

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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NOKIA OF AMERICA CORPORATION,  
Petitioner,

v.

TQ DELTA, LLC,  
Patent Owner.

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IPR2022-00640  
Patent 7,453,881 B2

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Before JONI Y. CHANG, JENNIFER MEYER CHAGNON, and  
ROBERT J. WEINSCHENK, *Administrative Patent Judges*.

CHAGNON, *Administrative Patent Judge*.

DECISION

Denying Institution of *Inter Partes* Review  
35 U.S.C. § 314, 37 C.F.R. § 42.4

## I. INTRODUCTION

Nokia of America Corporation (“Petitioner”)<sup>1</sup> filed a Petition requesting *inter partes* review of claims 17 and 18 (“the challenged claims”) of U.S. Patent No. 7453,881 B2 (Ex. 1001, “the ’881 patent”). Paper 2 (“Pet.”). TQ Delta, LLC (“Patent Owner”)<sup>2</sup> filed a Preliminary Response. Paper 7 (“Prelim. Resp.”). Pursuant to our authorization, Petitioner filed a Reply Brief (Paper 8, “Reply”) and Patent Owner filed a Sur-reply (Paper 9, “Sur-reply”).

We have authority to determine whether to institute an *inter partes* review under 35 U.S.C. § 314, which provides that an *inter partes* review may be instituted only upon a showing that “there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a).

Applying this standard, and upon consideration of the information presented in the parties’ briefing, as well as the evidence of record, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing in showing the unpatentability of at least one of the challenged claims. Accordingly, we do not institute an *inter partes* review.

### A. *Related Proceedings*

The parties identify the following related district court litigations involving the ’881 patent: *TQ Delta, LLC v. CommScope Holding Co.*, No. 2-21-cv-00310 (E.D. Tex.); *TQ Delta, LLC v. 2Wire, Inc.*, No. 1-13-cv-

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<sup>1</sup> Petitioner identifies itself, Nokia of America Corporation, as well as Nokia Corporation, Nokia Solutions and Networks Oy, as real parties-in-interest. Pet. 82.

<sup>2</sup> Patent Owner identifies itself, TQ Delta, LLC, as the real party-in-interest. Paper 5, 1.

01835 (D. Del.); *TQ Delta LLC v. ADTRAN Inc.*, No. 1-14-cv-00954 (D. Del.). Pet. 82; Paper 5, 1–2. Petitioner further identifies the following related district court litigations involving the '881 patent: *TQ Delta, LLC v. ZyXEL Commc'ns Corp.*, No. 1-13-cv-02013 (D. Del.); *TQ Delta LLC v. Zhone Techs. Inc.*, 1-13-cv-01836 (D. Del.). Pet. 82. Patent Owner also identifies an additional matter that “would affect or be affected by a decision” in this proceeding: *ADTRAN, Inc. v. TQ Delta, LLC*, Case No. 1:15-cv-00121 (D. Del.). Paper 5, 1.

*B. The '881 Patent*

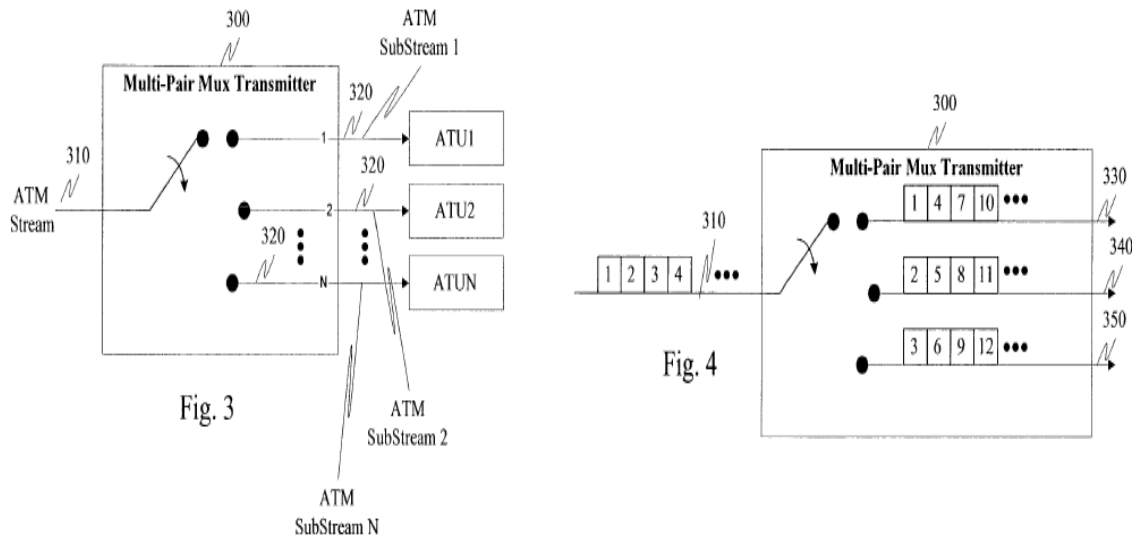
The '881 patent, titled “Systems and Methods for Multi-Pair ATM over DSL,” was filed on October 4, 2002, and issued on November 18, 2008. Ex. 1001, codes (22), (45), (54).<sup>3</sup> The '881 patent describes data communication systems for transmitting asynchronous transfer mode (ATM) data streams over digital subscriber line (DSL) to “generate a high data rate connection for the transport of an ATM cell stream between the service provider and, for example, a DSL subscriber.” *Id.* at 1:14–17, 1:60–67. In particular, the '881 patent uses “bonded” ADSL PHY links, i.e., multiple

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<sup>3</sup> The '881 patent claims earliest priority to Provisional application No. 60/327,440, filed on October 5, 2001. Ex. 1001, code (60). Petitioner asserts the claims at issue here are “entitled to a priority date no earlier than the filing date of the ['881 patent's corresponding utility application], October 4, 2002.” Pet. 6–7. However, Petitioner notes that “no matter the priority date [(i.e., that of the provisional or utility application)] each reference asserted in Grounds 1–4 qualifies as prior art.” *Id.* As such, we need not make any determination in this regard for purposes of this Decision. Because the application leading to the '881 patent claims priority to U.S. applications filed before March 16, 2013, patentability is governed by the version of 35 U.S.C. §§ 102 and 103 preceding the Leahy-Smith America Invents Act (“AIA”), Pub L. No. 112-29, 125 Stat. 284 (2011).

twisted wire pairs, to transmit and receive the cells of a single ATM cell stream. *Id.* at 4:6–9, 4:29–34, 5:1–2. The single ATM cell stream is transmitted and received on PHY links via multi-pair multiplexer transmitters and receivers. *Id.* at 4:22–28; *see id.* at 5:1–2.

Figures 3 and 4 are reproduced below.

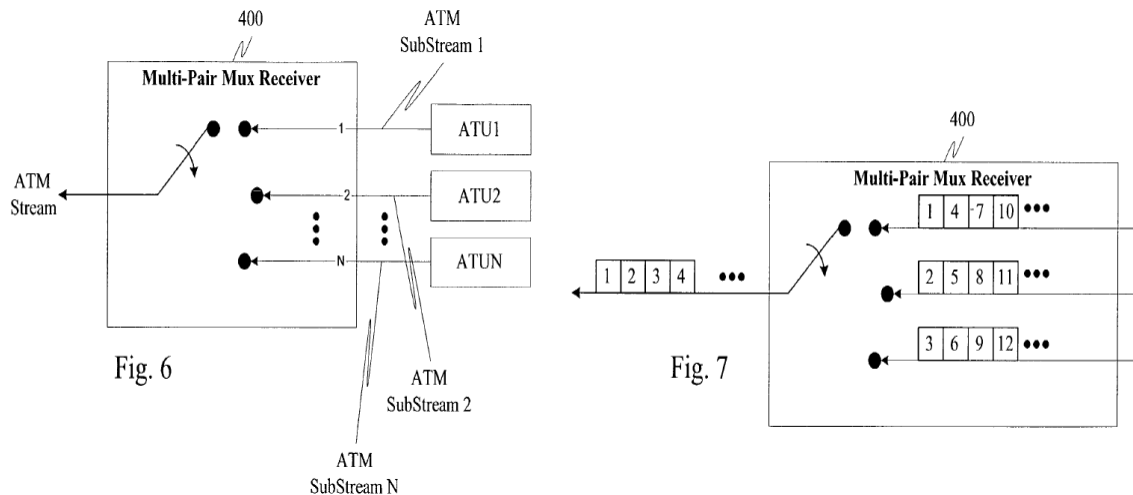


Figures 3 and 4, above, are block diagrams of exemplary multi-pair multiplexing transmitters. *Id.* at 2:30–39. As shown in Figure 3, the cells of “a single ATM cell stream 310” are distributed among N ATM substreams 320, i.e., ATM substream 1 to ATM substream N. *Id.* at 4:62–66.

In particular, “each ATM cell substream [is mapped] to a different DSL connection and provides as output these ATM cell substreams to the appropriate ADSL PHY (ATUx [or ADSL transceiver unit]).” *Id.* at 4:66–5:2; *see* Ex. 1003 ¶ 62 (citing Ex. 1011 § 4). Further, “the cells from the ATM stream 310 are distributed amongst the ATM substreams 320 based on the data rate of each DSL PHY.” Ex. 1001, 5:4–6. For example, as shown in Figure 4, “the data rate on all of the DSL PHY’s is the same” and so “an equal number of ATM cells will be transported over every PHY connection,” i.e., “multi-pair multiplexing transmitter 300 sends the first

ATM cell to ATU1330, the second ATM cell to ATU2340, the third ATM cell to ATU3350, and so on.” *Id.* at 5:9–21. Or, in the case that the “data rate on all the DSL PHY’s is not equal, the ATM cells can be forward to the DSL PHYs, at, for example, a ratio that matches the ratios of the available PHY data rates.” *Id.* at 5:22–27.

The “ATM cell substreams [transmitted] from different DSL PHYs” are received by a multi-part multiplexing receiver which “recombin[es] the ATM cells from the different ATM cell substreams to recreate the original ATM stream.” *Id.* at 5:44–50. Figures 6 and 7 are reproduced below.



Figures 6 and 7, above, are functional block diagrams of exemplary multi-pair multiplexing receivers. *Id.* at 2:43–48. As shown in Figure 6, “a plurality of ATM substreams are received by the multi-pair multiplexing receiver 400 and recombined into the original ATM stream.” *Id.* at 5:50–52. The “recombining of cells from the DSL PHYs depends on the data rates of the individual PHY connections.” *Id.* at 5:53–55. “[W]here all DSL PHYs had an equal data rate,” i.e., as in the embodiment of Figure 4, “the multi-pair multiplexing receiver 400 can perform the inverse of the transmitting multiplexer function and reconstruct the original ATM stream

by taking one cell from each ATM substream and combining them in the appropriate order, as illustrated in [Figure 7].” *Id.* at 5:55–61.

The ’881 patent highlights a concern with “ATM cells transported over a DSL PHY,” specifically, “different end-to-end delay (latency) based on several parameters” which causes “ATM cells . . . not being received in the same order as they [were] transmitted.” *Id.* at 6:1–9, 6:32–35 (An “ATM cell that was sent over a DSL PHY may be received at the multi-pair multiplexing receiver after an ATM cell that was sent out later on a different DSL PHY.”). The parameters causing different latencies include “configuration latency which is based on the configuration of the DSL transmission parameters” such as “the data rate, coding parameters, such as the coding method, codeword size, interleaving parameters, framing parameters, or the like.” *Id.* at 6:10–16. Other latencies include “ATM-TC latency is based on cell rate decoupling in the ATM-TC,” “[w]ire latency is based on differences in the twisted wire pairs” (such as wire length), and “[d]esign latency is based on differences in the DSL PHY design.” *Id.* at 6:17–31. The ’881 patent proposes two solutions for accommodating these types of variations in delay. *Id.* at 6:36–40; *see id.* at 6:40–65.

One solution proposed by the ’881 patent “for dealing with the issue of delay is to have cell buffers . . . in the multi-pair multiplexing receiver 500 that can provide the ability to compensate for the variations in delay.” *Id.* at 6:40–43. Using a buffer that can store received ATM cells, “the multi-pair multiplexing receiver 500 can simply wait until, for example, cell number 1 comes in path number one, while path number two will buffer cell number 2 and wait for cell number 1 to be received.” *Id.* at 6:43–48.

Another solution for “reducing the difference in latency between DSL PHYs” proposed by the ’881 patent “is mandate that all DSL PHYs are

configured with transmission parameters in order to provide the same configuration latency.” *Id.* at 6:56–59. One method the ’881 patent describes for “accomplishing the same configuration latency is by configuring the exact same data rate, coding parameters, interleaving parameters, etc. on all DSL PHYs.” *Id.* at 6:59–62. For PHYs “hav[ing], for example, different data rates,” “the appropriate coding or interleaving parameters [are used] to have the same latency.” *Id.* at 6:59–65; *see id.* at 6:66–7:36 (describing an example using Reed Solomon coding and interleaving functions, where latency is defined as:  $\text{Latency} = N \cdot D / R$ ). That is, if “two PHYs have different data rates,  $R_1$  and  $R_2$  then, in order to bond these PHYs together,” the respective parameters for number of bits in a codeword ( $N_1$ ,  $N_2$ ) and interleaver depth ( $D_1$ ,  $D_2$ ) are chosen to set matching configuration latencies for the two PHYs. *Id.* at 7:11–17.

*C. Illustrative Claim*

Of the challenged claims, claim 17 is independent. Claim 18 depends from claim 17. Independent claim 17 of the ’881 patent is reproduced below and is illustrative of the challenged claims.

17. A plurality of bonded transceivers,  
each bonded transceiver utilizing at least one transmission  
parameter value to reduce a difference in latency between the  
bonded transceivers,  
wherein a data rate for a first of the bonded transceivers is  
different than a data rate for a second of the bonded transceivers.

Ex. 1001, 12:57–62.

*D. The Applied References*

Petitioner relies on the following references in the asserted grounds.  
Pet. 1–2.

| Reference                                      | Issue Date/<br>Publication Date | Exhibit  |
|------------------------------------------------|---------------------------------|----------|
| U.S. Patent No. 6,178,448 B1 (“Gray”)          | Jan. 23, 2001 <sup>4</sup>      | Ex. 1007 |
| U.S. Patent No. 7,068,657 B2 (“Keller-Tuberg”) | June 27, 2006 <sup>5</sup>      | Ex. 1008 |
| U.S. Patent No. 6,772,388 B2 (“Cooper”)        | Aug. 3, 2004 <sup>6</sup>       | Ex. 1009 |
| U.S. Patent No. 6,222,858 B1 (“Counterman”)    | Apr. 24, 2001 <sup>7</sup>      | Ex. 1005 |
| U.S. Patent No. 6,956,872 B1 (“Djokovic”)      | Oct. 18, 2005 <sup>8</sup>      | Ex. 1006 |

Petitioner also relies on the Declaration of Dr. George Zimmerman (Ex. 1003) to support its positions. Pet. 1.

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<sup>4</sup> Petitioner asserts that Gray is prior art at least under 35 U.S.C. §§ 102(a), (b), or (e), depending on the applicable priority date. Pet. 7–8.

<sup>5</sup> Petitioner asserts that Keller-Tuberg is prior art under 35 U.S.C. § 102(e). Pet. 8.

<sup>6</sup> Petitioner asserts that Cooper is prior art at least under 35 U.S.C. § 102(e). Pet. 8.

<sup>7</sup> Petitioner asserts that Counterman is prior art under 35 U.S.C. §§ 102(a), (b), or (e), depending on the applicable priority date. Pet. 7–8.

<sup>8</sup> Petitioner asserts that Djokovic is prior art under 35 U.S.C. § 102(e). Pet. 8.

*E. The Asserted Grounds*

Petitioner sets forth its challenges to claims 17 and 18 on the following grounds. Pet. 1–2.

| <b>Claim(s) Challenged</b> | <b>35 U.S.C. §</b> | <b>Reference(s)/Basis</b> |
|----------------------------|--------------------|---------------------------|
| 17, 18                     | 102(b)             | Gray                      |
| 17                         | 102(b)             | Keller-Tuberg             |
| 17, 18                     | 103(a)             | Keller-Tuberg, Cooper     |
| 17, 18                     | 103(a)             | Counterman, Djokovic      |

**II. ANALYSIS**

*A. Legal Standards*

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden of persuasion never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review).

To establish anticipation, each and every element in a claim, arranged as recited in the claim, must be found in a single prior art reference. *See Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1369 (Fed. Cir. 2008); *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). Although the elements must be arranged or combined in the same way as in the claim, “the reference need not satisfy an *ipsissimis verbis* test,” i.e., identity of terminology is not required. *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009); *accord In re Bond*, 910 F.2d 831, 832 (Fed. Cir.

1990). Further, to be anticipating, a prior art reference must be enabling and must describe the claimed invention sufficiently to have placed it in possession of a person of ordinary skill in the field of the invention.

*See Helifix Ltd. v. Blok-Lok, Ltd.*, 208 F.3d 1339, 1346 (Fed. Cir. 2000); *In re Paulsen*, 30 F.3d 1475, 1479 (Fed. Cir. 1994).

A claim is unpatentable under 35 U.S.C. § 103(a) if “the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of ordinary skill in the art; and (4) if in evidence, objective evidence of nonobviousness.<sup>9</sup> *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). An obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418; *accord In re Translogic Tech., Inc.*, 504 F.3d 1249, 1259 (Fed. Cir. 2007). However, Petitioner cannot satisfy its burden of proving obviousness by employing “mere conclusory statements.” *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016). Instead, Petitioner must articulate a reason

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<sup>9</sup> The parties have not asserted or otherwise directed our attention to any objective evidence of non-obviousness.

why a person of ordinary skill in the art would have combined the prior art references. *See In re NuVasive*, 842 F.3d 1376, 1382 (Fed. Cir. 2016).

We analyze the asserted grounds of unpatentability in accordance with these principles to determine whether Petitioner has met its burden to establish a reasonable likelihood of success at trial.

*B. Level of Ordinary Skill in the Art*

We review the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art at the time of the invention. *Graham*, 383 U.S. at 17. For purposes of this proceeding, Petitioner argues a person of ordinary skill in the art at the time of the invention

would have possessed a bachelor's degree in electrical or computer engineering, or the equivalent, and at least 5–6 years of experience in telecommunications or a related field; a master's degree in electrical or computer engineering, or the equivalent, and at least 2–3 years of experience in telecommunications or a related field; or a Ph.D. in electrical or computer engineering, or the equivalent, with at least 1–2 years of experience in telecommunications or a related field. Additional experience may compensate for less education.

Pet. 20 (citing Ex. 1003 ¶¶ 42–44). Patent Owner does not specifically address the level of ordinary skill in the art asserted by Petitioner. *See generally* Prelim. Resp.

To the extent necessary, and for purposes of this Decision, we accept the assessment offered by Petitioner, as it is supported by Dr. Zimmermann's testimony and appears to be consistent with the '881 patent and the asserted prior art.

*C. Claim Construction*

For this *inter partes* review proceeding claim terms

shall be construed using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. [§] 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b) (2021). Under the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–19 (Fed. Cir. 2005) (en banc), claim terms are given their ordinary and customary meaning, as would have been understood by a person of ordinary skill in the art at the time of the invention, in light of the language of the claims, the specification, and the prosecution history of record. *See Thorner v. Sony Comput. Entm’t Am. LLC*, 669 F.3d 1362, 1365–66 (Fed. Cir. 2012).

Petitioner proposes construction for three claim limitations:

“transceiver,” “plurality of bonded transceivers,” and “utilizing at least one transmission parameter value to reduce a difference in latency between the bonded transceivers.” Pet. 10–16. For purposes of this decision, we need only construe the “utilizing” term. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

*“utilizing at least one transmission parameter value to reduce a difference in latency between the bonded transceivers”*

Petitioner submits that the claim limitation “utilizing at least one transmission parameter value to reduce a difference in latency between the

bonded transceivers” should be construed as “the ordinary meaning of this term, to the extent it is not indefinite, from the perspective of [a person of ordinary skill in the art].” Pet. 16 (citing Ex. 1003 ¶¶ 151–152). Petitioner’s arguments focus on its position that the Delaware district court’s construction of “utilizing at least one transmission parameter value to reduce a difference in **configuration** latency between the bonded transceivers,” improperly reads “configuration” into the claims. *See id.* at 12–16 (citing Ex. 1003 ¶¶ 146–150); Ex. 1014,<sup>10</sup> 19–20; Ex. 1015,<sup>11</sup> 1.

Patent Owner asserts that we “should reject Petitioner’s incorrect construction and adopt the [district court] construction,” i.e., that the term be construed as “utilizing at least one transmission parameter value to reduce a difference in configuration latency between the bonded transceivers.” Prelim. Resp. 6 (citing Ex. 1015; Ex. 2021, 40–44); *see id.* at 7–9. Patent Owner argues that “a person of ordinary skill in the art would have understood that what is being configured is the configuration of the transceivers, not the physical properties of the physical links” (*id.* at 7), and therefore the district court construction including “configuration” is correct. *Id.* at 6–8. Patent Owner also argues that the scope of “reduc[ing] differences in latency” as recited in claim 17 does not include “*compensating* for differences” in latency. *See id.* at 8–9 (emphasis Patent Owner’s).

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<sup>10</sup> Joint claim construction order, dated Feb. 7, 2018, for the ’881 patent in the District of Delaware. Citations to Ex. 1014 are to the page numbers added by Petitioner.

<sup>11</sup> Claim construction order, dated Jan. 14, 2020, for the ’881 patent in the District of Delaware.

In its Reply, Petitioner argues that Patent Owner is taking inconsistent positions here and in the district court, as to the construction of this term.

Reply 10. Patent Owner, in its Sur-reply, disagrees. Sur-reply 10.

The parties' arguments present two issues regarding the "utilizing" term: (1) whether the proper construction limits the claim to "*configuration* latency"; and (2) whether the claim covers compensating for differences or is more narrowly directed to only reducing differences. For purposes of this decision, we need only decide the second issue, as it is dispositive to the challenges presented in the Petition.

Patent Owner contends that,

the ['881] patent specification describes two methods for addressing differences in latency. The first method uses variable length queues "to compensate for the variations in delay." Ex. 1001 at 6:40–43. The second method configures the DSL PHYs with (*i.e.*, utilizes) transmission parameters for reducing the difference in latency between DSL PHYs. *Id.* at 6:56–61.

Prelim. Resp. 8–9. According to Patent Owner, "[t]he scope of the Challenged Claims extend to this second method." *Id.* at 9.

As to the first, the "compensating" method, the '881 patent describes:

An exemplary method for dealing with the issue of delay is to have cell buffers (not shown) in the multi-pair multiplexing receiver 500 that can provide the ability to compensate for the variations in delay. As example, if there is a cell buffer that can hold several ATM cells on each input ATM substream path, the multi-pair multiplexing receiver 500 can simply wait until, for example, cell number 1 comes in path number one, while path number two will buffer cell number 2 and wait for cell number 1 to be received. This method requires a cell buffer on each ATM substream path at the input of the multi-pair multiplexing receiver 500. The size of the cell buffer can be determined by, for example, the maximum difference in latency between the "bonded" PHYs. As an alternative, the buffer can be based on

one large buffer with multiple pointers without effecting the operation of the system.

Ex. 1001, 6:40–55.

As to the second, the “reducing” method, the ’881 patent describes:

Another effective method of reducing the difference in latency between DSL PHYs is mandate that all DSL PHYs are configured with transmission parameters in order to provide the same configuration latency. An exemplary method of accomplishing the same configuration latency is by configuring the exact same data rate, coding parameters, interleaving parameters, etc. on all DSL PHYs. Alternatively, different PHYs can have, for example, different data rates but use the appropriate coding or interleaving parameters to have the same latency on all the bonded PHYs.

*Id.* at 6:56–65.

Based on these disclosures, we agree with Patent Owner that the Specification of the ’881 patent clearly distinguishes between methods of *compensating for* differences in latency and methods of *reducing* differences in latency. We also agree that the claim is directed to the reducing differences embodiment. *See Baran v. Med. Device Techs., Inc.*, 616 F.3d 1309, 1316 (Fed. Cir. 2010) (“It is not necessary that each claim read on every embodiment.”); *see also SIMO Holdings Inc. v. Hong Kong uCloudlink Network Tech. Ltd.*, 983 F.3d 1367, 1379 (Fed. Cir. 2021) (“We have noted that ‘[i]t is often the case that different claims are directed to and cover different disclosed embodiments. The patentee chooses the language and accordingly the scope of his claims.’ *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1383 (Fed. Cir. 2008); *see also Nobel Biocare Servs. AG v. Intradent USA, Inc.*, 903 F.3d 1365, 1381 (Fed. Cir. 2018) (same); *PSN [Illinois, LLC v. Ivoclar Vivadent, Inc.]*, 525 F.3d [1159,] 1166

[(Fed. Cir. 2008)] (‘courts must recognize that disclosed embodiments may be within the scope of other allowed but unasserted claims’).”).

We recognize that Petitioner contends that the claim “is agnostic as to how this reduction [of the difference in latency] occurs.” Pet. 12 (citing Ex. 1003 ¶¶ 146–147). However, we agree with Patent Owner that, in light of the Specification, a person of ordinary skill in the art would have understood that compensating for a difference in latency is not the same as reducing a difference in latency. *See* Prelim. Resp. 8; Ex. 1001, 6:40–65; *compare* “Compensate” Definition, MERRIAM-WEBSTER.COM (available at <https://www.merriam-webster.com/dictionary/compensate>) (3b: “to neutralize the effect of (variations)”), *with* “Reduce” Definition, MERRIAM-WEBSTER.COM (available at <https://www.merriam-webster.com/dictionary/reduce>) (1b(1): “to diminish in size, amount, extent, or number”).

We also are not persuaded by Petitioner’s argument that Patent Owner “appears to be taking inconsistent positions in various proceedings [(i.e., here and in the district court)] in an attempt to narrowly interpret the claims to avoid prior art while broadly interpreting them to avoid indefiniteness.” Reply 10. Petitioner contends that, in the Preliminary Response, Patent Owner distinguishes between the “compensating method” and the “configuring method” (i.e., the “reducing” method as discussed herein) in construing the “utilizing” limitation. *Id.* But in district court, Petitioner notes that Patent Owner “relied on the ‘compensating’ disclosure . . . to

argue against indefiniteness of the same ‘utilizing’ limitation.” *Id.* (citing Ex. 1044,<sup>12</sup> 16).

We agree with Patent Owner, however, that these positions are not facially inconsistent. Rather, as Patent Owner explains,

[Petitioner’s] assertion is based on a false dichotomy. [Petitioner’s] argument assumes that a device must either (1) reduce a difference in latency or (2) compensate for a difference in latency, but that it is not possible to do both (1) and (2). That assumption is technically wrong. For example, a device could (1) utilize at least one transmission parameter value to reduce a difference in configuration latency between bonded transceivers to 2 milliseconds and (2) compensate for the 2 millisecond difference through buffering. [Patent Owner’s] district court argument described how the 881 Patent discloses example embodiments that do (1) and/or (2) and explained that the 881 Patent, through the disclosure of buffers to account for any remaining latency difference at the receiver, contemplates that “reduce” does not necessarily minimize or eliminate all difference in latency. On the other hand, TQ Delta’s POPR distinguished certain prior art by showing that it discloses only (2) and does not disclose (1).

Sur-reply 10 (internal citations omitted); *see also* Ex. 1044, 16–17 (Patent Owner arguing in district court that, “‘Reduce’ and ‘minimize’ are two different concepts, and Defendants fail to identify any alleged disclaimer. To the contrary, as detailed above, the specification contemplates utilizing the transmission parameter values will not necessarily eliminate (or reduce to its smallest amount) configuration latency, reflected in the disclosures of buffers to account for latency at the receiver.”) (internal citations omitted).

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<sup>12</sup> Patent Owner’s Claim Construction Brief, dated April 26, 2022, in the Eastern District of Texas. Citations to Ex. 1044 are to the page numbers added by Petitioner.

Petitioner's general assertion that the positions are inconsistent (*see* Reply 10) does not persuade us otherwise.

For these reasons, we determine that the proper construction of the “utilizing” term does not encompass compensating for differences in latency, but is instead directed to reducing a difference in latency between the bonded transceivers, for example by configuring the transceivers with particular transmission parameters. As mentioned above, we need not resolve the parties' dispute regarding whether the “latency” recited in the “utilizing” term is limited to “*configuration* latency.” *See Nidec Motor Corp.*, 868 F.3d at 1017 (“[W]e need only construe terms that are in controversy, and only to the extent necessary to resolve the controversy.” (internal quotations omitted)).

*D. Overview of the Asserted References*

*1. Overview of Gray (Ex. 1007)*

Gray is titled “Optimal Link Scheduling for Multiple Links by Obtaining and Utilizing Link Quality Information.” Ex. 1007, code (54). Gray describes “distributing communication packets over multiple concurrent parallel links between a first node and a second node in a communication network based upon link quality information for the link.” *Id.* at 5:67–6:3. Gray uses “link quality information from the links” so that “the rate at which packets are provided to the links may be made proportional to the quality of the link, and thus, the link's ability to transmit the packet.” *Id.* at 6:3–7.

Gray describes techniques for packet transmission based on link quality to improve performance. *See id.* at 6:39–49. In one embodiment, Gray “decreas[es] the rate at which packets are provided to individual links

as those links performance degrades.” *Id.* at 6:42–44. In particular, if the transmission quality of the link is below some threshold, the rate at which packets are provided to that link is decreased, so that “retry timeouts may be avoided and performance of the multiple links may be maintained.” *Id.* at 6:44–46; *see id.* at 10:1–12.

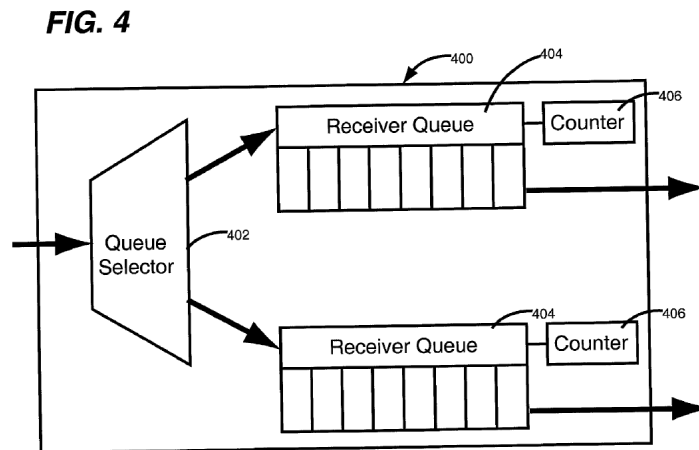
In another embodiment, based on a delay factor associated with each of the plurality of links, “communication packets are distributed among the plurality of links” so that “communication packets may be distributed to the links . . . with the least delay.” *Id.* at 6:53–59. A scheduler “then selects the link with the least delay and transmits the packets over that selected link.” *Id.* at 11:21–23. Delay factors associated with each of the plurality of links are determined, e.g., by “the sum of an effective time to send and receive a packet for a link, a propagation delay for the link and an estimate of the queueing delay of the link.” *Id.* at 6:50–64, 6:60–63, 11:1–16.

## 2. *Overview of Keller-Tuberg (Ex. 1008)*

Keller-Tuberg is titled “Facilitating Inverse Multiplexing Over Asynchronous Transfer Mode via Communication Links having Disparate Data Transmission Rates.” Ex. 1008, code (54). Keller-Tuberg describes a data communication technique of “Inverse Multiplexing (IM) . . . that allows a grouping of lower speed communication links into one logical higher speed communication link of approximately the same transmission bandwidth capacity as the sum of the lower speed communication links.” *Id.* at 1:30–34. Keller-Tuberg explains that, when grouping (i.e., bonding) multiple IM communication links, “there is a significant probability that the optimum speed for each link will differ” and it is desirable to synchronize

those IM communication links at a common data transmission rate. *Id.* at 3:1–3, 3:30–34.

Figure 4, reproduced below, “is a block diagram view depicting a transmitter . . . for transmitting cells across a plurality of IM communication links.” *Id.* at 3:48–52.

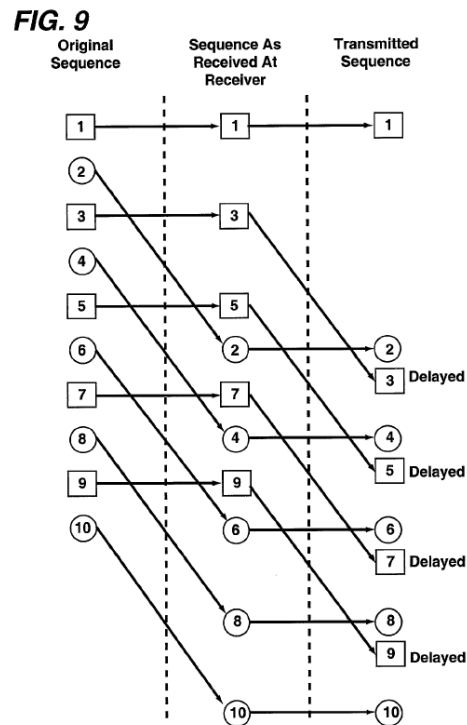


As shown in Figure 4, transmitter 400 includes selector queue 402 for “selectively routing ATM cells to each one of the plurality of receiver queues 404” for transmission on respective communication links. *Id.* at 7:57–59; *see id.* at 5:40–43, 7:57–51. Further, “receiver queues 404 [are] set to different lengths when the IM communication links are operating at different data transmission rates.” *Id.* at 8:1–3. In particular, “it is advantageous to provide a shorter queue length for communication links operating at slower data transmission rates and longer queue lengths for communication links operating at higher data transmission rates.” *Id.* at 8:4–8. Accordingly, “the receiver queue lengths are chosen such that the time required to transmit cells from all of the receiver queue locations from the transmitter across the communication links to the receiver is equal when all

of the receiver queues are initially completely full.” *Id.* at 8:8–13.

Furthermore, “reference data transmission rates (e.g. average data transmission rates) are used to determine such time required to transmit the cells.” *Id.* at 8:13–16.

Keller-Tuberg also identifies an issue in which sequenced ATM cells arrive at a receiver (from a transmitter, as described above) out of sequence due to “facility operating parameter differences,” e.g., transmission rates (capacity) or delay. *See id.* at 10:40–53, Fig. 9. To address that facility operating parameter delay issue, “a cell forwarding sequence in which forwarding of a portion of a plurality of cells . . . is delayed,” as shown in the diagrammatic view of Figure 9, reproduced below. *Id.* at 4:1–3, 10:40–43.



As shown in Figure 9, “the forwarding of cell 3, cell 5, cell 7 and cell 9 is delayed until the preceding cell(s) arrive and are forwarded.” *Id.* at 10:47–49. “The delay of the first facility cells is a result of the first facility having

a lower capacity (i.e. transmission rate) than the second facility, a longer delay than the second facility or both.” *Id.* at 10:49–53.

### 3. *Overview of Cooper (Ex. 1009)*

Cooper is titled “Apparatus and Method for Providing Optimal Adaptive Forward Error Correction in Data Communications.” Ex. 1009, code (54). Cooper is directed to an adaptive forward error correction (FEC) scheme. *Id.* at code (57). FEC provides error checking and correction for transmitted data packets (*see id.* at 2:22–29) but also “requires . . . more bits than are necessary to simply transmit the information” and, so, FEC “add[s] overhead for data transmission and correspondingly decreasing data throughput” and “increases the system response time or latency” (*id.* at 2:29–41). In order, “[t]o constrain the extra overhead, at least to a degree, the number of data errors that can be corrected, referred to as the forward error correcting power, is selected to meet the required performance demands of the communications system.” *Id.* at 2:41–45; *see id.* at 7:66–8:10. For example,

[w]hen the calculated or measured error parameter is less than [a] threshold level (minus any allowable variance), this indicates that the channel conditions are of a comparatively higher quality (relatively lower noise conditions). Fewer errors are occurring and these errors are capable of being corrected by the forward error correcting code. Under these conditions, the forward error correcting code parameter can be revised to lower the degree of forward error correction capability (i.e., capable of correcting fewer errors) to reduce the margin between the measured error level and the threshold level. By lowering the forward error correction power, the overhead and latency associated with the forward error correction scheme will also be reduced.

*Id.* at 8:11–23; *see id.* at 8:23–35.

Cooper describes a specific “forward error correction algorithm” in which “forward error correction parameters are optimized by dynamically selecting a value for the parameters CW LENGTH and CB LENGTH that achieves a target bit error rate and minimizes the forward error correction overhead (which also maximizes the data throughput) while not exceeding a maximum system latency requirement.” *Id.* at 9:35–42. Cooper explains that the parameters CW LENGTH and CB LENGTH are dynamically selected

based on the requirements of the communications network: (1) target bit error rate (TBER), (2) MAXIMUM OVERHEAD, which is the maximum FEC overhead allowed, which thereby specifies the minimum information bandwidth, and (3) MAXIMUM LATENCY, which is the maximum packet delay that will be tolerated by the system users due to FEC processing.

*Id.* at 9:53–61; *see id.* at 10:1–37, equations (1)–(2).

#### 4. *Overview of Counterman (Ex. 1005)*

Counterman is titled “Method of Inverse Multiplexing for ATM.” Ex. 1005, code (54). Counterman is directed to a “method for flexible inverse multiplexing for ATM and for link grouping of communication links with different transmission rates and delay.” *Id.* at code (57). Counterman explains that “ATM inverse multiplexers (IMA) . . . combine several communication lines, e.g., T1 carriers, into a higher bandwidth aggregate communication path.” *Id.* at 2:27–30.

Figure 4 is reproduced below.

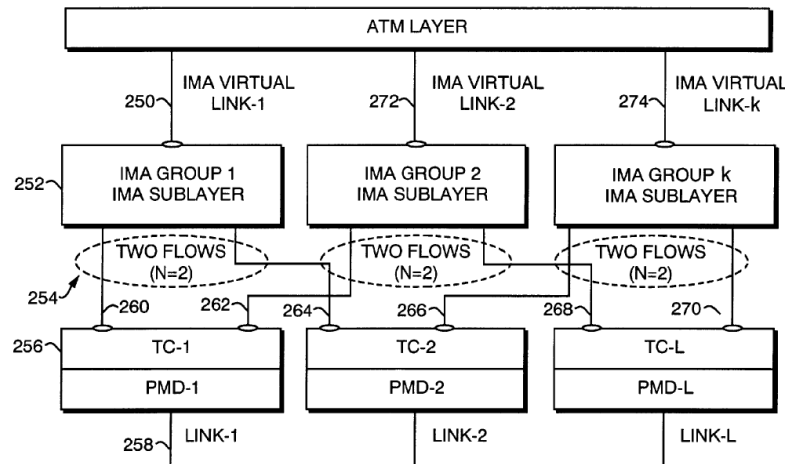


FIG. 4

Figure 4, above, “is a block diagram of flexible ATM inverse multiplexing [(IMA)].” *Id.* at 5:47–48. Counterman explains that physical links 258 “nominally have the same cell transfer delay (CTD) but different nominal cell rates (NCRs). The nominal cell transfer delay is typically the result of selecting certain FEC parameters in order to meet a desired, common QoS objective” for each physical link. *See id.* at 6:8–13, 6:22–24. Additionally,

IMA virtual links 250, 272, and 274 each correspond to an IMA group or sublayer 252. Each IMA virtual link 250 is the sum of the flows 254 for the respective IMA group 252. The flows 254 are between each IMA sublayer 252 and one or more TC sublayers 256 from several links 258. The flows 254 in an IMA group may have different nominal cell rates, but have the same nominal cell transfer delay, in order for the corresponding IMA virtual link 250 to meet the desired QoS objective. A link 258 carries one or more flows over a physical path between inverse multiplexers.

*Id.* at 6:29–40. That is, Counterman explains that each flow (254) of an IMA virtual link (250, 272, 274) has respective cell rates (kcell/s) and delays (latency in ms), as shown in Table 1, reproduced below.

TABLE 1

| IMA Group                       | Rate (kcell/s) | Latency (ms) |
|---------------------------------|----------------|--------------|
| TC-1, IMA Group 1, Flow 1 (260) | 1              | 0.5          |
| TC-1, IMA Group 2, Flow 1 (262) | 5              | 4.0          |
| TC-2, IMA Group 1, Flow 2 (264) | 2              | 0.5          |
| TC-2, IMA Group 3, Flow 1 (266) | 4              | 10.0         |
| TC-3, IMA Group 2, Flow 2 (268) | 2              | 4.0          |
| TC-3, IMA Group 3, Flow 2 (270) | 8              | 10.0         |
| IMA Virtual Link 1 (250)        | 3              | 0.5          |
| IMA Virtual Link 2 (272)        | 7              | 4.0          |
| IMA Virtual Link 3 (274)        | 12             | 10.0         |

As shown in Table 1 and Figure 4, Counterman “groups cell flows which have the same latency (or delay) into a virtual link although they may have different cell rates, and then transmits using each cell flow at its respective rate.” *Id.* at 7:7–10. For example, specific cell flows 260 and 264 (respectively from physical links 1 and 2) have the same latency (0.5 ms) and respective cell rates of 1 and 2; as such, cell flows 260 and 264 are grouped to IMA Group 1, corresponding to IMA Virtual Link 1 which has a latency of 0.5 ms and a total cell rate of 3. *See id.* at 6:63–7:3. Such a grouping technique “is in contrast to conventional techniques which increase the delay of flows in a group to match the highest delay flow in the group.” *Id.* at 7:11–13.

##### 5. Overview of Djokovic (Ex. 1006)

Djokovic is titled “System and Method for Encoding DSL Information Streams having Differing Latencies.” Ex. 1006, code (54). Djokovic “is generally directed to a system and method for encoding a DSL information bit stream.” *Id.* at 3:28–31. Djokovic describes a “transmitter/encoder for receiving a DSL bit stream 102 and generating a series of output symbols at 150, which can have varying degrees of error correction coding (i.e., redundancy), based upon the desired or acceptable

latency of the information being communicated through the DSL bit stream 102.” *Id.* at 5:45–50. The transmitter/encoder includes “a switching mechanism 110 . . . to direct DSL bit stream 102 through either a higher latency path (comprising additional levels of error correction coding, such as FEC) or a lower latency path, which implements a lower degree of error correction coding.” *Id.* at 5:50–55. For example, based on desired latency, the transmitter/encoder directs the bit stream

to any of a number of Reed Solomon encoders, each Reed-Solomon encoder . . . having a differing degree of decoding and differing depths of interleaving. Consequently, the error correction capabilities among the various Reed-Solomon encoders . . . differ. Consequently, the latency associated with each of the Reed-Solomon encoders . . . differ correspondingly.

*Id.* at 6:43–52.

*E. Asserted Anticipation over Gray*

Petitioner asserts that claims 17 and 18 are anticipated by Gray. Pet. 1, 20–30. Patent Owner disagrees. Prelim Resp. 39–42.

As to the “utilizing” term, Petitioner contends that “Gray discloses each bonded transceiver (e.g., transmitters/receivers associated with each sublink) utilizing at least one transmission parameter value to reduce a difference in latency between the bonded transceivers.” Pet. 26 (citing Ex. 1003 ¶¶ 247–248). In particular, Petitioner contends that, in Gray, “[t]ransmission parameters are used to reduce the difference in delay between multiple sublinks because the estimated delay calculation is used to adjust the packet flow—with more packets routed to higher quality links than lower quality links to balance among the links.” *Id.* at 27 (citing Ex. 1003 ¶¶ 254–258). Petitioner continues, arguing “[t]his packet

allocation reduces the difference in latency between the links (*i.e.*, the associated bonded transceivers) by lowering delay (*i.e.*, latency) on the lower quality links while increasing it on the higher quality links due to the increased traffic.” *Id.* at 27–28 (citing Ex. 1003 ¶¶ 254–258).

Patent Owner argues that “routing more packets to higher quality links than lower quality links to balance among the link,” as in Gray, “compensates for a difference in configuration latency without doing anything to the actual difference in latency much less ‘utilizing a transmission parameter to reduce a difference in latency.’” Prelim. Resp. 8 (citing Pet. 29). Patent Owner contends that, contrary to Petitioner’s assertions, “[r]educing the packet allocation to the line with a greater delay does nothing to reduce the delay on that line and increasing the packet allocation to the line with a smaller delay does nothing to increase the delay on that line.” *Id.* at 40. According to Patent Owner, “Gray merely attempts to compensate for the difference in delay by normalizing the packet allocation based on the computed delay for each line. Compensating for a difference in delay is not reducing a difference in latency.” *Id.*

Gray teaches changing the rate at which packets are provided to the links based on the quality of the link. *See* Ex. 1007, code (57); *see also id.* at 6:53–59 (“A delay factor associated with each of the plurality of links is determined and communication packets are distributed among the plurality of links based upon the delay factor associated with each of the plurality of links. The communication packets may be distributed to the links by providing communication packets to a link of the plurality of links with the least delay.”). Rather than reducing the difference in latency between the links, Gray teaches compensating for the differences by sending more packets to higher quality links, and less packets to lower quality links.

Based on our construction of the “utilizing” term, discussed above (*see* Section II.C.), we agree with Patent Owner that Petitioner has not shown sufficiently that Gray discloses “reducing a difference in latency between the bonded transceivers” as recited in claim 17.

For this reason, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that claim 17, or claim 18 which depends therefrom, is anticipated by Gray.

*F. Asserted Anticipation over Keller-Tuberg*

Petitioner asserts that claim 17 is anticipated by Keller-Tuberg. Pet. 1, 30–43. Patent Owner disagrees. Prelim Resp. 42–43.

As to the “utilizing” term, Petitioner contends that, in Keller-Tuberg, the “transmitter includes a queue selector that selectively routes ATM cells to each one of a plurality of receiver queues so that the time to transmit is equal.” Pet. 41 (citing Ex. 1008, 7:55–67; Ex. 1010, 5, Fig. 2). In particular, “[s]lower links are provided shorter queues and faster links receive longer queues—so the time to transmit ends up equal.” *Id.* (citing Ex. 1008, 8:1–16; Ex. 1010, 5–7). Petitioner asserts that “[t]his approach reduces the difference in latency between the links’ bonded transceivers.” *Id.* (citing Ex. 1003 ¶ 289).

Patent Owner argues that “‘selective queuing’ that ‘balances the differing times to transmit via the communication links,’” as in Keller-Tuberg, “compensates for a difference in configuration latency without doing anything to the actual difference in latency much less ‘utilizing a transmission parameter to reduce a difference in latency.’” Prelim. Resp. 8 (quoting Pet. 41–42). Patent Owner contends, that “contrary to Petitioner’s assertions, Keller-Tuberg does not selectively route cells

based on differential delay.” *Id.* at 43. According to Patent Owner, “Keller-Tuberg merely delays forwarding cells arriving on the faster communication links until the preceding cells arrive on the slower communication links. This procedure does not reduce a difference in latency; it only compensates for the difference in latency between the communication links.” *Id.*

We agree with Patent Owner. In fact, Keller-Tuberg teaches that “the new approach is *not restricted by differential delay between members of the group*, other than by the depth of the buffers that have been implemented at the transmitter and receiver ends. It is preferred to try to minimize the delay across any one link. However, the receiver buffer may be sized to accommodate any differential delay. In this manner, *adverse affects associated with differential delay are reduced.*” Ex. 1008, 14:30–37 (emphasis added). Based on our construction of the “utilizing” term, discussed above (*see* Section II.C.), we agree with Patent Owner that Petitioner has not shown sufficiently that Keller-Tuberg discloses “reducing a difference in latency between the bonded transceivers” as recited in claim 17.

For this reason, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that claim 17 is anticipated by Keller-Tuberg.

*G. Asserted Obviousness over Keller-Tuberg and Cooper*

Petitioner asserts that claims 17 and 18 would have been obvious in view of the combined teachings of Keller-Tuberg and Cooper. Pet. 1, 43–54. Patent Owner disagrees. Prelim. Resp. 44–45.

As to the “utilizing” term, Petitioner contends that Keller-Tuberg discloses this limitation. Pet. 50. As discussed above (*see* Section II.F.), we disagree. Petitioner contends, in the alternative, that a person of ordinary skill in the art “would have modified Keller-Tuberg with the teachings of Cooper to reduce transmission delay in asynchronous data transmissions.” Pet. 50. In Petitioner’s combination, Petitioner relies on Cooper’s teachings of a particular algorithm to reduce latency in any *single given link*. *See id.* at 45–53; *id.* at 47 (“Cooper instructs how to adjust latency by adjusting transmission parameters on a *single communication channel*, on any application.” (emphasis added)). Petitioner contends that “[t]he system of Keller-Tuberg explicitly prefers minimizing delay across any one link while equalizing the difference in latency between the bonded transceivers.” *Id.* at 53. Thus, according to Petitioner, “[i]mplementing Cooper’s delay-reducing algorithm in Keller-Tuberg achieves this preference and together with Keller-Tuberg’s system the difference in latency between the bonded transceivers is reduced.” *Id.* (citing Ex. 1003 ¶¶ 329, 331).

Petitioner’s combination with Cooper, however, does not remedy the deficiencies discussed above with respect to the asserted ground based on Keller-Tuberg alone. *See* Section II.F. As noted above, Petitioner relies on Cooper’s teaching of a specific delay-reducing algorithm, but continues to rely on Keller-Tuberg for its alleged teaching of “equalizing the difference in latency between the bonded transceivers.” Pet. 53. As Patent Owner argues “dynamically balancing the receive queue lengths to compensate for difference in latency,” as in Petitioner’s combination of Keller-Tuberg and Cooper, “compensates for a difference in configuration latency without doing anything to the actual difference in latency much less ‘utilizing a transmission parameter to reduce a difference in latency.’” Prelim. Resp. 8

(citing Pet. 49); *see also id.* at 44 (“balancing the ‘receiving queue lengths’ *compensates* for the differences in latency” (emphasis added)). Based on our construction of the “utilizing” term, discussed above (*see* Section II.C.), we agree with Patent Owner that Petitioner has not shown sufficiently that the combination of Keller-Tuberg and Cooper teaches “reducing a difference in latency between the bonded transceivers” as recited in claim 17.

For these reasons, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that claim 17, or claim 18 which depends therefrom, would have been obvious in view of Keller-Tuberg and Cooper.

*H. Asserted Obviousness over Counterman and Djokovic*

Petitioner asserts that claims 17 and 18 would have been obvious in view of the combined teachings of Counterman and Djokovic. Pet. 1, 55–74. Patent Owner disagrees. Prelim Resp. 45–46.

As to the “utilizing” term, Petitioner contends that “Counterman groups flows having the same latency.” Pet. 68 (citing Ex. 1005, 6:43–7:12). In particular, Petitioner contends that, in Counterman, “[v]irtual links group the flows to reduce a difference in latency between them (*see* 250, 272, and 274 in Table 1 . . . ) and the flows are transmitted at their respective rates.” *Id.* at 69 (citing Ex. 1005, 7:7–12). Petitioner continues, arguing, “[a]s such, Counterman selects FEC and interleaving parameters (transmission parameter) so as to create links with a reduced difference of latency between them.” *Id.* (citing Ex. 1003 ¶ 366).

Patent Owner argues that “grouping flows having the same latency into a virtual link despite differing cell rates,” as in Counterman, “compensates for a difference in configuration latency without doing

anything to the actual difference in latency much less ‘utilizing a transmission parameter to reduce a difference in latency.’” Prelim. Resp. 8 (citing Pet. 73). Patent Owner contends that, contrary to Petitioner’s assertions, “[u]tilizing a transmission parameter to adjust the latency of a single link for purposes of a QoS objective is not the same as reducing a difference in latency between the bonded transceivers.” *Id.* at 45. According to Patent Owner, “Counterman will not attempt to reduce the difference in latency and then group them. Counterman will only group lines that happen to have the same latency.” *Id.* at 46 (citing Pet. 65). Patent Owner continues, arguing that “grouping lines that happen to have the same latency is not the same as reducing the difference in latency between bonded transceivers.” *Id.*

Counterman teaches “group[ing] cell flows which have the same latency (or delay).” Ex. 1005, 7:8–9; *see id.* at 6:48–7:14. We are not persuaded by Petitioner’s assertion that Counterman utilizes the transmission parameters to reduce a difference in latency. *See* Pet. 69. As described in Counterman, once the individual links are independently adjusted, Counterman simply groups together the flows that happen to have the same resulting latency. *See* Ex. 1005, 6:48–7:14. We, thus, find persuasive Patent Owner’s argument that in Counterman “each bonded transceiver utilizes a transmission parameter *merely to adjust the latency of individual links* to achieve a QoS objective.” Prelim. Resp. 45 (emphasis added).

We also recognize Petitioner’s argument that “the timing of Counterman’s latency-difference reduction strategy is of no moment.” Pet. 70 n.9. However, the distinction between Counterman and claim 17 is that Counterman does not teach *reducing the difference* in latency between various links, but rather teaches individually adjusting the links and

compensating for the differences by grouping together the links that have the same latency. Based on our construction of the “utilizing” term, discussed above (*see* Section II.C.), we agree with Patent Owner that Petitioner has not shown sufficiently that Counterman teaches “reducing a difference in latency between the bonded transceivers” as recited in claim 17.

Petitioner relies on Djokovic’s teachings of “how to manage latencies of different links” and the “detailed disclosure of the very implementation details contemplated in Counterman.” Pet. 60 (citing Ex. 1006, 6:65–7:5). In particular, Petitioner relies on Djokovic’s general teachings of Reed-Solomon FEC coding. *Id.* at 60–62, 70–72. Petitioner does not rely on Djokovic for any teaching of reducing the difference in latency between bonded transceivers.

For these reasons, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing on its assertion that claim 17, or claim 18 which depends therefrom, would have been obvious in view of Counterman and Djokovic.

### *I. Other Arguments*

Patent Owner argues that the Petition is barred under 35 U.S.C. § 315(b) and that we should exercise discretion to deny institution under 35 U.S.C. § 314(a), based on the factors identified in *Apple, Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 (PTAB Mar. 20, 2020) (precedential). Prelim. Resp. 9–37; *see also* Pet. 75–81, Reply 1–9; Sur-reply 1–9. Because we deny the Petition on the merits, we do not reach these issues.

III. CONCLUSION

After considering the evidence and arguments presented in the parties' papers, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to any challenged claim of the '881 patent. We, therefore, do not institute an *inter partes* review.

IV. ORDER

Accordingly, it is

ORDERED that the Petition is *denied* as to all challenged claims, and no trial is instituted.

IPR2022-00640  
Patent 7,453,881 B2

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