

IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE

TQ DELTA, LLC,

Plaintiff,

v.

2WIRE, INC.,

Defendant.

No. 13-cv-1835-RGA

MEMORANDUM OPINION

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July 26, 2021

  
ANDREWS, U.S. DISTRICT JUDGE:

Before me are multiple motions submitted by Plaintiff TQ Delta and Defendant 2Wire.

This memorandum opinion will address Defendant's motion for summary judgment of invalidity (D.I. 1420) and Plaintiff's motions for summary judgment of no invalidity (D.I. 1424, 1426). The matters have been fully briefed. (D.I. 1421, 1425, 1428, 1490, 1491, 1494, 1509, 1510, 1512).

## **I. BACKGROUND**

Plaintiff TQ Delta filed this lawsuit against Defendant 2Wire asserting infringement of numerous U.S. Patents. (D.I. 1). I divided the case into separate trials by patent "Family." (D.I. 280). The motions before me involve what I believe is the only remaining Family 6 patent: U.S. Patent No. 8,462,835 ("the '835 patent"). Defendant moves for summary judgment of invalidity with respect to claims 8 and 10 (collectively, "the Asserted Claims") on grounds of obviousness under 35 U.S.C. § 103, anticipation under 35 U.S.C. § 102, and indefiniteness under 35 U.S.C. § 112. (D.I. 1420). Plaintiff cross-moves for summary judgment of no invalidity on the same grounds. (D.I. 1424, 1426).

The '835 patent claims an apparatus in the field of data communications that counters the effects of impulse noise, which was a known issue for Digital Subscriber Line (DSL) technology prior to invention. "Impulse noise is a short-term burst of noise that is higher than the normal noise that typically exists in a communication channel." (D.I. 1-19, Ex. 19, '835 patent at 1:28-30). DSL systems communicate through telephone lines and can experience disruptive impulse noise from a variety of "sources including telephones, AM radio, HAM radio, other DSL services on the same line or in the same bundle, other equipment in the home, etc." (*Id.* at 1:32-36). At the time of invention, it was "standard practice for communications systems to use

interleaving in combination with Forward Error Correction (FEC) to correct the errors caused by impulse noise.” (*Id.* at 1:36–39).

The invention improves upon this practice by, for example, “determining the impact of impulse noise on a communication system” and having “the capability to determine how the system should be configured to handle the impulse noise event.” (*Id.* at 3:24–27). One way the invention “determines the impact of impulse noise” is “by transmitting and receiving using a plurality of different FEC and interleaving parameter [FIP] settings.” (*Id.* at 3:28–31). When it does so, “the system can transition from one FIP setting to another FIP setting without going through the startup initialization procedure such as the startup initialization sequence utilized in traditional xDSL systems.” (*Id.* at 3:38–42).

Claim 8 of the ’835 patent recites:

An apparatus configurable to adapt forward error correction and interleaver parameter (FIP) settings during steady-state communication or initialization comprising:

a transceiver, including a processor, configurable to:

transmit a signal using a first FIP setting,

transmit a flag signal, and

switch to using for transmission, a second FIP setting following transmission of the flag signal,

wherein:

the first FIP setting comprises at least one FIP value,

the second FIP setting comprises at least one second FIP value, different than the first FIP value, and

the switching occurs on a pre-defined forward error correction codeword boundary following the flag signal.

(D.I. 1-19, Ex. 19, ’835 patent, claim 8).

Claim 10 of the ’835 patent recites:

The apparatus of claim 8, wherein a first interleaver parameter value of the first FIP setting is different than a second interleaver parameter value of the second FIP setting.

(*Id.*, claim 10).

## II. LEGAL STANDARD

### A. Summary Judgment

“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)). The burden on the moving party may be discharged by pointing out to the district court that there is an absence of evidence supporting the non-moving party’s case. *Celotex*, 477 U.S. at 323.

The burden then shifts to the non-movant to demonstrate the existence of a genuine issue for trial. *Matsushita Elec. Indus. Co. v. Zenith Radio Corp.*, 475 U.S. 574, 586–87 (1986); *Williams v. Borough of West Chester, Pa.*, 891 F.2d 458, 460–61 (3d Cir. 1989). A non-moving party asserting that a fact is genuinely disputed must support such an assertion by: “(A) citing to particular parts of materials in the record, including depositions, documents, electronically stored information, affidavits or declarations, stipulations . . . , admissions, interrogatory answers, or other materials; or (B) showing that the materials cited [by the opposing party] do not establish the absence . . . of a genuine dispute . . . .” FED. R. CIV. P. 56(c)(1).

### B. Anticipation

A patent is invalid as anticipated under 35 U.S.C. § 102 if “the four corners of a single, prior art document describe every element of the claimed invention, either expressly or inherently, such

that a person of ordinary skill in the art could practice the invention without undue experimentation.” *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). “[T]he hallmark of anticipation is prior invention.” *Net MoneyIN Inc. v. Verisign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008). Thus “the prior art reference . . . must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *Id.*

### **C. Obviousness**

A patent is invalid as obvious under 35 U.S.C. § 103 if “the claimed invention as a whole would have been obvious to a person of ordinary skill in the art at the time the invention was made.” *Kahn v. Gen. Motors Corp.*, 135 F.3d 1472, 1479 (Fed. Cir. 1998). “Obviousness is a question of law based on underlying factual findings: (1) the scope and content of the prior art; (2) the differences between the claims and the prior art; (3) the level of ordinary skill in the art; and (4) objective considerations of nonobviousness.” *In re Morsa*, 713 F.3d 104, 109 (Fed. Cir. 2013) (citing *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 17–18 (1966)).

To show a patent is obvious, a party “must demonstrate by clear and convincing evidence that a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention, and that the skilled artisan would have had a reasonable expectation of success in doing so.” *InTouch Techs., Inc. v. VGO Commc’ns, Inc.*, 751 F.3d 1327, 1347 (Fed. Cir. 2014) (cleaned up). The overall inquiry into obviousness, though, must be “expansive and flexible.” *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 415 (2007).

### III. DISCUSSION

#### A. Anticipation

##### 1. G.992.1

Defendant asserts that the ITU-T's G.992.1 standard anticipates the Asserted Claims. (D.I. 1421 at 3). Both parties agree that the Asserted Claims require a "flag signal" that "does not include the FEC codeword counter value upon which the updated FIP setting is to be used." (D.I. 1421 at 10; D.I. 1494 at 14). The parties dispute whether the G.992.1 standard discloses such a "flag signal." (D.I. 1421 at 10–13; D.I. 1494 at 10–15).

According to Defendant, "the DRA\_Swap\_Request message disclosed by G.992.1 is the claimed 'flag signal' as construed by the Court." (D.I. 1421 at 10). Defendant's subsequent factual assertions are material to its argument: "As Dr. Jacobsen explains, the DRA\_Swap\_Request is the signal used by the ADSL transceiver unit at the network operator end of a subscriber line (ATU-C) to indicate when an updated FIP setting is to be used, and the DRA\_Swap\_Request does not include an 'FEC codeword counter value.'" (*Id.*; D.I. 1391-1, Ex. A, Jacobsen Opening Report, ¶ 595).

Plaintiff disputes this assertion of fact. "The DRA\_Swap\_Request message is . . . not a flag signal because it includes the superframe reference number (SFR) value that provides the FEC codeword counter value upon which the updated FIP setting may be used." (D.I. 1494 at 14). Plaintiff cites statements by its expert, Dr. Madisetti, to support its position. (D.I. 1391-2, Ex. B, Madisetti Report, ¶ 103) (Dr. Madisetti opining, "As I have previously explained, in the G.992.1 implementation, the SFR value is a FEC codeword counter value. . . . Thus, a POSITA would understand that the SFR value communicated in the DRA\_Swap\_Request message is a FEC codeword counter value.").

Because the parties' experts provide conflicting opinions as to whether the DRA\_Swap\_Request includes an FEC codeword counter value, there is a genuine dispute of material fact whether G.992.1 anticipates. Summary judgment is therefore inappropriate.

## 2. Klayman

Plaintiff argues that the Klayman reference does not anticipate because no portion of the reference discloses signal transmission using both FEC and interleaving, as well as switching that "occurs on a pre-defined forward error correction codeword boundary" as required by the Asserted Claims. (D.I. 1425 at 8).

Defendant responds that its expert, Dr. Jacobsen, explained:

Klayman . . . discloses that, initially, encoded data has a "first or initial degree of forward error correction, from a plurality of degrees of forward error correction," where "[t]he plurality of degrees of forward error correction result from the variable levels of correcting capability associated with various codes and with various parameters of such codes," such as the Reed-Solomon parameters (n, k) and "inclusion of interleaving (with a specified depth)."

(D.I. 1490 at 10) (quoting 1492-1, Ex. A, Jacobsen Opening Report, ¶ 1075). Dr. Jacobsen further discusses how Klayman discloses switching "that occurs on a pre-defined forward error correction codeword boundary following the flag signal," as required by the Asserted Claims. (D.I. 1492-1, Ex. A, Jacobsen Opening Report, ¶ 1096–103). These statements present factual assertions that directly contradict Plaintiff's position.

Plaintiff argues that the evidence provided by Defendant is insufficient but produces no expert testimony or other record evidence in response that directly addresses the disputed facts.

Because of Plaintiff's cursory showing on this issue, I cannot determine that a reasonable jury could not conclude that Klayman discloses signal transmission using FIP settings and switching on a pre-defined forward error correction codeword boundary. Summary judgment of no anticipation as to Klayman is therefore denied.

### 3. Abbas

Plaintiff argues that the Abbas reference does not anticipate the Asserted Claims because it does not disclose the preamble: “An apparatus configurable to adapt forward error correction and interleaver parameter (FIP) settings during steady-state communication.” (D.I. 1425 at 9). Defendant responds that Abbas does disclose the preamble, citing assertions by its expert, Dr. Jacobsen, that Abbas discloses adapting FEC and interleaver settings as well as online reconfiguration during Showtime (i.e., “steady-state communication”). (D.I. 1490 at 12) (citing D.I. 1492-1, Ex. A, Jacobsen Opening Report, ¶ 824–25, 844). These statements present factual assertions that directly contradict Plaintiff’s position. Here, too, Plaintiff argues that the evidence offered by Defendant is insufficient but produces no expert testimony or other record evidence in response that directly addresses the disputed facts.

Because of Plaintiff’s cursory showing on this issue, I cannot determine that a reasonable jury could not conclude that Abbas discloses “[a]n apparatus configurable to adapt forward error correction and interleaver parameter (FIP) settings during steady-state communication.”

Summary judgment of no anticipation as to Abbas is therefore denied.

#### B. Obviousness

##### 1. G.992.1 and SC-060

Defendant asserts that the combination of G.992.1 and SC-060 teaches all limitations of the Asserted Claims. SC-060 is a proposed protocol for unified online reconfiguration for ADSL. (D.I. 1421 at 16). SC-060 specifically discloses ADSL transceiver units that can perform different types of online reconfiguration. (*Id.* at 17). Online reconfiguration requires synchronizing use of new transmission parameters between the receiving and transmitting transceiver units. (*Id.* at 18). SC-060 discloses use of a Synch Flag for that synchronization. (*Id.*)



The parties do not dispute these facts. The parties disagree, however, as to whether SC-060's Synch Flag is a "signal used to indicate when an updated FIP setting is to be used" and, therefore, whether the Synch Flag is the claimed "flag signal." (D.I. 1421 at 18; D.I. 1494 at 16).

Defendant contends that SC-060 discloses adapting FIP settings, which means the Synch Flag can be "used to indicate when an updated FIP setting is to be used." (D.I. 1421 at 18–19). SC-060 discloses different types of online reconfiguration, including modification to "PMD, PMS-TC, and TPS-TC parameters." (*Id.* at 18) (citing SC-060 at 2). These parameters facilitate different functions of the transceiver—such as forward error correction, interleaving, or synchronizing frames—and are modified during online reconfiguration to adapt to impulse noise during steady-state communication. (*See id.* at 4). Defendant cites statements made by Plaintiff's expert, Dr. Madisetti, noting VDSL2 specifies that PMS-TC parameters include FIP parameters. (*Id.* at 18) (citing D.I. 1396-3, Ex. K, Madisetti Opening Report, ¶ 75) ("The PMS-TC sublayer contains framing and frame synchronization features, as well as forward error correction (FEC), error detection, interleaving and de-interleaving, scrambling and descrambling functions."). Because SC-060 discloses modification of PMS-TC parameters, which VDSL2 specifies can include FIP settings, Defendant maintains that SC-060 discloses adapting FIP settings. (*Id.* at 18–19).

Plaintiff, on the other hand, argues that SC-060 does not disclose adapting FIP settings, which means the Synch Flag cannot be "used to indicate when an updated FIP setting is to be used." (D.I. 1494 at 16). Plaintiff cites Defendant's expert, Dr. Jacobsen, who states that SC-060 "is focused on the parameters that are listed in Section 2.3.1, 2.3.2, and 2.3.3" of SC-060. (*Id.* at 17) (quoting D.I. 1391-4, Ex. D, Jacobsen Dep. at 750:20–751:8). Sections 2.3.1, 2.3.2, and 2.3.3 of SC-060, Plaintiff notes, do not include FEC or interleaver settings in the list of "PMS-TC

Reconfigurable Parameters.” (*Id.* at 17) (citing SC-060 at 2). Plaintiff therefore maintains that even though SC-060 may disclose reconfiguration of PMS-TC, it does not disclose adapting FIP settings. (*Id.*).

I have already determined that there is a material factual dispute as to whether G.992.1 discloses the claimed “flag signal.” Therefore, at a minimum, SC-060 must disclose the claimed “flag signal” in order for the combination of G.992.1 and SC-060 to render the Asserted Claims obvious. In order for SC-060’s Synch Flag to meet the limitations for the claimed “Flag Signal”—specifically a “signal used to indicate when an updated FIP setting is to be used”—SC-060 must disclose adapting FIP settings.

Defendant argues that PMS-TC parameters by definition include FIP settings. Plaintiff, on the other hand, maintains that the description of PMS-TC parameters provided by SC-060 does not include FIP settings. Both parties cite to expert testimony and record evidence to support their positions. This presents a genuine dispute of a material fact. Summary judgment is therefore unwarranted.

## **2. Cioffi and Abbas**

Plaintiff asserts that the combination of the Cioffi reference and Abbas does not render the Asserted Claims obvious. (D.I. 1425 at 11). Plaintiff argues that a person of ordinary skill in the art (POSA) would not have had motivation to combine Cioffi and Abbas and that the resulting combination would not, in any case, have had a reasonable expectation of success. (*Id.* at 18–19). Plaintiff specifically contends that a POSA would have recognized that combining Abbas with an ADSL2 system, like Cioffi, would have resulted in a system that would switch on a discrete multitone transmission (DMT) symbol boundary rather than on a predefined FEC

codeword boundary as the Asserted Claims require. (*Id.*) (citing 1391-2, Ex. B, Madisetti Report, ¶ 173).

Defendant, on the other hand, argues that a POSA would have had the motivation to combine Cioffi and Abbas because a POSA “would have recognized that Abbas’s techniques would be suitable to coordinate the adaptations described in Cioffi.” (D.I. 1490 at 14–15; D.I. 1492-1, Ex. A, Jacobsen Opening Report, ¶ 904–05). Dr. Jacobsen further states, “Abbas notes that other turn-around periods than the next DMT symbol can be used . . . ‘The turn around period can be set as needed to ensure the timeliness of the signaled event.’” (D.I. 1492-1, Ex. A, Jacobsen Opening Report, ¶ 819) (quoting Abbas ¶ [0040]). Because Abbas discloses a system that can switch on boundaries other than merely DMT symbol boundaries, Defendant argues, a POSA would have had motivation to combine Cioffi and Abbas and a reasonable expectation of success in doing so.

Because the experts disagree whether Abbas discloses a system that switches on a predefined FEC codeword boundary—and consequently whether a POSA would have had motivation to combine or a reasonable expectation of success in doing so—there is a genuine dispute of material fact. Summary judgment is therefore inappropriate.

### **C. Indefiniteness**

#### **1. “configurable to”**

Defendant contends that the Asserted Claims are indefinite with respect to the term “configurable to.” The prosecution history, Defendant argues, shows that “configurable to”—the language of the claims—is narrower than “capable of,” which is the language the Applicant originally proposed. (D.I. 1421 at 7). For support, Defendant cites to the Examiner’s rejection of “capable of” (*id.*) (citing D.I. 1431-5, Ex. 5 at TQD014805) and suggestion of replacement with

“configured to” (*id.*) (citing D.I. 1431-5, Ex. 5 at TQD014810). The Applicant ultimately chose to use “configurable to” instead of “configured to” when submitting the amended claims.

Defendant asserts that this would confuse a POSA, who would wonder whether there is some additional difference between “configured to” and “configurable to,” preventing the POSA from knowing with reasonable certainty what “configurable to” means. (*Id.* at 8).

Plaintiff, on the other hand, argues that the term “configurable to” is not indefinite. Plaintiff notes that the application was allowed after the Applicant replaced the term “capable of” with “configurable to.” (D.I. 1494 at 7–8) (citing D.I. 1432-1, Ex. 1 at TQD014829, TQD014852). A POSA would, therefore, have reasonably known that the Examiner and Applicant understood that “configurable to” meant “configured to.” (*Id.* at 8).

I had not construed the term “configurable to” in this case as of the filing of the summary judgment motions at issue.

Subsequent to the briefing in this dispute, I construed—in another Family 6 case with a different defendant—the term “configurable to” as “includes the necessary hardware and software for performing the functionality recited in the claim without the need to rebuild, rewrite or recompile the code for, or redesign any of that hardware or software.” *TQ Delta LLC v. Adtran, Inc.*, No. 14-954-RGA, 2021 WL 1200595, at \*3–5 (D. Del. Mar. 30, 2021).

The requirement that the functionality must be present “without the need to rebuild, rewrite, or recompile the code” narrows the scope of the claim from the “capable of” language. Defendant’s argument for a POSA’s confusion when distinguishing “configurable to” from “configured to” relies on what it characterizes as Plaintiff’s equation of “configurable to” and “capable of.” (D.I. 1491 at 11). Defendant does not separately argue that there is some other difference in meaning between “configurable to” and “configured to” that would confuse a

POSA. I therefore turn to whether the prosecution history distinguishes “capable of” from “configurable to.”

I agree with Plaintiff that the prosecution history makes clear that “configurable to” and “capable of” do not mean the same thing. The Examiner rejected the term “capable of” because it failed to provide a “positive limitation” on the claim scope. (D.I. 1431-5, Ex. 5 at TQD014805). The Examiner accepted the amended term “configurable to” (*id.* at TQD014829, TQD014852), indicating that the Examiner thought there was a difference in meaning between those two terms. The prosecution history therefore makes clear that “capable of” and “configurable to” mean two different things, and that “configurable to” introduces the “positive limitation” the Examiner sought. Because Plaintiff’s argument that a POSA would be unable to determine the scope disclaimed by “configurable to”—as opposed to “configured to”—is premised on the inability of a POSA to distinguish “capable of” from “configurable to,” that argument, too, is unpersuasive.

“[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 901 (2014). Based on the prosecution history, a POSA would be able to determine with reasonable certainty that “configurable to” conveys a narrower claim scope than does “capable of,” namely that the invention must be able to perform the claimed function without rewriting code or changing the hardware.

I therefore grant summary judgment that the Asserted Claims are not invalid as indefinite with respect to the “configurable to” term.

## 2. “Wherein” clause

The parties dispute whether the Asserted Claims are indefinite because a POSA would not know whether the claimed transceiver must be operating to infringe. (D.I. 1427 at 11; D.I. 1491 at 14). The dispute focuses on the “wherein” clause of claim 8, which recites “the switching occurs on a pre-defined forward error correction codeword boundary following the flag signal.” (’835 patent, claim 8).

Plaintiff argues that a POSA would understand that the “switching” referenced in the “wherein” clause need not occur—and the transceiver does not need to be on—for there to be infringement. (D.I. 1427 at 13) (citing D.I. 1391-2, Ex. B, Madisetti Report, ¶ 91). The “wherein” clause, rather, indicates the type of “switching” (i.e., “on a pre-defined forward error correction codeword boundary” as opposed to a “superframe or DMT symbol boundary”) that will be programmed into the Accused Product when sold.

Defendant, on the other hand, argues that a POSA would understand that the error correction boundaries are not known until the “switching” actually occurs, which requires the apparatus to be turned on. (D.I. 1491 at 14) (citing D.I. 1492-1, Ex. A, Jacobsen Opening Report). A POSA would therefore be confused as to whether the apparatus must actually perform the “switching” or merely be configured to perform the “switching” to infringe. (*Id.* at 15).

The preamble to claim 8 states the apparatus is “configurable to” perform the claimed functionalities. I construed “configurable to” as “includes the necessary hardware and software for performing the functionality recited in the claim without the need to rebuild, rewrite or recompile the code for, or redesign any of that hardware or software.” *TQ Delta LLC v. Adtran, Inc.*, No. 14-954-RGA, 2021 WL 1200595, at \*3–5 (D. Del. Mar. 30, 2021). In other words, an apparatus that can perform the claimed functionality, without changing the underlying code or

hardware, infringes. The apparatus does not need to be performing the claimed functionality to infringe.

The “wherein” clause at issue describes the “transceiver,” which is in turn limited by the preamble. Because the preamble is limiting,<sup>1</sup> the “transceiver” is “configurable to” perform its claimed functionalities, including “switching” FIP settings. The “wherein” clause specifies where that “switching” takes place (i.e., “on a pre-defined forward error correction codeword boundary”). Because the “wherein” clause modifies “transceiver,” its terms, too, are subject to the limitation set forth in the preamble that the apparatus be “configurable to” perform the claimed functionalities. A POSA would therefore be reasonably certain, upon reading the claim terms, that an apparatus that can perform “switching” and does so “on a pre-defined forward error correction codeword boundary” would infringe because the apparatus would be “configurable to” perform that claimed functionality. The “wherein” clause accordingly is not indefinite because a POSA can determine the scope of the invention with reasonable certainty.

I therefore grant summary judgment that the Asserted Claims are not indefinite as to the “wherein” clause of claim 8.

### 3. “FIP setting”

The parties dispute whether the Asserted Claims are indefinite because a POSA would not be able to tell with reasonable certainty whether implementations characterized by multiple FEC parameter values infringe when they only include a subset of those values in the FIP setting. (D.I. 1427 at 14; D.I. 1491 at 16). Defendant’s expert, Dr. Jacobsen, opines that “when an implementation uses a FEC code characterized by more than one FEC parameter, a person

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<sup>1</sup> The parties do not dispute that the preamble is limiting. This is evident from their infringement arguments relating to the term “steady-state communication,” which, within the language of the Asserted Claims, only appears in the preamble. *TQ Delta, LLC v. 2Wire, Inc.*, No. 13-1835-RGA, 2021 WL 2649739, at \*6–7 (D. Del. June 28, 2021).

having ordinary skill in the art would not know which FEC parameter value(s) are part of the FIP setting and which are not.” (D.I. 1391-1 Ex. A at ¶ 421). Because it is unclear which FEC parameter values would be part of the FIP setting, Defendant argues, whether a given combination of FEC parameters would infringe would not be clear with reasonable certainty to a POSA. (D.I. 1491 at 16).

Plaintiff, on the other hand, argues that Dr. Jacobsen does not properly apply the Court’s construction of “FIP setting.” (D.I. 1425 at 15). The Court construed “FIP setting” to mean “set including at least one forward error correction parameter value and at least one interleaver parameter value.” (D.I. 535 at 11–12). Because the construction includes one FEC value and one interleaver parameter value, Dr. Madisetti opines, “If an implementation provides both FEC and interleaving and allows for a FEC parameter value to change or an interleaver parameter value to change, such that there is a change from using a first FIP setting to using a second FIP setting, the claim is infringed.” (D.I. 1491 at 16) (quoting D.I. 1391-2, Ex. B, Madisetti Report, ¶ 93). A POSA would therefore recognize that the claims are infringed by any of the FEC parameter combinations put forth by Defendant. (*Id.*).

I agree with Plaintiff. The claim language indicates that the “FIP setting” need not specify which FEC parameter values are part of the “FIP setting.” All that is needed to show infringement is that there has been a change between first and second FIP settings, which can be shown simply by indicating a shift in one FEC value or one interleaver parameter value, regardless of the other FEC parameter values that make up the FIP setting. A POSA would be able to determine with reasonable certainty whether an implementation infringes the Asserted Claims and, accordingly, understand the metes and bounds of the claimed invention’s scope.



IN THE UNITED STATES DISTRICT COURT  
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TQ DELTA, LLC,

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ORDER

For the reasons set forth in the accompanying memorandum opinion, **IT IS HEREBY ORDERED** that Defendant's motion for summary judgment of invalidity (D.I. 1420) is **DENIED**. Plaintiff's motion for summary judgment that the Asserted Claims are not indefinite (D.I. 1426) is **GRANTED**. Plaintiff's motion for summary judgment of no invalidity as to obviousness and anticipation (D.I. 1424) is **DENIED**.

Entered this 26<sup>th</sup> day of July 2021.

  
United States District Judge