

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

TQ DELTA, LLC,

Plaintiff,

v.

ADTRAN, INC.,

Defendant.

Civil Action No. 14-954-RGA

ADTRAN, INC.,

Plaintiff and  
Counterclaim Defendant,

v.

TQ DELTA, LLC,

Defendant and  
Counterclaim Plaintiff.

Civil Action No. 15-121-RGA

MEMORANDUM OPINION

Brian E. Farnan and Michael J. Farnan, FARNAN LLP, Wilmington, DE; Peter J. McAndrews, Timothy J. Malloy, Thomas J. Wimbiscus, Sharon A. Hwang, Paul W. McAndrews, and Anna M. Targowska, MCANDREWS, HELD & MALLOY, LTD., Chicago, IL, attorneys for Plaintiff TQ Delta LLC.

Kenneth L. Dorsney, MORRIS JAMES LLP, Wilmington, DE; Garland Stephens, Melissa L. Hotze, Justin L. Constant and Rene E. Mai, WEIL, GOTSHAL & MANGES LLP, Houston, TX, attorneys for Defendant ADTRAN, Inc.

September 11, 2019

  
ANDREWS, U.S. DISTRICT JUDGE.

Currently pending before the Court are the parties' various motions for summary judgment. (D.I. 635, 637, 645, 647).<sup>1</sup> This opinion will address ADTRAN's Motion for Summary Judgment of Non-Infringement of U.S. Patent Nos. 8,335,956, 8,468,411 and 8,645,784. (D.I. 645). The parties have fully briefed the issues. (D.I. 646, 686, 701). After full consideration of the briefing, the motion is resolved as follows.

## **I. BACKGROUND**

Plaintiff TQ Delta filed this lawsuit against Defendant ADTRAN on July 17, 2014 asserting infringement of thirty-two patents. (D.I. 1). ADTRAN has countersued. (C.A. 15-121, D.I. 1). I have divided the case into separate trials based on families of patents. (D.I. 369). For the Family 9 trial, TQ Delta currently asserts claim 31 of U.S. Patent No. 8,335,956 ("the '956 patent"), claim 10 of U.S. Patent No. 8,468,411 ("the '411 patent"), and claim 7 of U.S. Patent No. 8,645,784 ("the '784 patent"). I have granted summary judgment of noninfringement as to claims 30, 53, and 55 of U.S. Patent No. 8,595,577. (D.I. 800; D.I. 801). The Accused Products are those products containing the BCM65300 chipset. (D.I. 644 at 1 n. 1).

The Family 9 patents are "directed to various aspects of packet retransmission and memory sharing in communications systems." (D.I. 447 at 1). The asserted claim of the '956 patent reads as follows:

31. A system to share memory between a deinterleaving function and a packet retransmission function comprising:  
a transceiver capable of:  
transmitting to another transceiver or receiving from another transceiver a message indicating:  
an amount of the memory is to be allocated to the deinterleaver function, and

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<sup>1</sup> All docket item citations are to C.A. 14-954 unless otherwise noted.

an amount of the shared memory is to be allocated to the packet retransmission function;

allocating a first portion of the shared memory to the deinterleaving function; and

allocating a second portion of the shared memory to the packet retransmission function, wherein the first allocated portion of the shared memory is no more than the amount of memory indicated in the message for the deinterleaving function and the second allocated portion of the shared memory is no more than the amount of memory indicated in the message for the retransmission function.

('956 patent, cls. 31). The asserted claim of the '411 patent reads as follows:

10. A transceiver capable of packet retransmission comprising:

a transmitter portion capable of: transmitting a plurality of packets, identifying at least one packet of the plurality of packets as a packet that should be retransmitted and allocating a memory between a retransmission function and an interleaving and/or deinterleaving function, wherein at least a portion of the memory may be allocated to the retransmission function or to the interleaving and/or deinterleaving function at any one particular time, and wherein a message transmitted during initialization indicates how the memory has been allocated between the retransmission function and the interleaving and/or deinterleaving function in the transceiver.

('411 patent, cl. 10). The asserted claim of the '784 patent reads as follows:

7. A multicarrier communications transceiver with a shared memory, the transceiver operable to:

share the memory between a packet retransmission function and one or more of interleaving and deinterleaving functions; and

transmit or receive a message indicating how the shared memory in the transceiver is to be allocated to the packet retransmission function and to the one or more of interleaving and deinterleaving functions.

('784 patent, cl. 7).

## II. LEGAL STANDARD

“The court shall grant summary judgment if the movant shows that there is no genuine dispute as to any material fact and the movant is entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). The moving party has the initial burden of proving the absence of a genuinely disputed material fact relative to the claims in question. *Celotex Corp. v. Catrett*, 477 U.S. 317,

330 (1986). Material facts are those “that could affect the outcome” of the proceeding, and “a dispute about a material fact is ‘genuine’ if the evidence is sufficient to permit a reasonable jury to return a verdict for the nonmoving party.” *Lamont v. New Jersey*, 637 F.3d 177, 181 (3d Cir. 2011) (quoting *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248 (1986)). When determining whether a genuine issue of material fact exists, the court must view the evidence in the light most favorable to the non-moving party and draw all reasonable inferences in that party’s favor. *Scott v. Harris*, 550 U.S. 372, 380 (2007); *Wishkin v. Potter*, 476 F.3d 180, 184 (3d Cir. 2007).

### **III. DISCUSSION**

ADTRAN has filed a motion for summary judgment of non-infringement of the ’956, ’411, and ’784 patents. (D.I. 645). It appears from the briefing that the parties dispute the construction of the claim term “memory . . . allocated.” (D.I. 646 at 11; D.I. 686 at 1). ADTRAN asserts that the plain meaning of the term precludes arguments made by Dr. Cooklev but proposes an alternative construction of “used to implement.” (D.I. 646 at 20). TQ Delta asserts that the claims use the term “memory . . . allocated” in differing contexts, and therefore the term should be interpreted differently in different claims. (D.I. 686 at 1).

#### **A. Claim Construction**

“It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) (internal quotation marks omitted). “[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 (internal quotation marks omitted).

“[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 and internal quotation marks omitted). “[T]he ordinary meaning of a claim term is its meaning to [an] ordinary artisan after reading the entire patent.” *Id.* at 1321 (internal quotation marks omitted). “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 (internal quotation marks omitted). 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 and internal quotation marks omitted).

ADTRAN asserts that Dr. Cooklev’s opinions in his reply report contradict the plain and ordinary meaning of “memory . . . allocated” in the asserted patents. Specifically, ADTRAN argues that “memory . . . allocated” to a function must be the memory used for the claimed function, “not an upper bound on memory available for use by multiple functions.” (D.I. 646 at 19). TQ Delta argues:

[The] Family 9A patents use the word “allocate” in two different contexts: (1) allocation of memory for future use in a sense of reserving it with the understanding that no more than what is being reserved will be used; and (2) allocation of memory occurring after the memory has been set aside and within a limit indicated by a message.

(D.I. 686 at 3).<sup>2</sup>

There is a “presumption that the same terms appearing in different portions of the claims should be given the same meaning unless it is clear from the specification and prosecution history that the terms have different meanings at different portions of the claims.” *PODS, Inc. v. Porta Stor, Inc.*, 484 F.3d 1359, 1366 (Fed. Cir. 2007). The presumption “is a strong one, overcome only if ‘it is clear’ that the same phrase has different meanings in different claims.” *In re Varma*, 816 F.3d 1353, 1363 (Fed. Cir. 2016). The asserted patents share a common specification, and therefore, this same presumption should apply across the patents. There is no assertion by either

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<sup>2</sup> I note that both parties assert that their interpretation of the claim language follows the plain and ordinary meaning of the claims.

party that the prosecution histories of the patents shed any light on the meaning of “memory . . . allocated.”

The specification provides some insight into the meaning of the disputed term. The specification appears to use “allocated” and “used” to mean the same thing. *See* ’956 patent at col. 18:6-14 (“For example, if the configuration and noise conditions are such that the interleaving/RS coding would not provide good error correction/coding gain, then all the available memory *could be used* for the retransmission function and none *allocated* to the interleaving/deinterleaving/RS coding/RS decoding functionality, e.g., the interleaving/deinterleaving could be disabled.”) (emphasis added). At other points, however, the specification uses “allocated” to mean “divided.” *See id.* at 18:27-31 (“For example, 40% of the memory could be *allocated* to the interleaving/deinterleaving/RS coding/RS decoding functionality with the remaining 60% *allocated* to the retransmission of functionality. However, it should be appreciated, that in general, the memory can be *divided*, i.e., *shared*, in any manner.”) (emphasis added). This passage is consistent with the dictionary definition of allocation. *Allocate*, Oxford English Dictionary Online, Third Edition (2012) (“to make a distribution or apportionment of (something) among several recipients”). Another portion of the specification equates “allocat[ing]” memory with “partition[ing]” memory. *See* ’956 patent at col. 18:66-19:3 (“[a]ssociated with the ability to allocate or partition memory between one or more of the interleaving/deinterleaving/RS coding/RS decoding functionality and retransmission functionality. . .”). Thus, the specification clearly uses the word “allocate” with different meanings based upon the context.

Construing “allocate” to have different meanings in different claims is also consistent with the surrounding language of the claims. For example, claim 31 uses “allocate” in three different contexts, as TQ Delta notes. First, claim 31 describes “a message indicating: an amount of the

memory *is to be allocated* to the deinterleaver function, and an amount of the shared memory *is to be allocated* to the packet retransmission function. ('956 patent, cl. 31). Second, claim 31 describes the capability of the transceiver to act by “*allocating* a first portion of the shared memory to the deinterleaving function; and *allocating* a second portion of the shared memory to the packet retransmission function.” (*Id.*). Third, claim 31 sets out the condition that “the *first allocated portion* of the shared memory is no more than the amount of memory indicated in the message for the deinterleaving function and the *second allocated portion* of the shared memory is no more than the amount of memory indicated in the message for the retransmission function.” (*Id.*). The differing language used to describe allocation of the memory indicates that “memory . . . allocated” is not limited to “used to implement.” It appears that the message may merely reserve a portion of the shared memory for specific functions, but that the transceiver may ultimately assign or use a smaller amount of memory for either function. The plain language of the claims thus supports a broader construction than that proposed by ADTRAN.

Therefore, I will construe the term “memory . . . allocated” to have its plain and ordinary meaning. The plain and ordinary meaning is not limited to “used to implement.”

## **B. Infringement**

Using the construction above, it appears that there are genuine disputes of material fact between the parties that preclude summary judgment of noninfringement. First, there is a genuine dispute of material fact as to whether the O-PMS message satisfies the various “allocation” limitations of the asserted claims. (D.I. 650-5 at ¶ 78). Second, there is a genuine dispute of material fact as to whether “peripheral memory” is included in the “shared memory” for the interleaving and packet retransmission functions.<sup>3</sup> (D.I. 686 at 18-19; D.I. 646 at 17-19). Third,

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<sup>3</sup> ADTRAN points to a “related” patent in Family 3 to support its arguments that Dr. Rudnick’s arguments about peripheral memory are contrary to the claims. (D.I. 646 at 19). However, I will not import limitations from a patent



there is a genuine dispute of material fact as to whether the “memory . . . allocated” to the deinterleaving function of the accused products using the Vinax V2 and Vinax V3 chips is more memory than is indicated in the O-PMS message. (D.I. 686 at 14-15 (citing D.I. 687-3 at 225:7-14, 265:19-266:13)). Fourth, there is a genuine dispute of material fact as to whether the O-PMS message meets the “memory . . . allocated” to the retransmission function by indicating a maximum aggregate amount of memory that may be used by both the accused retransmission function and another separate function. (D.I. 686 at 16-17 (citing D.I. 650-5 at ¶ 43)). A reasonable juror, taking the evidence in the light most favorable to TQ Delta, could find the patents infringed by the accused products. Thus, summary judgment of noninfringement is not appropriate.

#### **IV. CONCLUSION**

For the foregoing reasons, I will deny ADTRAN’s motion for summary judgment of noninfringement.

An accompanying order will be entered.

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that shares neither a common specification or prosecution history. It is clear that “claims of unrelated patents must be construed separately.” *DigitalCorp. v. Futurewei Tech., Inc.*, 772 F.3d 723, 727 (Fed. Cir. 2014). ADTRAN makes no other argument to support its assertions regarding the appropriate meaning to be given to the terms “to a retransmission function” and “to an interleaver or deinterleaver function.” (D.I. 646 at 19).