IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

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| VARENTEC, INC.,<br><br>Plaintiff,<br><br>v.<br><br>GRIDCO, INC.,<br><br>Defendant. | Civil Action No. 16-217-RGA |

**MEMORANDUM OPINION**

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**ANDREWS, U.S. DISTRICT JUDGE:**

Presently before me is the issue of claim construction of multiple terms in U.S. Patent No. 9,014,867 (the "'867 patent"), U.S. Patent No. 9,293,922 (the "'922 patent"), and U.S. Patent No. 9,104,184 (the "'184 patent"). I have considered the parties' Joint Claim Construction Brief. (D.I. 146). I held oral argument on August 1, 2017. ("Tr.").

## I. LEGAL STANDARD

"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). "'[T]here is no magic formula or catechism for conducting claim construction.' Instead, the court is free to attach the appropriate weight to appropriate sources 'in light of the statutes and policies that inform patent law.'" *SoftView LLC v. Apple Inc.*, 2013 WL 4758195, at *1 (D. Del. Sept. 4, 2013) (quoting *Phillips*, 415 F.3d at 1324) (alteration in original). When construing patent claims, a court considers the literal language of the claim, the patent specification, and the prosecution history. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977–80 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996). Of these sources, "the specification is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term." *Phillips*, 415 F.3d at 1315.

"[T]he words of a claim are generally given their ordinary and customary meaning. . . . [Which 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." *Id.* at 1312–13 (citations omitted). "[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent." *Id.* at 1321. "In some cases, the ordinary

meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words." *Id.* at 1314.

When a court relies solely upon the intrinsic evidence—the patent claims, the specification, and the prosecution history—the court's construction is a determination of law. *See Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015). The court may also make factual findings based upon consideration of extrinsic evidence, which "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Phillips*, 415 F.3d at 1317–19. Extrinsic evidence may assist the court in understanding the underlying technology, the meaning of terms to one skilled in the art, and how the invention works. *Id.* Extrinsic evidence, however, is less reliable and less useful in claim construction than the patent and its prosecution history. *Id.*

"A claim construction is persuasive, not because it follows a certain rule, but because it defines terms in the context of the whole patent." *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that "a claim interpretation that would exclude the inventor's device is rarely the correct interpretation." *Osram GMBH v. Int'l Trade Comm'n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007) (citation omitted).

## II. BACKGROUND

The parties agree that the following claims are representative. (D.I. 147, JA26).

**Claim 1 of the '867 Patent**

1. A system comprising:

a distribution power network;

a plurality of loads at an edge of the distribution power network, each of the plurality of loads configured to receive power from the distribution power network; and

a plurality of shunt-connected, switch-controlled Volt-Ampere Reactive ("VAR") sources at the edge of the distribution power network, each of the plurality of shunt-connected, switch-controlled VAR sources configured to detect a proximate voltage at the edge of the distribution power network, each of the plurality of shunt-connected, switch-controlled VAR sources comprising a processor and a VAR compensation component, the processor configured to:

enable the corresponding shunt-connected, switch-controlled VAR source to non-continuously monitor the proximate voltage by waiting for a delay and then evaluating the proximate voltage to determine, after the delay, whether to enable the corresponding VAR compensation component based on the proximate voltage; and

adjust network VAR by controlling a switch to enable the corresponding VAR compensation component based on the determination;

wherein the delay extends for a predetermined length of time;

wherein the delay of each of the plurality of shunt-connected, switch-controlled VAR sources is not equal.

**Claim 15 of the '867 Patent**

15. The system of claim 1, wherein the processor is further configured to detect an overvoltage condition and disable the switch based on the detected overvoltage condition.

**Claim 1 of the '922 Patent**

1. A system comprising:

a distribution power network;

a plurality of loads at an edge of the distribution power network, each load configured to receive power from the distribution power network; and

a plurality of shunt-connected, switch-controlled Volt-Ampere Reactive ("VAR") sources, wherein each VAR source is located at or near the edge of the distribution power network, is configured to non-continuously monitor and detect a proximate voltage at or near the edge of the distribution power network, and comprises a processor and a VAR compensation component, the processor configured to enable the VAR source to determine, after a delay, whether to enable the VAR compensation component based on the proximate voltage and adjust network volt-ampere reactive by controlling a switch to enable the VAR compensation component based on the determination;

wherein the delay associated with each VAR source extends for a predetermined length of time that is not equal to the delay associated with any other of the plurality of VAR sources.

**Claim 15 of the '922 Patent**

15. The system of claim 1, wherein the processor is further configured to detect an overvoltage condition and disable the switch based on the detected overvoltage condition.

**Claim 1 of the '184 Patent**

1. A system comprising:

a distribution power network;

a first switch-controlled VAR source coupled to the distribution power network, the first switch-controlled VAR source comprising a processor, a voltage compensation component, and a switch, the first switch-controlled VAR source configured to

obtain a first delay value that is different from another delay value of another switch-controlled VAR source coupled to the distribution power network,

monitor a first proximate voltage of the distribution power network, the first proximate voltage being proximate to the first switch-controlled VAR source,

initiate a first delay duration based on the comparison of the first proximate voltage to at least one set point, the first delay duration being based on the first delay value,

determine, with the processor, after the first delay duration, whether to connect the voltage compensation component based on the monitored voltage, the monitored voltage being possibly changed by the other switch-controlled VAR source, and

control, based on the determination, the switch to connect the voltage compensation component to adjust a network voltage or a network voltage component associated with the distribution power network.

## III. AGREED UPON CONSTRUCTIONS

The parties have agreed, and I adopt, the following constructions. "Network voltage" in the '184 patent is construed as, "A voltage of all or part of a distribution power network."

"Infighting" in the '867 and '922 patents is construed as, "Devices working at cross-purposes by

overcompensating and undercompensating while reacting to conditions caused, at least in part, by other devices." (D.I. 146 at p. 7).

## IV. TERMS FOR CONSTRUCTION

**1. "edge of the distribution power network," "at an edge of the distribution power network," and "at or near the edge of the distribution power network" (collectively, the "edge terms") ('922 patent; '867 patent)[1]**

a. *Plaintiff's proposed construction*: The customer-facing side of the service transformer

b. *Defendant's proposed construction*:

For "edge of the distribution power network": That portion of the distribution power network that is close to the load that is to receive power, which portion may be on a medium voltage (e.g., 1,000 volts to 35,000 volts) portion or low voltage (e.g. up to 1,000 volts) portion of a distribution feeder

For "at an edge of the distribution power network": On that portion of the distribution power network that is close to the load that is to receive power, which portion may be on a medium voltage (e.g., 1,000 volts to 35,000 volts) portion or a low voltage (e.g., up to 1,000 volts) portion of a distribution feeder

For "at or near the edge of the distribution power network": On that portion of the power distribution network that is closer to the load that is to receive power than to the substation serving that load, which portion may be on a medium voltage (e.g., 1,000 volts to 35,000 volts) portion or a low voltage (e.g., up to 1,000 volts) portion of a distribution feeder

c. *Court's construction*:

For "edge of the distribution power network": That portion of the distribution power network that is close to the load that is to receive power, which portion may be on a medium voltage (e.g., 1,000 volts to 35,000 volts) portion or low voltage (e.g., up to 1,000 volts) portion

For "at an edge of the distribution power network": On that portion of the distribution power network that is close to the load that is to receive power, which portion may be on a medium voltage (e.g., 1,000 volts to 35,000 volts) portion or a low voltage (e.g., up to 1,000 volts) portion

For "at or near the edge of the distribution power network": On that portion of the distribution power network that is closer to the load that is to receive power than to the

[1] A joint list of the asserted claims associated with each term is found at D.I. 152.

substation serving that load, which portion may be on a medium voltage (e.g., 1,000 volts to 35,000 volts) portion or a low voltage (e.g., up to 1,000 volts) portion

I do not adopt Plaintiff's construction because it is too limiting. Nowhere in the patents does the phrase "customer-facing side of the service transformer" appear. (*See generally* D.I. 135, JA1[2]). The specification does not limit the edge to the customer side. A "power distribution grid" is defined as "an electrical grid, such as an interconnected network, for delivering electricity from suppliers to consumers." (D.I. 135, JA1, 8:33–35). The "edge of the network" is defined as "the portion of a power distribution network that is proximate to the load that is to receive power." (D.I. 135, JA1, 8:38–40). The term "load" is defined as "any component, circuit, device, piece of equipment or system on the power distribution network which consumes, dissipates, radiates or otherwise utilizes power." (D.I. 135, JA1, 8:30–33). These are broad definitions of where the edge could be and what the load is. This language does not limit the edge to the customer side. *See Phillips*, 415 F.3d at 1316 ("[O]ur cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs.").

Plaintiff argues that every single embodiment in the specification places the VAR source on the customer-facing side of the service transformer and thus the meaning of the edge and load must be narrow. (D.I. 146 at p. 18). I have reviewed JA1 at Figs. 1b, 1c, and 3b, 2:61–64, 5:46–48, 6:33–39, 8:38–44, 9:12–19, 9:59–10:1, 12:48–60, 16:13–17, 19:53–20:1, 22:43–44. I think Plaintiff's argument is not enough to overcome the clear definitions of edge and load provided. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms

[2] Unless otherwise provided, the '922 patent does not differ from the '867 patent for the cited proposition.

by implication."). Adopting Plaintiff's position would impermissibly confine the claims to the embodiments. *See Phillips*, 415 F.3d at 1323 (Fed. Cir. 2005) ("[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments.").

The prosecution history indicates that the examiner initially cited D'Aquila (U.S. Patent No. 5,402,057) as disclosing "a plurality of loads at an edge" and "a plurality of shunt connected, switch-controlled VAR sources at the edge." (D.I. 135-2 at 349–51). D'Aquila discloses loads on a medium voltage portion of the distribution power network. (JA24, Figs. 2 and 3, 4:1–7). The applicant responded by arguing that "D'Aquila merely discloses a single VAR source located at the 'power distribution substation' (i.e. near the transformer)—relatively far from the distribution network edge." (D.I. 135-2 at 390 (emphasis in original)). The applicant also argued that the "breaks" in D'Aquila "clearly indicate that D'Aquila did not contemplate, and does not teach, that the VAR source operates at the edge of the network (e.g., at the load)." (D.I. 135-2 at 418). In the Reasons for Allowance, the examiner again stated that D'Aquila taught a "plurality of loads at an edge of the distribution power network" and a "plurality of shunt-connected, switch-controlled VAR sources at the edge of the distribution power network." (D.I. 135-2 at 437). Plaintiff's briefing does not dispute that the applicant did not further contest this statement by the examiner. (D.I. 146 at p. 23).

The prosecution history separately indicates that applicant argued that "the VAR source disclosed in Folts is contemplated to be close to the transformer and/or substation, as opposed to the edge load." (D.I. 135-2 at 420–21). Defendant's briefing does not dispute that Folts' transformer is described to be on a medium voltage bus. (*See generally* D.I. 146). The prosecution history further indicates that "significant benefit is achieved by moving the VAR

source(s) to the edge of the network and closer/adjacent to their corresponding loads." (D.I. 135-2 at 391).

The prosecution history as a whole does not show clear disclaimer of the edge being on the utility-facing side of the service transformer. While the prosecution history with respect to Folts and D'Aquila suggests that the *applicant* understood the edge/load to be on the customer-facing side of the service transformer, the *examiner* did not share that view, at least with respect to D'Aquila. The applicants' failure to further contest the examiner's interpretation in relation to D'Aquila, leaves the prosecution history unclear as to whether there is disclaimer. *See TorPharm, Inc. v. Ranbaxy Pharm.*, Inc., 336 F.3d 1322, 1330 (Fed. Cir. 2003) ("Accordingly, in ascertaining the scope of an issued patent, the public is entitled to equate an inventor's acquiescence to the examiner's narrow view of patentable subject matter with abandonment of the rest. Such acquiescence may be found where the patentee narrows his or her claims by amendment, or lets stand an examiner's restrictive interpretation of a claim.") (internal citations omitted); 37 C.F.R. § 1.104(e) ("The applicant or patent owner may file a statement commenting on the reasons for allowance within such time as may be specified by the examiner.").

Considering the specification and the prosecution history as whole, the patent does not draw a bright-line between the utility and customer side of a service transformer. I therefore reject Plaintiff's proposed construction. Instead, I am adopting Defendant's construction with modifications. Plaintiff concedes that Defendant's voltage ranges for the medium and low voltage portion of the distribution power network are generally correct. (Tr. 14:5–18). Plaintiff concedes that the edge terms include the medium voltage portion of the distribution power network. (Tr. 19:24–20:10). I am modifying Defendant's construction by eliminating the distribution feeder language because the language misleadingly implies to a jury that the edge

cannot be on the customer-facing side. (*See also* Tr. 28:1–24 ("[W]e're not hung up on the particular language . . . .")).

**2. "load" and "loads" ('922 patent; '867 patent)**

a. *Plaintiff's proposed construction*: A customer device that consumes or dissipates power

b. *Defendant's proposed construction*: Any component(s), circuit(s), device(s), piece(s) of equipment or system(s) on the power distribution network which consume(s), dissipate(s), radiate(s) or otherwise utilize(s) power

c. *Court's construction*: Any component(s), circuit(s), device(s), piece(s) of equipment or system(s) on the power distribution network which consume(s), dissipate(s), radiate(s) or otherwise utilize(s) power.

Again, the term "load" is defined as "any component, circuit, device, piece of equipment or system on the power distribution network which consumes, dissipates, radiates or otherwise utilizes power." (D.I. 135-2 at 33, 8:30–33). There is no limiting language that restricts a load to a customer device that consumes or dissipates power. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) ("[O]ur cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs.").

Plaintiff again argues that all descriptions in the intrinsic evidence limit loads to customer loads. (D.I. 146 at pp. 28–30). I disagree. There is language that suggests that the patentee understood how to distinguish between the broader term "load" and the narrower term "customer load." (D.I. 135-2 at 33, 8:40–41). Plaintiff's argument is not enough to overcome the clear definitions of edge and load provided. *See Vitronics*, 90 F.3d at 1582. Plaintiff's position impermissibly confines the claims to the embodiments. *See Phillips*, 415 F.3d at 1323.

Plaintiff argues that the Defendant's definition is so broad as to be meaningless because it would render feeders themselves to become loads because power is dissipated to a certain extent

as it is transmitted. Defendant responds that there is no support for limiting "load" to a "device." (D.I. 146 at p. 30). Generally, I think Defendant's construction is acceptably broad because that is how the specification defines the term. I am open to further briefing before trial only on the specific issue of whether Defendant's construction should be modified to exclude a "feeder."

**3. "a plurality of shunt connected, switch controlled Volt-Ampere Reactive ('VAR') sources" ('922 patent; '867 patent)**

a. *Plaintiff's proposed construction*: More than one shunt connected, switch controlled VAR source but may be less than all of such VAR sources on the network

b. *Defendant's proposed construction*: Plain and ordinary meaning

c. *Court's construction*: More than one shunt connected, switch controlled VAR source but may be less than all of such VAR sources on the network

I adopt Plaintiff's proposed construction because it comports with the natural meaning of the word "plurality." *Dayco Prod., Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1327–28 (Fed. Cir. 2001) ("In accordance with standard dictionary definitions, we have held that 'plurality,' when used in a claim, refers to two or more items, absent some indication to the contrary.").

By its opposition to Plaintiff's proposal, Defendant implicitly seeks to impose a requirement that each VAR source must have a delay not equal to any other VAR source. Defendant's argument requires looking beyond the proposed term "a plurality of shunt connected, switch controlled Volt-Ampere Reactive ('VAR') sources" and into how the term is used in the context of the various claims. I only address how the proposed term is applied in the context of the three claim terms cited by the Defendant. (D.I. 146 at p. 32). For claim 1 of the '867 patent, Defendant seeks to construe "each of the plurality of shunt-connected, switch-controlled VAR sources is not equal." Applying my construction to this phrase, it means that

each VAR source has a different delay from every other VAR source. This is consistent with my preliminary injunction opinion. (*See* D.I. 137, JA30 at 14).

For claim 1 of the '922 patent, Defendant seeks to construe the phrase, "the delay associated with each VAR source extends for a predetermined length of time that is not equal to the delay associated with any other of the plurality of VAR sources." (D.I. 146 at p. 32). As with claim 1 of the '867 patent, I construe this phrase to mean each VAR source has a different delay from every other VAR source.

For claim 3 of the '867 patent, Defendant seeks to construe "wherein the delay of at least two of the plurality of shunt-connected, switch-controlled VAR sources is equal but the delay of a third of the plurality of shunt-connected, switch-controlled VAR sources is not equal." This phrase means at least two VAR sources have the same delay and there is another VAR source with a different delay. Defendant argues that all VAR sources must have different delays to avoid infighting. The plain language of claim 3 does not impose such a limit. It clearly contemplates some of the VAR sources having the same delay. The specification also suggests that some of the VAR sources may have the same delay. (*See* D.I. 135-2, JA1 at 2:42–45, 6:4–7). The patent teaches that some infighting may occur. (*See* D.I. 135-2, JA1 at 6:4–7). Thus, each VAR source does not have to have the same delay as every other VAR source. Defendant cites to *Apple v. Samsung*, 695 F.3d 1370 (Fed. Cir. 2012), but that case is distinguishable because it involves an unrelated technology and significantly different claim language.[3] Here, the patent teaches that some infighting may occur and the claim language clearly permits some VAR sources to have the same delay.

[3] *Apple* addressed the limitation "a plurality of modules . . . wherein . . . each heuristic module corresponds to a respective area of search and employs a different, predetermined heuristic algorithm." *Apple*, 695 F.3d at 1377. The court held that to satisfy the claim, each module in the system needed a different predetermined heuristic algorithm. *Id.* at 1379.

4. **"non-continuously monitor the proximate voltage" and "non-continuously monitor [and detect a/the] proximate voltage by waiting for a delay and then evaluating the proximate voltage" ('922 patent; '867 patent)**

   a. *Plaintiff's proposed construction*: Waiting for a delay and then evaluating the proximate voltage to determine, after the delay, whether to enable a VAR compensation component based on the proximate voltage

   b. *Defendant's proposed construction*: Plain and ordinary meaning

   c. *Court's construction*: Waiting for a delay and then evaluating the proximate voltage to determine, after the delay, whether to enable a VAR compensation component based on the proximate voltage but not evaluating the proximate voltage during the delay to determine whether to enable a VAR compensation component.

   The parties agreed to my construction. (Tr. 71:22–76:5).

5. **"predetermined length of time" and "the [first / second] delay [associated with each VAR source] extends for a [first / second] predetermined length of time" ('922 patent; '867 patent)**

   a. *Plaintiff's proposed construction*: A length of time that has its end determined in advance of that end

   b. *Defendant's proposed construction*: A fixed length of time that must be determined before it begins

   c. *Court's construction*: A length of time that is determined before it begins

Having had the benefit of a Markman hearing and a fuller understanding of the claimed invention, I am modifying my interpretation of this term from that in my preliminary injunction opinion. I think that so long as the length of time is "determined" before the beginning of the delay, that is enough to satisfy this claim limitation. What is essential for a length of time to be "determined" is that how long the time of the delay will be is provided before the initiation of the delay. If "how long" can only be acquired after the delay has begun, then that would not meet

the claim limitation because it would clash with what I think is the plain meaning of "predetermined."[4]

For example, if before beginning the delay, the VAR source receives an instruction to delay for a specified length of time, then that is enough to meet the claim limitation. The length of time can be randomly generated and still meet the claim limitation, so long as the length of time is generated before the beginning of the delay and provides for how long the length of the delay will actually be. (*See* '867 patent, 12:2–3). The length of time may be subsequently modified, for example, to accommodate for voltage "changing at a substantial rate" such that "the delay time may be accelerated," so long as the original length of time provided for how long the length of the delay would actually be. (*See* '867 patent, 16:66–17:4, 16:3–8). The construction I adopt avoids reading out certain embodiments (like the ones described at 16:66–17:4 and 16:3–8 of the '867 patent) of the '867 and '922 claims. *See Kaneka Corp. v. Xiamen Kingdomway Grp. Co.*, 790 F.3d 1298, 1304 (Fed. Cir. 2015) ("A claim construction that excludes a preferred embodiment is 'rarely, if ever, correct.'"). This construction is also consistent with the prosecution history.

Thus, I am rejecting Plaintiff's proposed construction because I think that the natural meaning of "predetermined" requires that whatever is going to be "determined" must be done so before it begins. I am rejecting Defendant's proposed construction because it requires that the length of time cannot be changed once it has begun. The length of time may be subsequently modified. Merely removing the word "fixed" from Defendant's proposal is not enough because the language "must be" also implies that the length of time must remain fixed.

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[4] *See* MERRIAM-WEBSTER, https://www.merriam-webster.com/dictionary/predetermine (last visited Aug. 10, 2017) (defining predetermine as: "foreordain, predestine"; "to determine beforehand"; "to impose a direction or tendency on beforehand).

6. **"an overvoltage condition" and "detect an overvoltage condition and disable the switch based on the detected overvoltage condition" ('922 patent; '867 patent)**

a. *Plaintiff's proposed construction*: A high voltage that could damage a VAR source

b. *Defendant's proposed construction*:

For "an overvoltage condition": A voltage in excess of a predefined threshold voltage

For "detect an overvoltage condition and disable the switch based on the detected overvoltage condition": Plain and ordinary meaning

c. *Court's construction*:

For "an overvoltage condition": A voltage in excess of a predefined threshold voltage

For "detect an overvoltage condition and disable the switch based on the detected overvoltage condition": Plain and ordinary meaning

Plaintiff's construction is not the plain and ordinary meaning of "overvoltage." The ordinary meaning of overvoltage is: "A voltage above the normal rated voltage or the maximum operating voltage of a device or circuit"; "Abnormal voltage higher than the normal service voltage, such as might be caused from switching or lightning surges"; "Abnormal voltage between two points of a system that is greater than the highest value appearing between the same two points under normal service conditions"; or "A voltage above the normal rated voltage or the maximum operating voltage of a device or circuit." (*See* D.I. 137, JA34, New IEEE Standard Dictionary of Electrical and Electronic Terms (1993) at p. 909). Nowhere in these definitions does the word "damage" appear. While some instances of overvoltage could result in damage to a VAR source, not all instances of overvoltage necessarily result in damage. While 3:24–26 and 11:49–52 of the '867 patent teach that in some embodiments, disabling the switch may be necessary based on detection of an overvoltage condition, the specification falls short of limiting overvoltage to scenarios where the VAR source is damaged. (D.I. 146 at p. 50). Defendant's construction more accurately captures the meaning of "overvoltage."

7. **"adjust network volt-ampere reactive" and "adjust network VAR" ('922 patent; '867 patent)**

   a. *Plaintiff's proposed construction*: Adjust VAR to affect network voltage

   b. *Defendant's proposed construction*: Plain and ordinary meaning

   c. *Court's construction*: Plain and ordinary meaning

Plaintiff's proposal seeks to clarify this term for the jury. I think that the proposed clarification would not be helpful as it is inaccurate. While the terms "adjust network volt-ampere reactive" and "adjust network VAR" are unlikely to be transparent to a jury, Plaintiff's proposal does not aid in understanding them, and it is inaccurate because it does not include power factor correction. (D.I. 146 at p. 57). The '867 and '922 patents disclose adjustment of network VAR for voltage regulation and power factor correction. ('867 patent, 19:17–32). Because there is no argument that the term does not have its plain and ordinary meaning and because Plaintiff's proposal is inaccurate, I adopt Defendant's proposal.

8. **"delay value" ('184 patent)**

   a. *Plaintiff's proposed construction*: A value related to a delay

   b. *Defendant's proposed construction*: This term should be construed in the context of the "obtain/obtaining" elements of the '184 patent. In the alternative, it should be construed as a value that corresponds to a length of time that defines the delay.

   c. *Court's construction*: A value related to a delay. The delay duration is dependent on this value.

9. **"obtain [/obtaining] by a first switch-controlled VAR source [coupled to a distribution power network], a first delay value that is different from another delay value of another switch-controlled VAR source [coupled to the distribution power network]" ('184 patent)**

   a. *Plaintiff's proposed construction*: Plain and ordinary meaning / no construction necessary except as it contains otherwise construed terms

b. *Defendant's proposed construction*: A first value that corresponds to a first fixed length of time that defines a first delay that is different from another value that corresponds to another fixed length of time that defines the other delay

c. *Court's construction*: Plain and ordinary meaning / no construction necessary except as it contains otherwise construed terms

**10. "based on" ('184 patent)**

a. *Plaintiff's proposed construction*: Dependent on

b. *Defendant's proposed construction*: Plain and ordinary meaning

c. *Court's construction*: Dependent on

**11. "initiate [/initiating] a first delay duration [based on the comparison of the first proximate voltage to at least one set point], the first delay duration being based on the first delay value" ('184 patent)**

a. *Plaintiff's proposed construction*: Plain and ordinary meaning / no construction necessary except as it contains otherwise construed terms

b. Defendant's proposed construction:

This term should be construed in conjunction with the "obtain/obtaining" step.

The first delay duration is a predetermined delay duration that is based on the first value, wherein the first delay duration must be determined before it begins.

c. *Court's construction*: Plain and ordinary meaning / no construction necessary except as it contains otherwise construed terms

The last four terms are all interrelated and will be construed together. Claim 1 of the '184 patent requires: "obtain a first delay value that is different from another delay value of another switch-controlled VAR source coupled to the distribution power network" and "initiate a first delay duration based on the comparison of the first proximate voltage to at least one set point, the first delay duration being based on the first delay value." (D.I. 135-2, JA3 ("'184 patent"), claim 1). This language makes clear that the "delay value" is distinct from the "delay duration." The length of the delay duration is "based on" the first delay value. Whether the

delay duration is "initiated" is "based on" the results of a comparison of the first proximate voltage to at least one set point. (*See, e.g.*, '184 patent, Fig. 6 at 606, 608; 19:47–20:26).

The specification describes many different ways of obtaining a delay value. It may be generated with a random number generator. ('184 patent, 4:64–65). It may be generated with an "N-cycle delay module." ('184 patent, 30:23–24). These values could be received from a "communications interface" outside the switch. ('184 patent, 30:25–28). These values could be preconfigured in the switch at time of fabrication. ('184 patent, 30:28–31). This suggests that a delay value is simply a value related to a delay.

The term "based on" is used twice in the "initiate" limitation. I think, read in the context of the patent, both uses of "based on" means "dependent on." The delay duration depends on the delay value. This means that whatever the delay value is, that value plays a role on the length of the delay duration. I interpret the specification to permit the possibility that the same delay value plays a role in generating different delay durations. It is possible that different delay values play a role in generating the same delay duration.

As to the first use of "based on," again, whether the delay duration is initiated depends on the results when comparing the first proximate voltage with at least one set point. Whatever the results of that comparison, those results play a role on whether the delay duration is initiated. I think it is helpful to clarify to the jury that "based on" means "dependent on."

Defendant argues that in order for the goal of preventing infighting to be achieved, the delay values must correspond to (i.e., define) delay durations. Defendant argues that the correspondence of the delay durations to the delay values ensures that delay durations are unique so that infighting is avoided. Nothing in the specification says that the delay value "corresponds" or "defines" the delay duration. I think this interpretation is an overly narrow

reading of "based on." I think the goal of preventing infighting can still be achieved if the delay duration depends on the delay value. Furthermore, the invention does not contemplate necessarily eliminating all infighting. (*See, e.g.*, '184 patent, 2:46–55, 8:55–58). Defendant also argues that the n-cycle delay module embodiment and the randomizer embodiment suggest that the delay value must "define" the delay duration. (D.I. 146 at pp. 60–61). Even if this is true, this would improperly limit the invention to the embodiments. *See Phillips*, 415 F.3d at 1323.

The parties again raise a "predetermined length of time"-type of issue here. (D.I. 146 at p. 61, 66–67). Similar to my discussion above in Part IV.5, when the delay duration is initiated, it takes on a length of time that depends on the delay value, but there is nothing in the claim language that prohibits the modification of the delay duration after it is initiated, so long as the delay duration provides a length of time. My reading takes into account the differences in claim language between the '184, '867 and '922 patents. This reading accounts for the fact that delay durations could be updated based on "conditions of the power network". ('184 patent, 23:62–24:5).

I include the language, "the delay duration is dependent on this value," in construing delay value because I think it is useful clarification for the jury. In doing so, I am rejecting Defendant's alternative construction of delay value because (1) "dependent on" is more accurate than "correspond" and (2) Defendant's use of the phrase "length of time that defines the delay" is more concisely expressed as delay duration.

Defendant also raises a "plurality"-type issue. (D.I. 146 at pp. 64–65). Because claim 1 of the '184 patent is a "comprising" claim, even though the claim talks about "a first" VAR source and "another" VAR source, there could be other VAR sources within the system. Unlike claim 1 of the '867 and '922 patents, claim 1 of the '184 patent contains no comparable language

requiring that each VAR source has a delay duration that is different from "every other" or "any other" VAR source. ('184 patent, claim 1). Instead, claim 1 of the '184 patent is analogous to claim 3 of the '867 patent. (*See* D.I. 135-2, JA1, claim 3).

## V. CONCLUSION

Within five days the parties shall submit a proposed order consistent with this Memorandum Opinion.