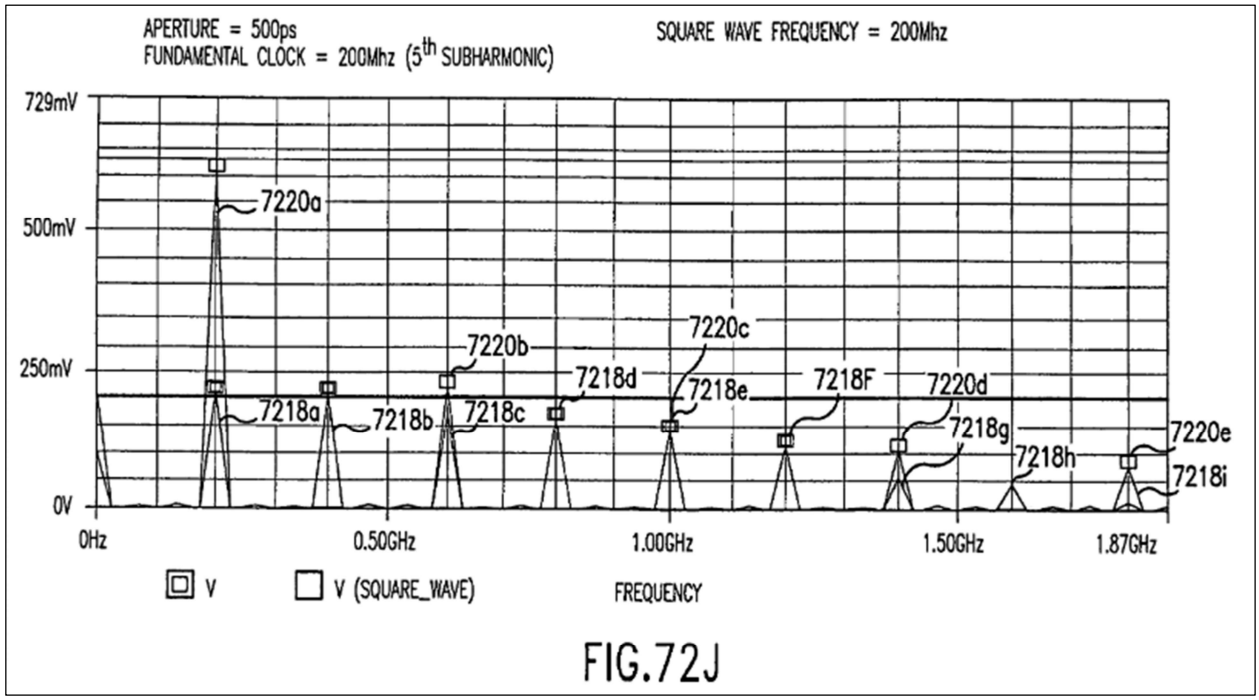


FIG.72J

As described above, Figure 72J depicts amplitudes at various harmonics, for control signals 7218 and 7220, which have different aperture T_A. The specification describes that while the amplitudes for signals 7220c and 7218e at the harmonic of interest (1 GHz) are approximately the same, the amplitude at the 200 MHz harmonic for signal 7220a is significantly higher than the amplitude for signal 7218a. In other words, because the amplitude of signal 7220a is significantly higher than the amplitude of signal 7218a at 200 MHz, control signal 7220 does a poor job of energy transfer to the desired harmonic (1 GHz). By contrast, control signal 7218 "improve[s] energy transfer to a desired harmonic" by reducing the amount of energy transferred to non-desired harmonics while transferring approximately the same energy to the desired harmonic.

Based on the above disclosures, the Court concludes that the specification provides more than adequate guidance regarding the scope of "configured to improve energy transfer to a desired harmonic" such that a POSITA would understand its meaning with at least reasonable certainty. *Nautilus*, 572 U.S. at 910.

Second, the Court does not find Defendants' arguments to be persuasive. Contrary to Defendants' argument that the patent does not specify a technique of measurement, the specification describes measuring the amplitude using a Fourier analysis. *See, e.g.*, '638 Patent at 44:44–59. Similarly, contrary to Defendants' argument that the patent does not specify a baseline for comparison, the Court agrees with Plaintiff that the baseline is an unoptimized system, *e.g.*, that does not use the claimed invention.

With respect to Defendants' argument that the patent does not provide guidance to determine if more energy has been directed towards the target harmonic, as described immediately above, the specification describes measuring the amplitude using a Fourier analysis. *See, e.g.*, *id.* Accordingly, a POSITA would understand that if the amplitude of the target harmonic for the optimized system is greater than the amplitude of the target harmonic for the unoptimized system, then more energy has been directed towards the target harmonic. With respect to Defendants' argument that wasting less energy at undesired harmonics is not the same as "improving energy transfer to a desired harmonic," the Court disagrees because reducing the energy directed towards undesired harmonics improves the efficiency of energy transfer to the desired harmonic.

Finally, with respect Defendants argument that "improv[ing] energy transfer to a desired harmonic" is not the same as maximizing the amplitude, the Court agrees-in-part and disagrees-in-part. More specifically, the Court agrees that "improving energy transfer" is not coextensive with "maximizing the amplitude." But the Court disagrees that the specification does not describe how to "improve energy transfer to a desired harmonic." Rather, the specification describes that "the relative amplitude of a particular harmonic 7152 can be increased (or decreased) by adjusting the pulse width T_A of the control signal 7123." *Id.* at 42:67–43:3. Increasing the amplitude of the desired harmonic is one way to improve energy transfer to that harmonic.

For these reasons, the Court concludes that Defendants have not provided clear and convincing evidence that this term is indefinite.

Construction: Because the "heavy presumption" is that terms should be construed according to their plain-and-ordinary meaning and because Defendants does not allege lexicography or disclaimer, which are the only two exceptions to the general rule that a term should be construed as having its plain-and-ordinary meaning, the Court concludes that the term should be construed as having its plain-and-ordinary meaning. *Azure Networks*, 771 F.3d at 1347; *Thorner*, 669 F.3d at 1365.

Therefore, for the reasons described above, the Court finds that the term is not indefinite and should be construed according to its plain-and-ordinary meaning.

C. Term #3: "a pulse width of the first control signal and the second control signal is configured to improve energy transfer to a desired harmonic"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
#3: "a pulse width of the first control signal and the second control signal is configured to improve energy transfer to a desired harmonic" U.S. Patent No. 7,929,638, Claim 18 Proposed by Defendants	Plain-and-ordinary meaning	Indefinite

The Parties' Positions:

Defendants contend that this term is indefinite for the same reasons that Term #2 is indefinite. Opening at 13, Reply at 8. Plaintiff contends that the term is not indefinite for the same reasons that Term #2 is not indefinite. Response at 17, Sur-Reply at 7.

The Court's Analysis:

Because the parties' arguments rely on their arguments for Term #2, for the reasons described above in connection with Term #2, the Court finds that the term is not indefinite and should be construed according to its plain-and-ordinary meaning.

D. Term #4: "wherein the relative amplitude of a particular harmonic image of said plurality of harmonic images can be adjusted by adjusting a pulse width of the first control signal and the second control signal"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
#4: "wherein the relative amplitude of a particular harmonic image of said plurality of harmonic images can be adjusted by adjusting a pulse width of the first control signal and the second control signal" U.S. Patent No. 7,929,638, Claim 20 Proposed by Defendants	Plain-and-ordinary meaning	"the wherein clause is not limiting" Alternatively, indefinite.

The Parties' Positions:

Defendants contend that this term does not add "patentable weight" to Claim 16 as it only recites an optional element. Opening at 14 (citing cases).

Defendants contend that if the wherein clause is limiting, then the term is indefinite. *Id.* More specifically, Defendants contend that the term is indefinite because there is no guidance regarding the circumstances when the claimed relative amplitude "can be adjusted." *Id.* at 14–15 (citing cases).

In its response, Plaintiff contends that this term is not indefinite and only requires that the "claimed system has to have the capability of adjusting a harmonic amplitude using a corresponding adjustment in control signal apertures." Response at 17.

Plaintiff contends that the "wherein" clause "does far more than merely recite an intended outcome—it recites a technical relationship between signal characteristics." *Id.* at 18. More specifically, Plaintiff contends that the claim language "defines a capability of the system: that by modifying pulse widths, the relative amplitude of a particular harmonic image can be varied." *Id.*

With respect to Defendants' contention that the term is indefinite, Plaintiff contends that contention is inconsistent with their primary construction (that the "wherein" clause is not limiting) because that demonstrates that Defendants were able to analyze the claim and determine a meaning. *Id.* Plaintiff further contends that Defendants do not argue that any of the words or phrases of the term are unclear. *Id.* Plaintiff also contends that the specification "explains that the pulse width of control signals can be used to modify the harmonic content of an output signal [and] the amplitude of a particular harmonic of a sampled signal may be maximized by, 'setting T_A=1/2 the period (or π radians) at the harmonic of interest.'" *Id.* at 19 (citing '638 Patent at 45:43–45).

In their reply, Defendants contend that "can be" is "plainly permissive." Reply at 8–9 (citing cases).

With respect to Plaintiff's argument that Defendants contend that the wherein clause is not "an intended outcome," Defendants contend that Claim 20 is a method claim, which makes Plaintiff's argument "entirely irrelevant." *Id.* at 9.

With respect to Plaintiff's arguments regarding indefiniteness, Defendants contend that "[a]t most, the patent discloses that an amplitude of a harmonic of interest can be 'maximized' by 'setting T_A = ½ the period (or π radians) at the harmonic of interest.'" *Id* (citing '638 Patent at

45:43–45). But Defendants contend that "'maximizing' does not provide one of skill in the art with reasonable certainty about when 'can be adjusted' is satisfied and when it is not—it merely provides one example of what would be considered an adjustment." *Id.* (citing cases).

In its sur-reply, Plaintiff contends that "wherein" clause "specifies a technical relationship between control signal pulse widths and harmonic amplitudes—namely, adjusting the pulse widths of the two control signals results in adjusting the amplitude of a harmonic image." Sur-Reply at 7.

Plaintiff contends that Defendants attempt to "reframe[] the issue as a semantic dispute over whether 'can be' is 'permissive[,]'" but "in the context of this claim and its supporting disclosure, the phrase is not a merely optional or an intended outcome." *Id.*

With respect to Defendants' indefiniteness argument, Plaintiff contends that "[t]he claim does not require the adjustment to result in a specific value or degree of change. Rather, the claim simply states that the amplitude 'can be adjusted'—i.e., changed—by modifying the pulse width." *Id.* at 8.

The Court's Analysis:

After reviewing the parties' arguments and considering the applicable law, the Court agrees with Plaintiff that the wherein clause is limiting. The Court agrees with that the term recites a technical relationship between signal characteristics; namely, that there is a relationship between pulse widths of the first and second control signals and the relative amplitude of a particular harmonic. This limitation further limits Claim 19 by requiring that the amplitude of the desired harmonic can be controlled using the pulse widths of the first and second control signals. As such, the Court agrees with Plaintiff that the phrase is not a merely optional or an intended outcome.

With respect to indefiniteness, the Court agrees with Plaintiff that the term is not indefinite for the reasons that follow. ***First***, as described above in Section III.B, Equation 1 in the specification shows that the "relative amplitude of the frequency images is generally a function of the harmonic number n, and the ratio of T_A/T_S," and that adjusting the T_A/T_S ratio adjusts the amplitude of the harmonic. *Id.* at 44:45–56, 44:57–59, 44:61–63. Given that T_A is the pulse width of the control signals, adjusting the pulse width of the control signals changes the ratio of T_A/T_S, which according to Equation 1, changes the relative amplitude of the frequency image. Based on this disclosure alone, the Court concludes that a POSITA would understand with at least reasonable certainty the scope of the claim term. *Nautilus*, 572 U.S. at 910.

Second, with respect to Defendants' argument that there is no guidance regarding the circumstances when the relative amplitude of a particular harmonic image "can be adjusted," the claim language does not condition the adjustment of the amplitude on any particular circumstance. Rather, the claim language only requires that the relative amplitude can be adjusted by adjusting the pulse widths of the first and second control signals. In other words, the only requirement is that relative amplitude can be controlled by the pulse widths of the first and second control signals.

Third, none of the words of this claim term are unclear—and Defendants do not allege as much—nor is this term within the category of terms that are typically found to be indefinite, *e.g.*, a term of approximation, a term of degree, subjective terms, lack of antecedent basis, *etc.* *See, e.g.*, U.S. Pat. & Trademark Off., Manual of Patent Examination Procedure §§ 2173.05(b) , 2173.05(e) (9th ed. 2024, rev. Jan. 2024). Unsurprisingly, when arguing that the claim term was not limiting, Defendants did not have any problems determining the meaning of the claim term.

For these reasons, the Court concludes that Defendants have not provided clear and convincing evidence that this term is indefinite.

Construction: Because the "heavy presumption" is that terms should be construed according to their plain-and-ordinary meaning and because Defendants does not allege lexicography or disclaimer, which are the only two exceptions to the general rule that a term should be construed as having its plain-and-ordinary meaning, the Court concludes that the term should be construed as having its plain-and-ordinary meaning. *Azure Networks*, 771 F.3d at 1347; *Thorner*, 669 F.3d at 1365.

Therefore, for the reasons described above, the Court finds that the term is not indefinite and should be construed according to its plain-and-ordinary meaning.

E. Term #5: "power efficiency"

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction
#5: "power efficiency" U.S. Patent No. 8,498,593, Claim 9 Proposed by Defendants	Plain-and-ordinary meaning	"the output power of the power supply compared to its input power"

The Parties' Positions:

Defendants contend that this term should not be construed as requiring direct measurements, but as also allowing indirect measurements. Opening at 15 (citing Opening, Ex. 12 (Larson IPR Decl.) at ¶ 83). Defendants contend that "[t]he only description in the specification of activating the bypass switch to 'de-activat[e] the switching device and pass[] the input voltage to the output voltage node' relies on indirect measurements such as output power." *Id.* (citing '593 Patent at 4:7–10, 7:59–8:8, 8:41–60). Defendants contend that, by contrast, there is "no disclosure in the '593 patent's specification where the circuitry directly calculates the power efficiency, much

less determines whether to bypass the down-converter based on such a calculation." *Id.* at 15–16 (citing Opening, Ex. 12 (Larson IPR Decl.) at ¶ 85). Defendants contend that, the specification "treats the direct measurement of output power as indirectly related to power efficiency: 'Bypass Switch Control module bypasses the power supply when the output power exceeds a determined threshold, thereby increasing the efficiency of the power supply…'" *Id.* at 16 (citing '593 Patent at 8:4–8; Opening, Ex. 12 (Larson IPR Decl.) at ¶ 85; *Trustees of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359,1362–66 (Fed. Cir. 2016)).

Defendants contend that claim differentiation also supports their proposed construction. *Id.* More specifically, Defendants contend that because dependent Claims 2 and 12 describe using indirect measurements (measuring either the load current or the down-converted voltage), the broader independent claim includes indirect measurements. *Id.* (citing Opening, Ex. 12 (Larson IPR Decl.) at ¶ 86; *Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1379–82 (Fed. Cir. 2022)).

In its response, Plaintiff contends that Defendants' proposed construction is not a construction of the term, but rather a "veiled attempt to improperly rewrite the claim scope based on system-level implementations and design choices." Response at 19. Plaintiff contends that "nothing in the claim language or the specification redefines 'power efficiency' to mean or include 'indirect measurements.'" *Id.*

Plaintiff contends that the specification "consistently distinguishes between voltage, current, and power, and confirms that power efficiency is a function of power—not voltage or current standing alone." *Id.* at 20 (citing '593 Patent at 1:29–39). Plaintiff contends that the specification describes "scenarios that explicitly calculate power efficiency as a ratio of power output to power input[.]" *Id.* (citing '593 Patent at 4:35–43).

Plaintiff contends that, while Defendants' proposed construction aligns with the specification's description, they argue that it should include indirect measurements. *Id.* Plaintiff contends that Defendants' position are "incompatible" because "[a] ratio of output power to input power is a direct relationship. It cannot simultaneously be defined by a different physical quantity like voltage or current, which—although related—are not substitutes for power." *Id.* at 21.

Plaintiff contends that Defendants' arguments are inconsistent with the claim language, which does not recite how efficiency should be measured. *Id.* Plaintiff further contends that "practical engineering choice has no bearing on the meaning of the term." *Id.*

With respect to Defendants' claim differentiation argument, Plaintiff contends that "power efficiency" is "used consistently with its plain meaning and is never redefined to mean voltage, current, or any other proxy." *Id.* at 22. Plaintiff contends that the "dependent claims merely reflect specific implementations of how switching may be triggered—they do not redefine 'power efficiency.'" *Id.*

In their reply, Defendants contend that the two sides' proposed constructions are "nearly identical." Reply at 10. Defendants contend that Plaintiff's proposed construction "improperly narrows the scope of the claim by excluding indirect measurements of power efficiency." *Id.* More specifically, Defendants contend that the specification's "primary embodiment" uses voltage measurements to determine whether the power supply should be switched to bypass mode, which Plaintiff improperly argues should be excluded. *Id.* at 10, 11 (citing '593 Patent at 7:59–8:10, 4:7–10, 8:41–60; *Accent Packaging, Inc. v. Leggett & Platt, Inc.*, 707 F.3d 1318 (Fed. Cir. 2013)). Defendants contend that Plaintiff "attempts to misdirect from the patent's use of the 'threshold' and 'power supply output' voltages by focusing on general disclosures[,]" but none of these

disclosures forecloses indirect measurements of power. *Id.* at 11 (citing '508 Patent at 1:29–39, 4:35–43).

With respect to claim differentiation, Defendants contend that dependent Claim 12 requires comparing voltages, *i.e.*, indirect measurements of power, so independent Claim 9 is broad enough to include indirect measurements of power as well. *Id.* Defendants contend that there is no contrary evidence to overcome the presumption that claim differentiation applies. *Id.* at 12.

In its sur-reply, Plaintiff contends that Defendants improperly seek to insert implementation-specific concepts into the claim. Sur-Reply at 8. Plaintiff contends that the specification uses "power efficiency" according to plain-and-ordinary meaning. *Id.*

With respect to Defendants' argument that Plaintiff is improperly attempting to exclude an embodiment, Plaintiff contends that "[t]hose disclosures relate to how a switching decision might be implemented—not how 'power efficiency' is defined." *Id.* at 8, 9.

With respect to Defendants' claim differentiation argument, Plaintiff contends that dependent "Claim 12 recites a particular embodiment in which a switching decision is based on a voltage comparison[,]" but that does not redefine the meaning of "power efficiency" in independent Claim 9. *Id.* at 9.

The Court's Analysis:

After reviewing the parties' arguments and considering the applicable law, the Court agrees with Plaintiff that this term should be construed according to its plain-and-ordinary meaning for the reasons that follow. ***First***, the "heavy presumption" is that terms should be construed according to their plain-and-ordinary meaning. *Azure Networks*, 771 F.3d at 1347. ***Second***, Defendants do not expressly allege lexicography or disclaimer, which are the only two exceptions to the general

rule that a term should be construed as having its plain-and-ordinary meaning. *Thorner*, 669 F.3d at 1365.

Third, a POSITA would understand that the term "power efficiency" is simply the ratio of the output power of a component as compared to its input power. Defendants' proposed construction reflects this plain-and-ordinary meaning. How "power efficiency" is measured is outside of the scope of the term. The language of Claim 9 also does not specify how "power efficiency" should be measured, and Defendants' proposed construction is likewise silent.

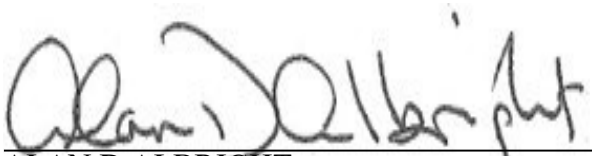
Fourth, with respect to Defendants' claim differentiation argument, the Court disagrees with Defendants that Claim 12 describes using indirect measurements of power efficiency. More specifically, Claim 12 recites "wherein the de-activating comprises deactivating the switching device and passing the input voltage to the output voltage node comprises comparing the down-converted voltage to a threshold voltage." This limitation further narrows Limitation [c] in Claim 9, which recites "in response to a power efficiency of the power supplying exceeding a predetermined threshold, de-activating the switching device and passing the input voltage to the output voltage node." In other words, the focus of Claim 12 is limited to further narrowing the (1) "de-activating" and (2) "passing the input voltage to the output voltage node" of Claim 9. With respect to the former, the "deactivating" of Claim 9 plainly occurs only after the power efficiency is measured ("in response to a power efficiency of the power supplying exceeding a predetermined threshold, de-activating…"). Therefore, what occurs in the deactivating step does not affect how "power efficiency" is measured. With respect to the latter, the Court agrees with Plaintiff that Claim 12 only recites only one implementation of how switching may be triggered. But this implementation does not limit or redefine what "power efficiency" is.

Therefore, for the reasons described above, the Court finds that the term should be construed according to its plain-and-ordinary meaning.

IV. CONCLUSION

In conclusion, for the reasons described herein, the Court adopts the below constructions as its final constructions.

SIGNED this 16th day of November, 2025.



ALAN D ALBRIGHT
UNITED STATES DISTRICT JUDGE

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Final Construction
#1: "string of multiple pulses" U.S. Patent No. 7,050,508, Claim 11 Proposed by Defendants	Plain-and-ordinary meaning	"a sequence of pulses containing at least n+1 pulses for every cycle of said string of pulses"	Plain-and-ordinary meaning
#2: "the first control signal and the second control signal are configured to improve energy transfer to a desired harmonic" U.S. Patent No. 7,929,638, Claim 17 Proposed by Defendants	Plain-and-ordinary meaning	Indefinite	Not indefinite. Plain-and-ordinary meaning
#3: "a pulse width of the first control signal and the second control signal is configured to improve energy transfer to a desired harmonic" U.S. Patent No. 7,929,638, Claim 18 Proposed by Defendants	Plain-and-ordinary meaning	Indefinite	Not indefinite. Plain-and-ordinary meaning

Term	Plaintiff's Proposed Construction	Defendants' Proposed Construction	Court's Final Construction
#4: "wherein the relative amplitude of a particular harmonic image of said plurality of harmonic images can be adjusted by adjusting a pulse width of the first control signal and the second control signal" U.S. Patent No. 7,929,638, Claim 20 Proposed by Defendants	Plain-and-ordinary meaning	"the wherein clause is not limiting" Alternatively, indefinite.	Not indefinite. Plain-and-ordinary meaning
#5: "power efficiency" U.S. Patent No. 8,498,593, Claim 9 Proposed by Defendants	Plain-and-ordinary meaning	"the output power of the power supply compared to its input power"	Plain-and-ordinary meaning