

**UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION**

VIDEOLABS, INC., and
VL COLLECTIVE IP LLC,

Plaintiffs,

v.

AMAZON.COM, INC., and
AMAZON WEB SERVICES, INC.,

Defendants.

Civil Action No. 6:22-cv-00079-ADA

JURY TRIAL DEMANDED

VIDEOLABS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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Plaintiffs VideoLabs, Inc. and VL Collective IP LLC (collectively “VideoLabs”) hereby respond to the Opening Claim Construction Brief (ECF No. 48, “Op. Br.”) of Defendants Amazon.com, Inc. and Amazon Web Services, Inc. (collectively “Amazon”).

I. INTRODUCTION

The claim construction process is intended to provide the parties with an early opportunity to resolve disputes about claim scope and clarify the meaning of technical claim terms. Amazon is instead using the process to litigate fact-intensive issues of patent validity, to inject ambiguity into claims, to raise irrelevant infringement issues, and to impugn VideoLabs’ character.

For three of the six terms, Amazon does not propose a construction—it seeks an invalidity-driven finding that the terms are subject to §112, ¶ 6 and lack supporting structure. Rather than raise disputes on the meaning of claim terms based on interpreting the claim language in light of the intrinsic evidence, Amazon has targeted these claim terms based on unsupported opinion and allegations. But Amazon, and its expert, ignore the plethora of evidence in the patent and in the art demonstrating that these claim terms are in no way mysterious. They are all terms understood by those skilled in the art and are further described in the specification relative to structural elements that they work with to achieve the goals of the invention. In all cases, Amazon fails to meet its burden to prove by clear and convincing evidence that these claims are indefinite.

For many of the remaining terms, Amazon asks the Court to narrow the claims based largely on Amazon’s infringement-related accusations. Amazon’s focus on infringement is telling. The claim construction analysis is based on the intrinsic and extrinsic evidence—not infringement. Amazon’s mudslinging serves only to demonstrate the weak merits of their proposed constructions.

II. ASSERTED PATENTS AND DISPUTED TERMS¹

A. U.S. Patent Nos. 7,769,238 and 8,139,878²

The '238 and '878 patents claim an advance in video compression.³ Ex. 1 at ¶¶ 29-44 (providing an additional background of some of the patents-in-suit). The '238 and '878 patents cover a type of entropy coding called “variable length coding” which encodes data into variable length codeword, and uses shorter “codewords” for data that occurs more frequently. As an analogy, if one was sending weather data in a geographic region where it often rains, one would use a short code to indicate rain, while weather patterns that are less likely (e.g., snow) would use a longer code.

1. “an audio processing unit configured to” “decode the separated coded audio data” and “code audio data to obtain coded audio data”

Term	VideoLabs' Construction	Amazon's Construction
“an audio processing unit configured to decode the separated coded audio data” ('238 patent, claim 1 ⁴)	No construction necessary <i>Alternatively</i> , if found to be subject to 35 U.S.C. § 112, ¶ 6:	These terms are subject to 35 U.S.C. § 112, ¶6.
“an audio processing unit configured to code audio data to obtain coded audio data” ('878 patent, claims 1–4)	<u>Function</u> : “decode the separated coded audio data” / “code audio data to obtain coded audio data” <u>Structure</u> : voice processing unit (ex305), and the specification's discussions thereof, and equivalents thereof.	<u>Function</u> : “decode the separated coded audio data” / “code audio data to obtain coded audio data” <u>Structure</u> : Indefinite.

Amazon alleges that the “audio processing unit” terms are indefinite based on its erroneous

¹ The parties have agreed to a number of constructions, which are set forth in Exhibit 3.

² Many of the disputes addressed in this brief were also briefed in a related case. *VideoLabs, Inc. v. Dell Techs., Inc.*, No. 6:21-cv-00456-ADA (W.D. Tex.). Those disputes are still pending.

³ Amazon provides extensive background of the patented technology. Op. Br. at 1-4, 12-13, 26-27. While VideoLabs does not agree with all of Amazon's characterizations, many of them are irrelevant to the present issues, and are therefore not addressed here.

⁴ For all patents, the proposed constructions apply for the identified claims and all dependent claims that are asserted.

assertion that the terms are subject to § 112, ¶ 6. Amazon cannot show that the “audio processing unit” terms are means-plus-function and thus no construction is necessary.

a. These Terms Are Not Subject To § 112, ¶ 6.

A claim term is a means-plus-function term and thus subject to § 112, ¶ 6 when it only recites the “means . . . for performing a specified function without the recital of structure, material, or acts in support thereof.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347 (Fed. Cir. 2015). When a claim does not use the word “means,” there is “a rebuttable presumption” that “§ 112, para. 6 does not apply.” *Id.* at 1348. That presumption will only be overcome “if the challenger demonstrates that the claim term fails to ‘recite[] sufficiently definite structure’ or else recites ‘function without reciting sufficient structure for performing that function.’” *Id.*; *Media Rights Techs., Inc. v. Capital One Fin. Corp.*, 800 F.3d 1366, 1372 (Fed. Cir. 2015).

A term does not invoke § 112, ¶ 6 when “persons skilled in the art would understand the claim language to refer to structure, assessed in light of the presumption that flows from the drafter’s choice not to employ the word ‘means.’” *Samsung Elecs. Am., Inc. v. Prisma Eng’g Corp.*, 948 F.3d 1342, 1354 (Fed. Cir. 2020); *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1372 (Fed. Cir. 2003) (“[T]his court inquires into whether the ‘term, as the name for the structure, has a reasonably well understood meaning in the art.’” (quoting *Greenberg v. Ethicon Endo-Surgery, Inc.*, 91 F.3d 1580, 1583 (Fed.Cir.1996))). Thus, the term is not a means-plus-function term if it is “used in common parlance or by ordinarily skilled artisans.” *Power Integrations, Inc. v. Fairchild Semiconductor Int’l, Inc.*, 711 F.3d 1348, 1365 (Fed. Cir. 2013); *Estech Sys., Inc. v. Burnco Texas LLC*, 2021 WL 2530959, at *18 (E.D. Tex. June 18, 2021).

The terms “audio processing unit configured to decode the separated coded audio data” and “audio processing unit configured to code audio data to obtain coded audio data” recite

sufficiently definite structure. As VideoLabs’ expert, Dr. Richardson, explains, a POSITA would understand that “audio processing unit” refers to an “audio processor.” Ex. 1 ¶¶ 48-52; Ex. H; Ex. J; Ex. P (showing example of audio processors performing audio processing); Ex. L, *The New Penguin Dictionary of Computing* (2001) at 27 (“An integrated circuit specially designed for handling sound information, typically used as a principal component of a sound card.”).

The claim language and specification confirm that a POSITA would understand the “audio processing unit” to refer to an “audio processor.” The claims recite that the “audio processing unit[s]” “decode[s] the separated coded audio data” and “code[s] audio data to obtain coded audio data,” which are common operations for “audio processors.” *See* Ex. 1 ¶¶ 50, 52, 55-57. And the specification describes that the “voice processing unit ex305” (which is an “audio processing unit,” Ex. 1 ¶ 58) decodes the audio data. ’238 patent⁵ at 36:39-45 (“In order to decode the multiplexed data received via the antenna ex201,” the data is separated by a demultiplexing unit, and then the “voice data” is provided “to the voice processing unit ex305.”); Ex. 1 ¶ 57. A POSITA would thus understand that the terms “refer to structure,” *Samsung Elecs. Am., Inc.*, 948 F.3d at 1354, “ha[ve] a reasonably well understood meaning in the art,” *Apex Inc.*, 325 F.3d at 1372, and are “used in common parlance or by ordinarily skilled artisans,” *Power Integrations, Inc.*, 711 F.3d at 1365.

Further, the structure of the term “audio processing unit” is conveyed by its claimed operation. *See Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1299 (Fed. Cir. 2014), *overruled on other grounds by Williamson*, 792 F.3d 1339 (“Structure may also be provided by describing the claim limitation’s operation, such as its input, output, or connections.”); *Sonrai Memory Ltd. v. Oracle Corp.*, 2022 WL 800730, at *9 (W.D. Tex. Mar. 16, 2022); *WSOU Invs. LLC v. Oneplus*

⁵ The ’238 and ’878 patents share a specification as relevant to this brief. The ’238 patent is cited to for simplicity, but such citations encompass the ’878 patent as well.

Tech. (Shenzhen) Co., 2022 WL 3500120, at *11 (W.D. Tex. May 24, 2022). Claim 1 of the '238 patent recites a “receiving apparatus” that includes (1) a “demultiplexing unit,” (2) an “audio processing unit” that “decode[s] the separated coded audio data,” and (3) a “picture decoding unit” that “decode[s] the separated coded picture data.” These pieces are interconnected: The “receiving apparatus” “receives multiplexed data” from “multiplexing coded audio data and coded picture data;” the “demultiplexing unit” “separate[s] the multiplexed data into the coded audio data and coded picture data;” the “audio processing unit” then receives the “coded audio data” from the “demultiplexing unit,” and decodes the separated coded audio data. Thus, the “audio processing unit” “decode[s] the separated coded audio data” within a defined structure. *See* Ex. 1 ¶ 53.

Similarly, claim 1 of the '878 patent recites a “transmitting apparatus” that includes (1) a “multiplexing unit,” (2) an “audio processing unit” that “code[s] audio data to obtain coded audio data,” and (3) a “picture coding unit” that “code[s] picture data to obtain coded picture data.” The “audio processing unit” “code[s] audio data to obtain coded audio data;” the “picture coding unit” “code[s] picture data to obtain coded picture data;” the “multiplexing unit” receives these two types of coded data (coded audio data and coded picture data) and “multiplex[es] the coded audio data and the coded picture data to obtain multiplexed data.” Finally, the “transmitting apparatus” “transmits multiplexed data” which it receives from “multiplexing coded audio data and coded picture data” by the multiplexing unit. Again, the “audio processing unit” “code[s] audio data to obtain coded audio data” within a defined structure. *See* Ex. 1 ¶ 53.

Relevantly, Amazon does not dispute that the other claimed units that make up the “transmitting apparatus” and the “receiving apparatus” have a sufficiently definite structure. *See* Op. Br. at 7 (discussing the “more than 10 different ‘units’” in the claims). *See Sonrai Memory Ltd.*, 2022 WL 800730, at *9 (“[B]oth parties use the term ‘logic’ in their proposed constructions

of ‘compression/decompression logic,’ thus indicating that in the context of the [asserted] Patent logic has a sufficiently understood structural meaning to a POSITA.”).

Amazon ignores the bulk of this evidence. Instead, Amazon errs by parsing “audio processing unit” into its subsidiary parts — “audio processing” and “unit” — and arguing about each sub-term. Op. Br. at 6-7. Amazon argues that “unit” is a “nonce” word and “audio processing” merely a “functional modifier.” *Id.* But the § 112, ¶ 6 analysis is highly context specific and each word cannot be analyzed in a vacuum. *Zeroclick, LLC*, 891 F.3d at 1007; *Sonrai Memory Ltd.*, 2022 WL 800730, at *9; *Apex Inc.*, 325 F.3d at 1372 (“The primary source of this error lies in the district court’s reliance on single words of the limitations . . .”). Here, the evidence demonstrates that the full terms have specific meaning with definite structure. Unlike in the decisions cited by Amazon, “unit” is not used as a nonce word “that reflect[s] nothing more than verbal constructs” and “audio processing” is not just a “functional modifier” (Op. Br. at 6-7) — they together create the well understood term, “audio processing unit.” Ex. 1 ¶¶ 48-52.

Amazon’s attempt to rely on case-specific examples also fails. Op. Br. at 7. In *Intelligent Automation Design, LLC v. Zimmer Biomet CMF & Thoracic, LLC*, the Federal Circuit found the term “a control circuit for determining a time when the torque reaches a maximum” was means-plus-function, because the word “control” did not “provide enough description of the structure to render the limitation structural.” 799 F. App’x 847, 850-51 (Fed. Cir. 2020). Unlike here, there was insufficient evidence that a “control circuit” indicated a particular structure. *Id.* at 850. Additionally, the parties agreed that the phrase “determining a time when the torque reaches a maximum” was means-plus-function in a related claim, so the only question was whether “control unit” rescued a term that was otherwise subject to § 112, ¶ 6. *Id.*

Amazon also relies on *Huawei Techs. Co. Ltd. v. T-Mobile US, Inc.*, but there the court

drew a distinction between terms that had a well understood structure in the art, and those that did not. 2017 WL 2691227, at *36–37 (E.D. Tex. June 22, 2017). The term “acquisition model” was not subject to § 112, ¶ 6 because it had a well understood structure and claimed objectives and operations. *Id.* Conversely, “selection module” and “key derivation module” were subject to § 112, ¶ 6 because they “do[] not have an understood meaning in the art or belong to a class of structures.” *Id.* “Audio processing unit” has an “understood meaning in the art,” *supra* at 3-5, and thus falls on the same side as “acquisition model.”

Amazon’s remaining cited cases are similarly inapplicable to the “audio processing” terms and the supporting evidence provided here. *Saint Lawrence Commc’ns LLC v. ZTE Corp.*, No. 2:15-CV-349, 2016 WL 6275390, at *19 (E.D. Tex. Oct. 25, 2016) (patentee did not attempt to distinguish the relevant law and provided no evidence that the modifier imparted sufficient meaning or “interacts with other components ... in a way that might inform the structural character of the limitation-in-question”); *Optis Wireless Tech., LLC v. Huawei Device Co.*, No. 2:17-CV-123-JRG-RSP, 2018 WL 476054, at *32 (E.D. Tex. Jan. 18, 2018) (“the claim provides very little detail beyond the functional language as to the processing unit,” and does not identify the inputs, outputs, or the system structure); *Digital Retail Apps, Inc. v. H-E-B, LP*, No. 6-19-CV-00167-ADA, 2020 WL 376664, at *4 (W.D. Tex. Jan. 23, 2020) (“‘communication module’ simply refers to a module that is used in communication”); *Canon, Inc. v. TCL Elecs. Holdings Ltd.*, No. 2:18-CV-546-JRG, 2020 WL 2098197, at *28 (E.D. Tex. May 1, 2020) (“Plaintiff fails to provide any extrinsic evidence (besides its expert declaration) that the term connotes structure.”)

Amazon next claims the extrinsic evidence is not relevant because they say “audio processor” instead of “audio processing unit.” Op. Br. at 8-9. But the standard is whether a POSITA “would understand the claim language to refer to structure” — the words of the claim

need not be the most common way to describe the structure. *See Samsung Elecs. Am., Inc.*, 948 F.3d at 1354. The evidence shows that a POSITA would understand an “audio processing unit” to refer to an “audio processor.” *See supra* at 3-4. Amazon’s only evidence to the contrary is from its expert, Dr. Mayer-Patel, whose conclusion is based on his reductive assertion that “‘audio processor’ is a separate term from ‘audio processing unit.’” ECF No. 48-1 ¶ 61.

Amazon also cites to *Optis Wireless Tech., LLC*, but that case does not support Amazon’s argument. Op. Br. at 21 (citing 2018 WL 476054, at *31). That court held that two different phrases not at issue here — “processor” and “processing unit” — meant different things specifically because “the specification makes clear that . . . embodiments of the invention are intended to encompass more than merely processors.” *Optis Wireless Tech., LLC*, 2018 WL 476054, at *31. Amazon concedes that the specification discloses that the “audio processing unit” can be implemented “as hardware” and “as software,” Op. Br. at 9, which comports with the extrinsic evidence showing that “audio processors” can be implemented as hardware or software. Ex. 1 ¶¶ 49, 50, 54, 56; Ex. H; Ex. J (hardware audio processors); Ex. P (software audio processor).

Finally, Amazon argues that an “audio processing unit” (including the dictionary definitions) is defined in part by its function. Op. Br. at 7-8. But “[t]he fact that a particular [claim term] is defined in functional terms is not sufficient to convert a claim [limitation] into a ‘means for performing a specified function’ within the meaning of 112(6).” *Apex Inc.*, 325 F.3d at 1372 (quoting *Greenberg*, 91 F.3d at 1583). That is particularly true for software claims, as “[u]nlike in the mechanical arts, the specific structure of software code and applications is partly defined by its function.” *Dyfan, LLC v. Target Corp.*, 28 F.4th 1360, 1368 (Fed. Cir. 2022).

b. If § 112, ¶ 6 Applies, The Specification Discloses Sufficient Structure.

The “audio processing unit” terms are not subject to § 112, ¶ 6 and should be given their

plain and ordinary meaning. However, even if the terms were subject to § 112, ¶ 6, they are not indefinite, as Amazon alleges, because the specification explicitly discloses the associated structure — the “voice processing unit ex305.”

For a term subject to § 112, ¶ 6, “the patent specification must disclose with sufficient particularity the corresponding structure for performing the claimed function and clearly link that structure to the function.” *Nevro Corp. v. Bos. Sci. Corp.*, 955 F.3d 35, 42 (Fed. Cir. 2020). The specifications of the ’238 and ’878 patents disclose that the voice processing unit ex305 performs various types of coding and decoding (the claimed functions). *See* Ex. 1 ¶¶ 58-64. For example, the specification describes that “[i]n order to decode the multiplexed data” the multiplexed data is demultiplexed into picture and voice data, and then the “voice data” is provided “to the voice processing unit ex305.” ’238 patent at 36:39-45. A person of skill would understand that the “voice processing unit ex305” decodes the voice data, since the purpose of the process is “to decode the multiplexed data.” *Id.*; Ex. 1 ¶ 60. This same passage also discloses that the “voice processing unit ex305” performs analog-digital coding. ’238 patent at 36:39-45. Additionally, a voice processing unit is a type of audio processing unit (as voice data is a type of audio data), which, as discussed above, is well understood. Ex 1 ¶ 58. Thus, a person of ordinary skill would understand that the voice processing unit is clearly linked to the claimed “decode the separated coded audio data” and “code audio data to obtain coded audio data” functions. Ex. 1 ¶ 63.

Amazon makes two arguments to attempt to show that the claim terms are indefinite. First, Amazon argues that “the specification must provide an algorithm clearly linked to the claimed functions.” Op. Br. at 10-12. Amazon’s argument misunderstands the law. An algorithm is only necessary “[i]f the function is performed by a general-purpose computer or microprocessor.” *Nevro Corp.*, 955 F.3d at 42; *Qualcomm Inc. v. Intel Corp.*, 6 F.4th 1256, 1267 (Fed. Cir. 2021).

The voice processing unit is not a “general-purpose computer or processor” but a specific structure, well-defined structure.

Second, Amazon argues that the “voice processing unit (ex305)” is a “black-box.” Op. Br. 10. But that is not so. The patent explains how the “voice processing unit (ex305)” operates, and the structure of the voice processing unit within the larger system. ’238 patent at 35:30-40; *see also id.* at 35:46-50, 34:58-64. The specification thus links structure to the function. *S3 Inc. v. NVIDIA Corp.*, 259 F.3d 1364, 1371 (Fed. Cir. 2001).

Amazon also alleges that the voice processing unit cannot perform the claimed function because it “only performs analog-to-digital and digital-to-analog conversion of voice data” and “[a]nalog-to-digital and digital-to-analog conversion are not encompassed by the claimed functions.” Op. Br. at 10. Amazon is wrong on both accounts. The claimed audio coding and decoding is not limited to “compressing audio data,” as Amazon argues, Op. Br. at 10, but covers all forms of audio coding, including analog-analog conversion. Ex 1 ¶¶ 61-63. Amazon’s own extrinsic evidence demonstrates this, stating that a decoder “usually” decodes “compressed” data — thus indicating that decoding is not just limited to decompressing data. Ex. M, Computer Graphics Dictionary (2002) at 137. Moreover, the voice processing unit does not only perform analog-digital conversion, but also decompression decoding. Ex. 1 ¶ 60; ’238 patent at 36:39-45.

Finally, Amazon points to the co-pending IPR to make a byzantine argument that the G.723.1 audio codec “explicitly teaches that the audio coder and decoder do not perform any analog-to-digital or digital-to-analog conversion.” Op. Br. at 11. But whether the G.723.1 standard excluded analog-to-digital or digital-to-analog coding does nothing to *limit* whether coding in the ’238, ’878, and ’059 patents includes analog-to-digital or digital-to-analog coding.

B. U.S. Patent No. 7,970,059

The ’059 patent is related to the ’238 and ’878 patents, and similarly describes an advance

in video compression. The '059 patent covers a type of entropy coding called "Context Adaptive Binary Arithmetic Coding," or "CABAC," which, notably, uses probability tables that are known to both the encoder and the decoder to encode and decode data to compress data. *See* '059 patent at 1:37-42, 1:60-2:2, 6:13-14. In general, the '059 patent takes advantage of probability tables. The '059 patent teaches that the order of probability tables should be determined in advance, so that the encoder and the decoder proceed through the same probability tables in the same order. Additionally, that order should be preset to prohibit reversing direction. *See, e.g., id.* at 2:48-51. In particular, the inventors realized that, moving through the probability tables in a single, predetermined direction according to trends in the data allows you to take advantage of those trends, even if there are individual aberrations that would otherwise throw the direction off trend. *Id.* at 2:14-3:3; Ex. 1 ¶¶ 74-75. This adaptation increases the efficiency of the coding so that data may be communicated with a smaller number of bits. *See* '059 patent at 3:7-11.

1. "to switch between the plurality of probability tables in a predetermined one direction" / "the switching between the plurality of probability tables (i) is performed in a predetermined one direction"

Term	VideoLabs' Construction	Amazon's Construction
"to switch between the plurality of probability tables in a predetermined one direction" / "the switching between the plurality of probability tables (i) is performed in a predetermined one direction" ('059 patent, claims 1-4)	No construction necessary	to switch from a probability table with a smaller table number to a probability table with a larger table number (i.e., in ascending order of probability table numbers)

Amazon's proposal improperly narrows the claim scope to a single embodiment from the specification, contrary to the term's plain meaning, and is internally nonsensical.

The words in this term are plain, English words without specialized technical meaning, both individually and in combination. Ex. 1 at ¶¶ 66-67. It is thus presumed that the term should

have its plain and ordinary meaning. “Claim terms are generally given their ordinary meaning as understood by persons skilled in the art in question at the time of the invention.” *InterDigital Commc’ns, LLC v. Int’l Trade Comm’n*, 690 F.3d 1318, 1324 (Fed. Cir. 2012); *Searfoss v. Pioneer Consol. Corp.*, 374 F.3d 1142, 1149 (Fed. Cir. 2004). The plain meaning of switching between the probability tables “in a predetermined direction” is progressing through the probability tables in a preset order. Ex. 1 at ¶ 67.

Amazon does not dispute that its proposed construction limits the term beyond its plain and ordinary meaning. Nor could it. Nothing in the term’s plain meaning indicates to a person of ordinary skill that the claimed “predetermined direction” must be an “ascending order of probability table numbers”⁶ (Amazon’s proposed construction). Indeed, by arguing that an “ascending order” is a direction, Amazon implicitly acknowledges that “descending order” is also within the plain meaning of “direction.” Ex. 1 ¶ 76. And the word “predetermined” in the claim indicates that there is more than one direction through which to traverse the probability tables, because a determination must be made between multiple possible directions. More broadly, the plain meaning of “direction” naturally includes many contexts that are not numerically based, such as “up / down,” “clockwise / counterclockwise,” “left / right,” “A to Z,” etc. Ex. 1 at ¶ 66. Amazon’s proposed construction reads out these plain meanings of “direction.”

Since Amazon’s proposed construction would limit the term’s ordinary meaning, Amazon must show that the inventors clearly intended to redefine the term through lexicography. *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012); *Wasica Fin. GmbH v. Cont’l Auto. Sys., Inc.*, 853 F.3d 1272, 1281 (Fed. Cir. 2017). Lexicography requires a “clear

⁶ Amazon’s construction is also nonsensical because it repeatedly refers to “table numbers” despite nothing in the claims refers to, much less requires, “table numbers.” Ex. 1 ¶¶ 68-71.

expression of intent necessary for a patentee to act as its own lexicographer.” *See Medicines Co. v. Mylan, Inc.*, 853 F.3d 1296, 1306 (Fed. Cir. 2017). Amazon fails to make this showing.

Amazon points to one statement as the alleged lexicography: “As described above, the probability tables are switched in one direction, that is, from a probability table with a smaller table number to a probability table with a larger table number.” Op. Br. at 14-15 (quoting ’059 patent at 6:50–57, 12:62–64). This statement is found twice in the specification, once in a section titled “First Embodiment” and once in a section titled “Second Embodiment.” ’059 patent at 4:41, 11:5. These sections describe how the probability tables are switched in these two (out of four) embodiments. *Id.* at 6:15-49 (“showing a method of switching between probability tables”), 12:13-62 (“An explanation is given of a detailed operation of the arithmetic decoding unit 701 and the multi-value conversion unit 702.”); *see also id.* at 16:57, 17:35.

Immediately following these descriptions, the specification provides summaries (Amazon’s alleged lexicography): “*As described above*, the probability tables are switched in one direction, *that is*, from a probability table with a smaller table number to a probability table with a larger table number.” ’059 patent at 6:50–57, 12:62–64. In other words, the specification explains that *in these embodiments* the switching occurs “from a probability table with a smaller table number to a probability table with a larger table number.” ’059 patent at 6:50-57, 12:63-65; Ex. 1 ¶¶ 72-73. With this context, the phrase “that is” is prefacing a description of the just-disclosed embodiment, not the invention. It is black-letter Federal Circuit law that importing limitations from embodiments into the claims is improper absent the patentee’s clear intention to limit the claim scope. *Thorner*, 669 F.3d at 1366.

The full specification demonstrates the identified statements are not lexicographical. The specification uses “that is” or “i.e.” to summarize information, not to define terms. *See, e.g.*, ’059

patent at 10:1-3 (using “i.e.” not to define “probability tables,” but to summarize), 10:12-13 (same), 10:17-18 (same), 16:10-11 (same). When the specification wants to define terms, it does so expressly, not with the words “that is” or “i.e.” *See, e.g., id.* at 5:17-19 (“the RL sequence generation unit 201 generates a sequence (to be referred to as ‘RL sequence’ hereinafter)”), 5:19-22 (“combinations of a number R indicating a run of ‘zero’ coefficients and the subsequent coefficient value L indicating a non-‘zero’ coefficient (to be referred to as ‘RL values’ hereinafter”). There is simply no support for an inference that the inventors limited the claimed invention. *See Abbott Lab’ys v. Andrx Pharms., Inc.*, 473 F.3d 1196, 1210-11 (Fed. Cir. 2007) (the term “is” does not signal lexicography in light of unambiguous signaling for other terms).

Amazon cites to instances where courts have held that the phrase “that is” indicates lexicography. Op. Br. at 15. But claim construction is highly context specific; there is no bright line rule that every recitation of “that is” (or the similar “i.e.”) limits the invention. *Pfizer, Inc. v. Teva Pharms., USA, Inc.*, 429 F.3d 1364, 1373 (Fed. Cir. 2005). Indeed, courts regularly find that uses of “that is” (or “i.e.”) are exemplary, not definitional. *See e.g., Pfizer, Inc. v. Teva Pharms., USA, Inc.*, 429 F.3d 1364, 1373 (Fed. Cir. 2005) (“saccharides (i.e., sugars)” is not lexicographic); *TQ Delta, LLC v. CommScope Holding Co., Inc.*, No. 2:21-CV-309-JRG, 2022 WL 2071073, at *41 (E.D. Tex. June 8, 2022) (“several of the above-cited disclosures imply that ‘DSL systems’ are an example rather than a necessary limitation.”); *Timeline, Inc. v. Proclarity Corp.*, 2007 WL 321387 (W.D. Wash. 2007) (“automatically (i.e., without the need for human analysis)” is not lexicographic). Here, the exacting standard of lexicography is not met.

Moreover, Amazon’s proposed construction would frustrate the very point of the invention. The specification explains that one of the key insights of the ’059 invention is that when compressing data, the probability tables should be moved through in a single, predetermined

direction according to trends in the data, even if there are individual aberrations that indicate otherwise, so as to accurately track those trends. '059 patent at 2:14-3:3; Ex. 1 ¶¶ 74-75. As an analogy, imagine trying to estimate tomorrow's temperature. Previously, one would predict tomorrow's temperature based solely on today's temperature. This would often be successful, but would have serious flaws. For example, temperatures in Texas generally climb from January to June. But if, one day in May, the temperature dips lower than it was the previous day, the old method would predict that the following day will also be colder (and so on), despite the overarching warming trend. Ex. 1 ¶ 75. The concept of the patented invention, however, recognizes that overall temperatures are increasing, and predict that tomorrow will be warmer, even though the current day was colder. The claimed invention works similarly. By moving through probability tables in a predetermined direction, the selection of a new probability table can more easily adapt to individual coefficients that go against the general trend. '059 patent at 2:66-3:3; Ex. 1 ¶¶ 74-75. Amazon would artificially narrow the claimed invention to a single example, excluding a key insight of the patent.

Amazon puts forth a half dozen additional arguments, but none hold water.

- Amazon argues that its construction is compelled by Figures 7 and 2. But Figure 7 shows an *embodiment* that moves “from a probability table with a smaller table number to a probability table with a larger table number,” *see* '059 patent at 4:5-8, 6:15-16, which is improper to import into the claims.
- Amazon next argues that the meaning of “switching between probability tables ‘in a predetermined one direction’” is only “reasonably certain” if the probability tables are “assigned labels or identifiers.” Op. Br. at 17-18. Even if probability tables must have identifiers, that does not mean that the identifiers must be table numbers (or that they must be moved through in ascending order). For example, at the time of the invention, the widely-known H.263 standard used two tables labelled as “Table 16/H.263” (Ex. B at 42) and “Table I.2/H.263” (*id.* at 76). *See* Ex 1 ¶ 77.
- Amazon next argues that “[t]he patent describes no other ‘one direction’ in which the ‘probability tables’ can be switched.” Op. Br. 17. It is well established that “an applicant is not required to describe in the specification every conceivable and possible future embodiment of his invention.” *Innogenetics, N.V. v. Abbott Lab’ys*, 512 F.3d 1363, 1370 (Fed. Cir. 2008); *Info-Hold, Inc. v. Applied Media Techs.*

Corp., 783 F.3d 1262, 1267 (Fed. Cir. 2015). A POSITA would understand the scope of “direction” without every direction being listed. Ex. 1 ¶ 76.

- Amazon next argues “[t]he ‘one direction’ also cannot merely refer to switching between the tables” because “not re-using a probability table is separately recited in the claims.” Op. Br. at 18. But that reasoning does not compel Amazon’s construction because the two elements are not coextensive. For example, if the tables were switched between in an alphabetical order, switching from Table A to Table C to Table B might run afoul of the “predetermined one direction” limitation, but not the “not re-using a probability table” limitation.
- Amazon also argues that “the claimed switching in ‘one direction’ must specify how you move from one probability table to the next.” Op. Br. at 18. While a predetermined one direction does require a predetermined way of “mov[ing] from one probability table to the next,” *id.*, that does not support limiting the claim to moving from lower to higher table numbers.
- Finally, Amazon alleges that the plain meaning of the “switching” term tracks the “JVT-C031” proposal, which Amazon says was rejected for inclusion in the H.264 standard. Op. Br. at 19. Amazon makes this allegation without sufficient analysis to support its conclusion or demonstrate its relevance to claim construction.

2. “an audio coding unit configured to code an audio signal” / “an audio decoding unit configured to decode audio data”

Term	VideoLabs’ Construction	Amazon’s Construction
“an audio coding unit configured to code an audio signal” (’059 patent, claims 1-4)	No construction necessary <i>Alternatively</i> , if found to be subject to 35 U.S.C. § 112, ¶ 6:	These terms are subject to 35 U.S.C. § 112, ¶ 6.
“an audio decoding unit configured to decode audio data” (’059 patent, claims 1-2)	<u>Function</u> : “code an audio signal” / “decode audio data” <u>Structure</u> : voice processing unit (ex305), and the specification’s discussions thereof, and equivalents thereof.	<u>Function</u> : code an audio signal / decode audio data <u>Structure</u> : Indefinite.

Amazon cannot show that the “audio coding unit” and “audio decoding unit” terms are means-plus-function and thus no construction is necessary.

a. These Terms Are Not Subject To § 112, ¶ 6.

Amazon largely rehashes its arguments regarding the “audio processing unit” terms and VideoLabs’ discussion of these terms apply with equal force to the “audio coding unit” and “audio decoding unit” terms. *See supra* at 3-8.

In particular, Dr. Richardson explains, a POSITA would understand the claimed “audio coding unit” and “audio decoding unit” refer to an “audio coder” and “an audio decoder,” respectively. Ex. 1 ¶ 83. Audio coders and decoders are well understood. *Id.* ¶¶ 84-91. For example, one dictionary defines an audio encoder as the hardware or software that “encodes information—that is, converts the information to a particular form or format.” Ex. K, Microsoft Computer Dictionary, Fifth Edition (2002) at 192 (definition of encoding); *see* Ex. N, Dictionary of Computing, Fourth Edition (2002) (“Device that can translate data from one format to another.”); Ex. O, Hargrave’s Communications Dictionary (2001) (“Decoder: A device or software that converts coded data back to its original form. Decryption, decompression, and code converters are all forms of decoding.”); Ex. M (“Decoder: Device or software that converts data in a coded (and usually compressed) form back to the original data state.”); Microsoft Computer Dictionary, Fifth Edition (2002) (“Decoder: A device or program routine that converts coded data back to its original form.”); Ex. I, The Dictionary of Multimedia Terms & Acronyms, Fourth Edition (2005) (“Decoder: Any hardware or software system that translates data streams into video or audio information.”); *see also* Ex. L, The New Penguin Dictionary of Computing (2001) at 27 (defining “audio processor,” which a POSITA would understand to include an audio encoder).

POSITAs regularly used the terms “audio coder” and “audio decoder.” Dr. Richardson’s textbook regarding the H.264 standard (which was published within a few years of the invention date) repeatedly references audio codecs (audio encoders and audio decoders). Ex. C (Iain E. Richardson, *The H.264 Advanced Video Compression Standard* (2d. ed. 2010)) at 4 (“Standards make it possible to build platforms that incorporate video, in which many different applications such as video codecs, audio codecs, transport protocols, security and rights management, interact in well-defined and consistent ways.”), *id.* at 246 (“RTP payload formats are defined for various

standard video and audio CODECs, including H.264.”). For another example, the G.723.1 standard describes a format for audio coding that was commonly used together with the H.263 format for video coding. Ex. E at ii; *see also id.* at 3, 17 (providing structural diagrams of an audio encoder and audio decoder for speech audio), 22 (sample software source code implementing the encoder and decoder); Ex. S; Ex. 1 ¶¶ 86-90. Similarly, a POSITA would understand that audio encoders/decoders (“audio CODECs”) were included in devices offered for sale that implement software and hardware to encode and decode audio data. *See, e.g.,* Ex. 1 ¶ 95; Ex. S (<https://www.cirrus.com/support/technologies/codecs>); Ex. H; Ex. J; Ex. P.

The claims themselves also designate these terms’ structures. Ex. 1 ¶ 92. Claims 1 and 2 of the ’059 patent recite “a decoding apparatus” and claim 1 explains that the decoding apparatus “decodes the coded picture data and the audio data included in the multiplexed data recorded on said recording medium” — demonstrating the structure of the units. The claims also explain that the “decoding apparatus” includes an “audio coding unit” that is “configured to code an audio signal.” And the specification explains how the “voice processing unit ex305” (which is an “audio processing unit,” Ex. 1 ¶ 97) decodes the audio data. ’059 patent at 20:8-26 (“a coded bit stream of voice data” is provided “to the voice processing unit ex305 via the synchronous bus ex313” and then the “the voice processing unit ex305 converts the voice data into an analog voice signal”).

These terms thus “refer to structure,” *Samsung Elecs. Am., Inc.*, 948 F.3d at 1354, “ha[ve] a reasonably well understood meaning in the art,” *Apex Inc.*, 325 F.3d at 1372, and are “used in common parlance or by ordinarily skilled artisans,” *Power Integrations, Inc.*, 711 F.3d at 1365.

b. If § 112, ¶ 6 Applies, The Specification Discloses Sufficient Structure.

Even if the terms were subject to § 112, ¶ 6, they are not indefinite, as Amazon alleges, because the specification discloses the associated structure — the “voice processing unit ex305” —

which performs the claimed audio coding and decoding. *See supra* at 8-10.

Just as with the '238 and '878 patents, the '059 patent explains the structure of the voice processing unit within the larger system: the voice processing unit ex305 is interconnected with the “power supply circuit unit ex310, an operation input control unit ex304, a picture coding unit ex312, a camera interface unit ex303, an LCD (Liquid Crystal Display) control unit ex302, a picture decoding unit ex309, a multiplexing/demultiplexing unit ex308, a recording/reproducing unit ex307, [and] a modem circuit unit ex306” “via a synchronous bus ex313.” '059 patent at 18:63-19:7; Ex. 1 ¶¶ 97-98. Additionally, the specification describes how the “voice processing unit ex305” performs compression coding and decoding and works with other structures of the invention to do so. '059 patent at 20:8-26, 19:43-67. The specification explains that a coded bit stream of voice data” is provided “to the voice processing unit ex305 via the synchronous bus ex313,” and “the voice processing unit ex305 converts the voice data into an analog voice signal, and then supplies this signal to the voice output unit ex208. *Id.* at 20:8-26. This same passage also discloses that the “voice processing unit ex305” performs analog-to-digital and digital-to-analog conversion coding. *Id.* The specification also describes that the “voice processing unit ex305 converts a voice signal received by the voice input unit ex205 in conversation mode into digital voice data under the control of the main control unit ex311 comprised of a CPU, a ROM, a RAM and others.” '059 patent at 19:13-17; Ex. 1 ¶¶ 97-98. Finally, the specification discloses that the coding and transmitting in the '059 patent includes multimedia content, such as “a music live video.” '059 patent at 18:22-23.

While Amazon repeats the arguments it made regarding the “audio processor units,” those arguments fail to demonstrate the “audio coding unit” and “audio decoding unit” terms are indefinite, as explained above. *Supra* at 8-10; Ex. 1 ¶¶ 99-104.

3. **“a data reading unit configured to read the multiplexed data from said recording medium”**

Term	VideoLabs’ Construction	Amazon’s Construction
“a data reading unit configured to read the multiplexed data from said recording medium” (’059 patent, claim 1)	No construction necessary <i>Alternatively</i> , if found to be subject to 35 U.S.C. § 112, ¶ 6: <u>Function</u> : “read the multiplexed data from said recording medium” <u>Structure</u> : computer system (Cs or ex111), PDA (ex112), camera (ex116 or ex113), cellular phone (ex114 or 115), STB (ex407), recording/reproducing unit (ex307), LSI (ex117), and/or re-production apparatus (ex403), and the specification’s discussions thereof, and equivalents thereof	These terms are subject to 35 U.S.C. § 112, ¶6. <u>Function</u> : “read the multiplexed data from said recording medium” <u>Structure</u> : Indefinite.

Just as with the “audio” terms, discussed above, Amazon asserts that “a data reading unit configured to read the multiplexed data from said recording medium” is subject to § 112, ¶ 6 and is indefinite. Neither is true, and no construction is necessary.

a. These Terms Are Not Subject To § 112, ¶ 6.

The “data reading unit” term has sufficiently definite structure, which is well understood by a POSITA, and is thus not a means-plus-function term. *See Samsung Elecs. Am., Inc.*, 948 F.3d 1342, 1354 (Fed. Cir. 2020). The data reading unit is part of the “decoding apparatus,” along with the interconnected “demultiplexing unit,” “arithmetic decoding unit,” “second switching unit,” and “audio decoding unit.” ’059 patent at claim 1. A POSITA would understand that the decoding apparatus must receive data in order to decode that data, and that such data is stored on a recording medium. Ex. 1 ¶¶ 106-107. Such hardware and software devices that read data (“data reading units”) were well known at the time of the invention. *Id.* A person of ordinary skill would understand that a “data reading unit” refers to a particular type of structure that is hardware or

software that can read multiplexed data, such as audiovisual data, from a recording medium. *Id.*; *see, e.g.*, Ex. U (“Defining DVD,” D. Parker (1999)) at 81, 82, 84 (discussing “DVD drives” that read multiplexed audiovisual data from DVDs).

The claims themselves provide additional structure. Claim 1 states that the objective of the decoding apparatus is to decode data recorded on a recording medium. The claim then recites how the structures of the apparatus interact to achieve this objective. In particular, the data reading unit reads data from a recording medium, a demultiplexing unit processes the data to demultiplex it, and then the separated data is decoded by the “arithmetic decoding unit.” ’059 patent at claim 1 (“a demultiplexing unit configured to demultiplex the multiplexed data ***read by said data reading unit*** into the coded picture data and the audio data” (emphasis added)). The data reading unit is connected to the “recording medium,” the “demultiplexing unit,” and the “arithmetic decoding unit;” takes as an input the data from a recording medium; and outputs the multiplexed data. The claims thus demonstrate the structure of the “data reading unit.” *See Apple Inc.*, 757 F.3d 1 at 1299; *Huawei Techs.*, 2021 WL 150442, at *2, *13 (when three claimed “units” “cooperate in a specified and detailed manner,” “such claim recitation of how functionally-defined components interact to achieve a claim-recited objective” is enough to avoid § 112, ¶ 6.).

Similarly, the ’059 specification also designates the structure of the “data reading unit.” The specification describes various electronic devices (“clients”), such as computers, cell phones, PDAs, set-top boxes, etc. ’059 patent at 18:28-30, 20:38-59. These electronic devices comprise hardware and/or software for receiving and decoding media content for the purpose of display or playback of the media content. Ex. 1 ¶ 106. A POSITA would understand that each of these electronic devices includes known hardware and/or software that is used to read data stored from an internal or external recording media or memory. *Id.*

b. If § 112, ¶ 6 Applies, The Specification Discloses Sufficient Structure.

Section 112, ¶ 6 does not apply to the “data reading unit” term. However, even if it did, the term is not indefinite. The specification describes numerous structures that perform the claimed function, namely: computer system (Cs or ex111) (’059 patent at 17:19-27, 21:5-9), PDA (ex112) (*id.* at 17:47-53, 18:28-30), camera (ex116 or ex113) (*id.* at 18:1-30), cellular phone (ex114 or 115) (*id.* at 17:47-53, 18:18-21, 18:28-34, 18:40-20:28), Set Box Top (ex407) (*id.* at 20:38-21:4), recording/reproducing unit (ex307) (*id.* at 18:63-19:7), LSI (ex117) (*id.* at 18:1-21), and/or re-production apparatus (ex403) (*id.* At 20:44-59). *See* Ex. 1 ¶¶ 111-120. Generally, a person of ordinary skill would understand that all of these devices perform media content encoding and decoding, and thus would include a structure to read multiplexed data (such as audiovisual data) from a recording medium. Ex. 1 ¶¶ 111-120, 108. The specification explains how each device is able to “read multiplexed data” in detail. *Id.*

Amazon argues that these structures do not read “multiplexed data,” Op. Br. at 25, mistakenly assuming that video data is not multiplexed data. As Dr. Richardson explains, video data is multiplexed picture and audio data — a combination of the two types of data. Ex. 1 ¶ 109. Amazon asserts that “[t]he personal digital assistant (PDA) ex112 decodes a single stream of picture data, but does not read multiplexed data.” Op. Br. at 25 (citing ’059 patent at 18:28–30, 18:1–21). But the specification explains that the PDA (and other such devices) can handle different types of content including “music live video.” ’059 patent at 18:22–34; Ex. 1 ¶ 113-115. Amazon also alleges that “[t]he set top box (STB) ex407 decodes a single ‘coded bit stream of video information,’ but it does not read multiplexed data.” Op. Br. at 25-26 (citing ’059 patent at 20:35–54). Again, a person of ordinary skill would understand that video data, for example television or movie data, inherently includes audio and images, multiplexed together. Ex. 1 116. Thus, the set

top box reads the multiplexed data from a recording medium. *Id.*

Amazon also focuses on the “multiplexing/demultiplexing unit ex308” in the cellular phone ex114 and ex115, arguing the “demultiplexing unit” (within the cellular phone ex114 and ex115) “is not and cannot be the corresponding structure” because “[t]he claim requires that [(1)] reading multiplexed data and [(2)] demultiplexing this data are performed by two distinct ‘units’ acting sequentially.” Op. Br. at 23-24. But it is well-established that a single structure can perform two different functions. *Intell. Prop. Dev., Inc. v. UA-Columbia Cablevision of Westchester, Inc.*, 336 F.3d 1308, 1320 (Fed. Cir. 2003). There is no issue with a single structure — the “demultiplexing unit” — performing both the “reading” and “demultiplexing” actions. Amazon’s cases merely state that different claim terms have different meanings. Op. Br. at 24. The two terms — “read[ing] the multiplexed data” and “demultiplex[ing] the multiplexed data” — have different meanings, but that does not mean they cannot be performed by the same structure.

Amazon also argues that the demultiplexing unit cannot be the corresponding structure because it “receives multiplexed data from ‘modem circuit unit ex306,’” not a recording medium. Op. Br. at 25. But the specification explains that the “modem circuit unit ex306” “performs spread spectrum processing” on the data “under the control of the main control unit ex311 comprised of a CPU, a ROM, a RAM and others.” ’059 patent at 19:13-21. A person of ordinary skill would understand that the “modem circuit unit ex306” is acting on the data stored on “a CPU, a ROM, a RAM” — recording media — and thus, when it is done, the data is still on the recording media to be read by the demultiplexing unit. *See* Ex. 1 ¶¶ 114-115.

Finally, Amazon again argues that the specification fails to provide an “algorithm.” Op. Br. at 26. But again, an algorithm is only necessary to show definiteness “[i]f the function is performed by a general-purpose computer or microprocessor.” *Nevro Corp.*, 955 F.3d at 42. The

disclosed structures — including the reproduction apparatus ex403, the recording/reproducing unit ex307, and the Set Box Top (ex407) — are not general-purpose computers or microprocessors, Ex. 1 ¶¶ 121-122, and thus no algorithm is necessary.

C. U.S. Patent No. 8,605,794

The '794 patent describes improved techniques for synchronizing audio and video data segments when streaming content. Prior methods used the timestamps stored within the audio and video data segments to order and align the segments, which is resource intensive. The patent addresses that problem by using an assignment rule to interrelate the audio and video segments. For example, the assignment rule could dictate that each sequential video segment is aligned with every fourth audio segment (e.g., if the segments are constructed so that every video segment is four times as long as each audio segment). By creating relationships between the data segments, assignment rules enable the quick and efficient alignment of segments. The assignment rules can be flexibly used to synchronize when transmitting, storing, or processing data segments.

1. “content-related . . . data segments”

Term	VideoLabs' Construction	Amazon's Construction
“content-related . . . data segments” (’794 patent, claims 1, 3, 7, 9 ⁷)	data segments ordered in a file such that they will present the file’s contents in their intended presentation order when rendered sequentially	data segments that have a syntactical meaning within their respective data file

The parties agree that the patentees acted as their own lexicographers and set forth a definition of “content-related . . . data segments,” Op. Br. at 27-28, but disagree on that definition. VideoLabs’ proposed construction accurately reflects the meaning the inventors ascribed to the term and expresses it clearly so that it can be consistently applied by the parties and understood by the jury. Amazon’s proposed construction, by contrast, omits key aspects of the term’s definition,

⁷ Amazon’s opening brief incorrectly identifies claim 8 of the ’794 patent as having this term. Claim 8 recites “content-related markers,” not “content-related . . . data segments.”

is vague, and invites juror confusion and attorney disagreement when it is applied to the accused products. It fails to capture the patentees' intent and invites future disputes about claim scope.

The '794 patent sets forth the meaning of "content-related . . . data segments" in the Detailed Description section of the specification:

The term "content-related" is understood to mean that first and second data segments have *a syntactical meaning within the respective data file*, such as e.g. *a plurality of succeeding second data segments represent the speech signal of a specific speaker within a dialog sequence*. Furthermore, *sections of the data file* can also be understood thereby, such as e.g. *individual images of a video sequence*. In the following description data segments always refer to content-based data segments.

By the first data segments S1 is meant *data segments of the first data file D1 which have a content-related meaning for the first data file D1*. Such as e.g. *individual images in a video sequence or individual spoken words in an audio sequence*.

In this case the chronological sequence identifies that sequence of individual first data segments S1 in which, for example, the latter are played back visually or made audible. For example, *one data segment contains the word "Good" and a further data segment the word "Morning", so the data segment containing "Good" is output first, and then the data segment containing "Morning"*.

('794 patent, 4:14-22, 49-60 (emphasis added).) The specification thus makes clear, through its use of consistent and repeated language, that for "content-related . . . data segments," *succeeding* data segments within a data file are ordered so as to present the content in its intended *sequence* when rendered. *VirnetX Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1317-19 (Fed. Cir. 2014); *Alloc, Inc. v. ITC*, 342 F.3d 1361, 1368-71 (Fed. Cir. 2003).

Thus, if a speaker in a movie scene says "Good Morning," the corresponding audio data segments for that sequence will be ordered within the audio data file so that the "Good" audio segment is before the "Morning" data segment. Similarly, for the corresponding video sequence, the video data segment where the speaker mouths the word "Good" comes before the segment where the speaker mouths "Morning." It is this purposeful ordering of data segments that makes

them “content-related” and provides them with a “syntactical meaning” within their data file. VideoLabs’ proposed construction captures these relationships between the data segments and their files by including their sequential, chronological nature, while Amazon’s does not.

The claims further support VideoLabs’ construction. Independent claims 1 and 9 require outputting the data segments “sequentially” and “according to their chronological sequence.” (’794 patent, claims 1, 9.) It is only by organizing data segments within their data files in the intended presentation order — *i.e.*, the “Good” audio segment is before the “Morning” audio segment — that outputting the segments sequentially will also result in the segments being output chronologically. The examples in the specification further buttress this lexicography. (*See, e.g.*, Figs. 1-2, 4:23-5:9 (processing the data segments in each data file sequentially, which maintains the chronological order of the content); Fig. 5, 6:4-27 (same).)

This definition of “content-related . . . data segments” also makes sense in view of the problem the invention solved. While some media synchronization techniques are used to *create* content for the first time — for example, splicing together various film sequences and audio samples to generate a movie — the ’794 patent is used to *maintain* the proper order of previously-existing content — *e.g.*, re-assembling the audio and video data segments that make up a television broadcast. (*See* ’794 patent, 1:34-2:3, 3:65-4:8 (describing known problems with traditional television broadcasts and other “data streams” that have an intended, chronological order that needs to be maintained by the device receiving the content).) VideoLabs’ proposed construction thus unambiguously captures the meaning that was assigned to the term by the inventors.

By contrast, Amazon’s proposed construction fails to inform the fact-finder of the metes and bounds of the term. It is not readily apparent what “syntactical meaning” means, and Amazon’s brief sheds no light on what it believes these words to convey (other than something

different than VideoLabs’ construction). Op. Br. at 28-29. Indeed, “syntactical meaning” is inherently context-based; certain rules of syntax govern the English language, while a very different syntax applies in the context for computer programming languages. Amazon’s proposed construction provides no guidance on what context or rules undergird the “syntactical meaning.”

Tellingly, Amazon is unable to describe the meaning of its construction other than by using the words of the claim term being construed. *Id.* at 29 (“But data segments being related in content (i.e., ‘content-related’) has nothing to do with an order of any kind. Instead, it has everything to do with their ‘content,’ and thus a syntactical meaning within their respective data file, as the patentee’s definition for ‘content-related’ confirms.”) This circularity reveals that Amazon’s proposed construction is really no construction at all, but merely replaces one set of ambiguous words with another. This itself is a reason to deny Amazon’s proposed construction. Additionally, adopting the vague words “syntactical meaning” as part of the construction would fail to resolve the parties’ dispute about claim scope — when it is clear such a dispute exists. *See O2 Micro Int’l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1360 (Fed. Cir. 2008).

2. **“output together”**

Term	VideoLabs’ Construction ⁸	Amazon’s Construction
“output together” (’794 patent, claims 1, 9)	“output”: transmitted, stored together or passed on to a processing unit “together”: plain and ordinary meaning	“the first and second data segments are transmitted, stored together or passed on to a processing unit at the same time”

The parties agree that the patentee defined “output” as “transmitted, stored together, or

⁸ Amazon incorrectly asserts that VideoLabs proposed plain and ordinary meaning for the entire term. Op. Br. at 19. VideoLabs’ position has always been that the term “output” has been defined by the patentee as recited herein and that “together” need not be construed.

passed on to a processing unit.”⁹ For the term “together,” VideoLabs proposes that it be afforded its plain and ordinary meaning, while Amazon seeks to narrow the term to particular sub-definitions that it curated from dictionaries.

Amazon alleges that its proposed construction is the plain and ordinary meaning of “together,” but this is readily disproven. The entirety of Amazon’s support for this assertion is three non-technical dictionaries. Though each dictionary contains multiple definitions of “together,” Amazon relies on just one definition from each source to support its claim that “together” means “at the same time.” But the other definitions in Amazon’s own dictionaries show that the plain meaning of “together” is not so limited. For example, “together” is also defined as:

- 1) “In or into a single group, mass, or place” (Ex. 25¹⁰);
- 2) “In association with or in relationship to one another” (Ex. 25);
- 3) “Regarded collectively” (Ex. 25);
- 4) “In or into a unified structure or arrangement” (Ex. 25);
- 5) “in or into one place” (Ex. 26);
- 6) “so as to be in contact, joined or united” (Ex. 26);
- 7) “into a proper or suitable order or state of being organized” (Ex. 26);
- 8) “in combination” (Ex. 27);
- 9) “into companionship or close association” (Ex. 27); and
- 10) “continuously” (Ex. 27)

All ten of the above definitions could apply in the context of “output[ting]” data segments “together.” For instance, when “output” is being used to mean that the data segments are “transmitted” (as opposed to “stored together” or “passed on to a processing unit”), it is reasonable to interpret the data segments as being transmitted “continuously.” This is because, when data segments are transmitted over a network, it will typically not be transmitted all at once. Rather, a data *stream* will be transmitted, and the portions of the stream comprising one data segment will

⁹ The parties also agree that the term “outputting” in claim 1 is defined as “transmitting, storing together, or passing on to a processing unit.” “Outputting” in claim 1 is not followed by “together.”

¹⁰ These numbered exhibits refer to exhibits to the declaration of J. David Hadden (ECF No. 48-3).

be transmitted before the second segment. (*See* Ex. 2, Declaration of Dr. Michael Goodrich (“Goodrich Decl.”), ¶¶ 21-23.) The data segments are thus transmitted “continuously” as part of a data stream, in accordance with one of the dictionary definitions that Amazon’s proposed construction excludes. Definition Nos. 2-4 and 7-9 above can also be used to describe the process that occurs when transmitting data, and so would also be excluded by Amazon’s proposal.

As another example, when “output” is used in the context of “storing” the data segments together, the definition of “in or into one place” (i.e., a computer folder or memory buffer) is apt. These are not isolated examples. As Dr. Goodrich explains, the person of ordinary skill in the art would understand that the above definitions apply when “outputting.” (*Id.* at ¶¶ 24-26.) Amazon’s own extrinsic evidence thus shows that its proposed construction is *not* the plain and ordinary meaning of “together” — the term is understood to have a broader meaning.

More broadly, requiring data segments be output “at the same time” would be nonsensical in the context of computers, which typically conduct operations like “transmitting,” “storing,” and “passing on” sequentially, not simultaneously. (*Id.* at ¶¶ 21-27.) Amazon would thus exclude the common way computers implement this functionality.¹¹

Because Amazon’s proposed construction is narrower than the plain meaning, to prevail, Amazon is required to show that its proposal is consistent with the patentee’s lexicography, or that the patentee disavowed the claim scope that its construction excludes. *See, e.g., Thorner v. Sony Computer Entm’t Am. LLC*, 669 F.3d 1362, 1366 (Fed. Cir. 2012). Amazon does not even attempt to make either showing, nor could it. Amazon’s proposal should be rejected for this reason alone.

Amazon’s only other argument is based on an overly narrow reading of the word

¹¹ It is of course expected that the appropriate audio and video content will be presented “at the same time” when the content is *rendered* to the user, such as on the screen of a mobile phone. But rendering is not the same as the claimed “output[ting].”

“synchronizing” in the preambles of claims 1 and 9, which Amazon claims necessarily requires outputting the data segments “at the same time.” (Op. Br. at 29-30.) In support, Amazon relies on a single definition of “synchronizing” from a single dictionary. (*Id.*) First of all, Amazon has not sought to construe the term “synchronizing,” and so it cannot fairly argue that the term “together” should be narrowly construed based on its shadow construction of “synchronizing.” Regardless, Amazon does not explain why synchronicity is not achieved when the first and second data segments from their respective data files are associated with one another “on the basis of an assignment rule.” (’794 patent, claims 1, 9.) This is what is required by the claims, and is a form of synchronization. Moreover, Amazon’s analysis of “synchronizing” in no way avoids the fundamental problem with its construction discussed above — the computer operations of “transmitting,” “storing,” and “passing on” usually occur sequentially, not “at the same time.”

Accordingly, the agreed constructions for “output” should be adopted, and the term “together” should be afforded its plain and ordinary meaning. If the Court is inclined to further clarify the term “together,” then the term should be given its plain and ordinary meaning, with the additional guidance that the term is not limited to outputting “at the same time.”

III. CONCLUSION

For the reasons above, VideoLabs’ proposed claim constructions should be adopted. Additionally, the parties agreed-upon constructions, which are set forth in Exhibit 3, should be adopted as well.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above document was served on September 1, 2022 on all counsel of record who have submitted to electronic service via the Court's CM/ECF system.

/s/ Taylor N. Mauze

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