

UNITED STATES DISTRICT COURT
CENTRAL DISTRICT OF CALIFORNIA

CIVIL MINUTES - GENERAL

Case No. CV 18-9344-GW(JCx)

Date July 25, 2019

Title *Realtime Adaptive Streaming LLC v. Adobe Systems Inc.*

Present: The Honorable GEORGE H. WU, UNITED STATES DISTRICT JUDGE

Javier Gonzalez

None Present

Deputy Clerk

Court Reporter / Recorder

Tape No.

Attorneys Present for Plaintiffs:

Attorneys Present for Defendants:

None Present

None Present

**PROCEEDINGS: IN CHAMBERS - FINAL RULING ON MARKMAN/CLAIM
CONSTRUCTION**

Attached hereto is the Court's Final Ruling on *Markman*/Claims Construction.

Initials of Preparer JG

I. INTRODUCTION

Plaintiff Realtime Adaptive Streaming LLC (“Realtime”) brought this action against Defendants Google LLC and YouTube, LLC (collectively, “Google Defendants”), alleging that Google Defendants infringe five U.S. patents owned by Realtime. *See* Docket No. 1. Realtime also filed suit against Defendant Adobe Systems Inc. (“Adobe”), alleging that Adobe infringes seven U.S. patents owned by Realtime, including the five patents asserted against Google Defendants. *See* Case No. 18-09344, Docket No. 1.

On March 28, 2019, a Joint Claim Construction and Prehearing Statement was filed in each of these actions. Docket No. 44; Case No. 18-09344, Docket No. 63. The Court issued an Order directing the parties to file consolidated claim construction briefs for certain of the disputed terms identified by the parties in their two Joint Statements. Docket No. 45. Google Defendants and Adobe jointly filed a Collective Opening Claim Construction Brief on June 6, 2019. Docket No. 69. On the same day, Realtime filed an Opening Claim Construction Brief. Docket No. 70. The parties filed their responsive briefs on June 20, 2019. Docket No. 73; Docket No. 74.

A hearing was held on the parties’ claim construction disputes on July 18, 2019 and the disputed matters were taken under submission.¹

The Court would construe the disputed terms as stated herein.

II. BACKGROUND

The five patents asserted against both Google Defendants and Adobe are U.S. Patent Nos. 7,386,046 (“the ’046 Patent”), 8,934,535 (“the ’535 Patent”), 9,578,298 (“the ’298 Patent”), 9,769,477 (“the ’477 Patent”), and RE46,777 (“the R777 Patent”). *See* Docket No. 37; Case No. 18-09344, Docket No. 53. The two patents additionally asserted against Adobe are U.S. Patent Nos. 9,762,907 (“the ’907 Patent”) and 8,929,442 (“the ’442 Patent”). *See* Case No. 18-09344, Docket No. 53.

¹ At the hearing, the parties were provided with a Tentative Ruling reflecting the Court’s thoughts regarding the parties’ disputes. The Tentative Ruling is not a final ruling of the Court.

A. The Fallon Patents

The '535, '477, '907, and '442 Patents are each a continuation patent that claims priority back to the '046 Patent. Both parties colloquially refer to these five patents as “the Fallon Patents” based on their first named inventor, James Fallon. As continuation patents, they share substantially the same specification.

The Fallon Patents generally disclose systems and methods allowing for the selection between known data compression and decompression methods. *See, e.g.*, '535 Patent at Abstract.² The technology described and claimed by the Fallon patents will be explained in further detail in the later sections of this Ruling.

In its operative pleadings, Realtime alleges that one or more Defendants infringe at least Claim 40 of the '046 Patent, Claims 1 and 15 of the '535 Patent, Claim 1 of the '477 and '907 Patents, and Claim 8 of the '442 Patent. *See* Docket No. 37 ¶¶ 34, 52; Case No. 18-09344, Docket No. 53 ¶¶ 50, 57, 68, 75, 105, 112, 123, 130. The parties' claim construction arguments primarily focus on the following asserted claims: Claims 1 and 23 of the '046 Patent, Claims 1 and 14 of the '535 Patent, Claims 1, 16, 17, 20, and 22 of the '477 Patent, and Claim 1 of the '907 Patent.³ *See, e.g.*, Docket Nos. 69, 70.

The '046 Patent is titled “Bandwidth Sensitive Data Compression and Decompression.” Claim 1 of the '046 Patent states:

1. A method comprising:
 - compressing data using a first compression routine providing a first compression rate, wherein the first compression routine comprises a first compression algorithm;
 - tracking the throughput of a data processing system to determine if the first compression rate provides a throughput that meets a predetermined throughput threshold, wherein said tracking throughput comprises tracking a number of pending requests for data transmission; and
 - when the tracked throughput does not meet the predetermined throughput threshold, compressing data using a second compression routine providing a second compression rate that is greater than the first compression rate, to increase the throughput of the data processing system to at least the predetermined throughput level,

² Because the Fallon Patents share substantially the same specification and the parties generally cite to the '535 Patent, the Court will do the same unless otherwise noted.

³ The parties have not presented any disputed terms for the fifth Fallon Patent, the '442 Patent, titled “System and Methods for Video and Audio Data Distribution.” Thus, the '442 Patent is not further discussed in this Order.

wherein the second compression routine comprises a second compression algorithm.

'046 Patent at Claim 1.

The '535 Patent is titled "Systems and Methods for Video and Audio Data Storage and Distribution." Claim 1 of the '535 Patent states:

1. A method, comprising:
 - determining a parameter or attribute of at least a portion of a data block having audio or video data;
 - selecting an access profile from among a plurality of access profiles based upon the determined parameter or attribute; and
 - compressing the at least the portion of the data block with one or more compressors using asymmetric data compression and information from the selected access profile to create one or more compressed data blocks, the information being indicative of the one or more compressors to apply to the at least the portion of the data block.

'535 Patent at Claim 1.

The '477 Patent is titled "Video Data Compression Systems." Claim 1 of the '477 Patent states:

1. A system, comprising:
 - a plurality of different asymmetric data compression encoders, wherein each asymmetric data compression encoder of the plurality of different asymmetric data compression encoders is configured to utilize one or more data compression algorithms, and
 - wherein a first asymmetric data compression encoder of the plurality of different asymmetric data compression encoders is configured to compress data blocks containing video or image data at a higher data compression rate than a second asymmetric data compression encoder of the plurality of different asymmetric data compression encoders; and
 - one or more processors configured to:
 - determine one or more data parameters, at least one of the determined one or more data parameters relating to a throughput of a communications channel measured in bits per second; and
 - select one or more asymmetric data compression encoders from among the plurality of different asymmetric data compression encoders based upon, at least in part, the determined one or more data parameters.

'477 Patent at Claim 1.

The '907 Patent is titled "System and Methods for Video and Audio Data Distribution."

Claim 1 of the '907 Patent states:

1. A system comprising:
 - one or more different asymmetric data compression algorithms, wherein each algorithm of the one or more different asymmetric data compression algorithms utilizes one or more asymmetric data compression routines of a plurality of different asymmetric data compression routines, wherein a first asymmetric data compression routine of the plurality of different asymmetric data compression routines is configured to produce compressed data with a higher data rate for a given data throughput than a second asymmetric data compression routine of the plurality of different asymmetric data compression routines; and
 - a processor configured:
 - to analyze one or more data parameters from one or more data blocks containing video data, wherein at least one data parameter relates to an expected or anticipated throughput of a communications channel; and
 - to select two or more different data compression routines from among a plurality of different data compression routines based upon, at least in part, the one or more data parameters relating to the expected or anticipated throughput of the communications channel.

'907 Patent at Claim 1.

B. The R777 Patent

The R777 Patent is titled “Quantization for Hybrid Video Coding.” It discloses video encoding methods that rely on a “quantization” process and the calculation of “quantization efficiency” for those processes. *See* R777 Patent at 1:14-16, 4:10-25.

In its operative pleadings, Realtime alleges that one or more Defendants infringe at least Claim 1 of the R777 Patent. *See* Docket No. 37 ¶ 72; Case No. 18-09344, Docket No. 53 ¶¶ 27, 39. The parties dispute the meaning of two terms in the R777 Patent, both of which appear in Claim 11.

Claim 11 of the R777 Patent states:

11. A coder for coding a video signal using hybrid coding, comprising:
 - means for reducing temporal redundancy by block based motion compensated prediction in order to establish a prediction error signal,
 - a quantizer that quantizes the prediction error signal in order to establish quantized values representing samples or coefficients, wherein the prediction error signal includes a plurality of subblocks,
 - control means for:

calculating a first quantization efficiency of at least one subblock of the plurality of subblocks;
setting the quantized values of the at least one subblock to all zeroes;
calculating a second quantization efficiency for the at least one subblock while all of the quantized values are zeroes;
selecting which of the first and second quantization efficiencies is a higher efficiency; and
selecting, for further proceeding, the at least one subblock with the quantized values prior to setting the quantized values of the at least one subblock to all zeroes if the first quantization efficiency is higher and selecting the at least one subblock with the quantized values set to zero, for further proceeding, if the second quantization efficiency is higher.

R777 Patent at Claim 11 (bracketed language, *i.e.* language removed from reissued patent claim, omitted; emphasis omitted).

C. The '298 Patent

The '298 Patent is titled “Method for Decoding 2D-Compatible Stereoscopic Video Flows.” It relates to “a method for decoding a stereoscopic digital video stream.” '298 Patent at 1:8-12. The stereoscopic digital video stream is a video signal produced for 3D display. *See Id.* at 1:19-23. For 3D display, it carries “two independent video streams intended for the right eye and for the left eye.” *Id.* at 1:27-31. Recognizing the need for “2D compatibility of the stereoscopic signals,” the '298 Patent describes “a decoding method that allows extracting a 2D-compatible (2D) video signal from a stereoscopic digital video stream.” *Id.* at 2:10-13, 3:3-5.

In its operative pleadings, Realtime alleges that one or more Defendants infringe at least Claim 1 of the '298 Patent. *See* Docket No. 37 ¶ 96; Case No. 18-09344, Docket No. 53 ¶¶ 86, 94. The parties have one disputed term included in Claim 1 of the '298 Patent.

Claim 1 of the '298 Patent states:

1. A method for processing a video stream of digital images, the method comprising the steps of:
 - receiving the video stream which comprises at least one composite frame (FC), each composite frame containing a pair of stereoscopic digital images (L,R) according to a predetermined frame packing format;
 - generating an output video stream which can be reproduced on a visualization apparatus,
 - receiving metadata which determine an area occupied by one of the two

images within said composite frame (FC), said metadata indicating either a geometry of the frame packing format or a frame packing type of said composite frame (FC);
determining the area in the composite frame (FC) which is occupied by said one image of the stereoscopic pair within the composite frame based on said metadata;
decoding only that part of the composite frame (FC) which contains said one image to be displayed, and
generating an output frame containing said decoded image.

'298 Patent at Claim 1.

III. LEGAL STANDARD

A. Claim Construction

Claim construction is an interpretive issue “exclusively within the province of the court.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). It is “a question of law in the way that we treat document construction as a question of law,” with subsidiary fact-finding reviewed for clear error pursuant to Fed. R. Civ. P. 52(a)(6). *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S.Ct. 831, 837-40 (2015). The claim language itself is the best guide to the meaning of a claim term. *See Vederi, LLC v. Google, Inc.*, 744 F.3d 1376, 1382 (Fed. Cir. 2014). This is because the claims define the scope of the claimed invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005). But a “person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent.” *Id.* at 1313. Thus, claims “must be read in view of the specification,” which is “always highly relevant to the claim construction analysis.” *Phillips*, 415 F.3d at 1315 (internal quotations omitted).

Although claims are read in light of the specification, limitations from the specification must not be imported into the claims. *Abbott Labs. v. Sandoz, Inc.*, 566 F.3d 1282, 1288 (Fed. Cir. 2009). “[T]he line between construing terms and importing limitations can be discerned with reasonable certainty and predictability if the court’s focus remains on understanding how a person of ordinary skill in the art would understand the claim terms.” *Phillips*, 415 F.3d at 1323.

The prosecution history may lack the clarity of the specification, but it is “another established source of intrinsic evidence.” *Vederi*, 744 F.3d at 1382. “Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent.” *Phillips*, 415 F.3d at 1317 (citations omitted). “Furthermore, like the specification, the prosecution

history was created by the patentee in attempting to explain and obtain the patent.” *Id.* “Yet because the prosecution history represents an ongoing negotiation between the PTO and the applicant, rather than the final product of that negotiation, it often lacks the clarity of the specification and thus is less useful for claim construction purposes.” *Id.*

Claim construction usually involves resolving disputes about the “ordinary and customary meaning” that the words of the claim would have had “to a person of ordinary skill in the art in question at the time of the invention.” *Phillips*, 415 F.3d at 1312-13 (internal quotations and citations omitted). But in some cases, claim terms will not be given their ordinary meaning because the specification defines the term to mean something else. “[A] claim term may be clearly redefined without an explicit statement of redefinition,” so long as a person of skill in the art can ascertain the definition by a reading of the patent documents. *Id.* at 1320; *see also Trustees of Columbia Univ. in City of New York v. Symantec Corp.*, 811 F.3d 1359, 1364 (Fed. Cir. 2016).

Where the patent itself does not make clear the meaning of a claim term, courts may look to “those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean,” including the prosecution history and “extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.” *Phillips*, 415 F.3d at 1314 (internal quotations omitted). Sometimes, the use of “technical words or phrases not commonly understood” may give rise to a factual dispute, the determination of which will precede the ultimate legal question of the significance of the facts to the construction “in the context of the specific patent claim under review.” *Teva*, 135 S. Ct. at 841, 849. “In some cases, the ordinary meaning of claim language as understood by a person of skill in the art may be readily apparent even to lay judges, and claim construction in such cases involves little more than the application of the widely accepted meaning of commonly understood words.” *Phillips*, 415 F.3d at 1314. “In such circumstances, general purpose dictionaries may be helpful.” *Id.*

B. Indefiniteness

A patent’s specification must conclude “with one or more claims particularly pointing out and distinctly claiming the subject matter which the inventor or a joint inventor regards as the invention.” 35 U.S.C. § 112(b); *see also* 35 U.S.C. § 112 ¶ 2 (2006). In order to meet this “definiteness” requirement, “a patent’s claims, viewed in light of the specification and prosecution history, [must] inform those skilled in the art about the scope of the invention with reasonable certainty.” *Nautilus, Inc. v. Biosig Instruments, Inc.* (“*Nautilus I*”), 572 U.S. 898, 910 (2014).

The Supreme Court in *Nautilus I* emphasized that patents must be precise enough to afford clear notice of what is claimed, thereby “appris[ing] the public of what is still open to them,” while recognizing that absolute precision is unobtainable given “the inherent limitations of language.” *Id.* at 899, 910 (quoting *Markman*, 517 U.S. at 373).

General claim construction principles apply to indefiniteness challenges, but the burdens are slightly different. See *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1332 (Fed. Cir. 2010) (“In the face of an allegation of indefiniteness, general principles of claim construction apply”) (internal quotations and citations omitted). While courts construing claim language sit in relative equipoise, a patent is “presumed valid under 35 U.S.C. § 282.” *Biosig Instruments, Inc. v. Nautilus, Inc.* (“*Nautilus II*”), 783 F.3d 1374, 1377 (Fed. Cir. 2015). “[C]onsistent with that principle, a fact finder is instructed to evaluate . . . whether an invalidity defense has been proved by clear and convincing evidence.” *Id.* (quoting *Microsoft Corp. v. i4i Ltd. P’ship*, 564 U.S. 91, 111 (2011)) (emphasis added, brackets removed); *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1345 (Fed. Cir. 2007) (“Because a patent is presumed to be valid, the evidentiary burden . . . is one of clear and convincing evidence.”).

C. Means-Plus-Function Claim Limitations

A claim limitation may also be phrased as “a means or step for performing a specified function without the recital of structure, material, or acts in support thereof.” 35 U.S.C. § 112, ¶ 6; 35 U.S.C. § 112(f).⁴ Such limitations “shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.” *Id.* This “means plus function” interpretation applies “only to purely functional limitations that do not provide the structure that performs the recited function.” *Philips*, 415 F.3d at 1311. To construe a means-plus-function claim, first, “the court must first identify the claimed function.” *Williamson v. Citrix Online*, 792 F.3d 1339, 1351 (Fed. Cir. 2015). Second, “the court must determine what structure, if any, disclosed in the specification corresponds to the claimed function.” *Id.* Structures in the specification are “corresponding structure[s]” when “the intrinsic evidence clearly links or associates that structure to the function recited in the claim.” *Id.* at 1352. If the patent does not

⁴ Section 112 ¶ 6 was renamed as § 112(f) by the America Invents Act, Pub. L. No. 112-29, which took effect on September 16, 2012. One of the relevant patents in this case for purposes of the parties’ means-plus-function dispute was filed after the America Invents Act took effect, while the other patents have priority dates to applications filed before the Act took effect. As such, the § 112, ¶ 6 and § 112(f) nomenclature are used section-by-section depending on the asserted patent(s) at issue.

disclose an “adequate corresponding structure, the claim is indefinite.” *Id.*

IV. ANALYSIS

A. *Agreed Terms*

The parties have agreed on constructions for the following terms. Docket No. 44; Case No. 18-09344, Docket No. 63.

Claim Terms	Parties’ Agreed Construction
“compressing” / “compress[ed]” / “compression” (All asserted claims)	[representing / represented / representation] of data with fewer bits
“means for reducing temporal redundancy by block based motion compensated prediction in order to establish a prediction error signal” (R777 Patent, Claim 1)	<p>Governed by 35 U.S.C. § 112, ¶ 6.</p> <p>Function: reducing temporal redundancy by block based motion compensated prediction in order to establish a prediction error signal</p> <p>Corresponding structure: adder, subtractor, and equivalents thereof</p>

B. *Disputed Terms*

1. “access profile” (’535 Patent Claims 1, 14)

Realtime’s Proposed Construction	Defendants’ Proposed Construction
“information that enables the controller to select a suitable compression algorithm that provides a desired balance between execution speed (rate compression) and efficiency (compression ratio)”	“information regarding the number or frequency of reads or writes”

The term “access profile” appears in Claims 1 and 14 of the ’535 Patent. Again, Claim 1 of the ’535 Patent states:

1. A method, comprising:
 - determining a parameter or attribute of at least a portion of a data block having audio or video data;
 - selecting an access profile from among a plurality of access profiles based upon the determined parameter or attribute;* and
 - compressing the at least the portion of the data block with one or more

compressors using asymmetric data compression *and information from the selected access profile* to create one or more compressed data blocks, the information being indicative of the one or more compressors to apply to the at least the portion of the data block.

'535 Patent at Claim 1 (emphasis added). Claim 14 of the '535 Patent is another independent method claim that similarly refers to “selecting an access profile from among a plurality of access profiles based upon the determined parameter or attribute.” See '535 Patent at Claim 14.

The parties appear to be in agreement that the term “access profile” as it is used in the Fallon Patents is essentially a coined term. See Docket No. 73 at 3 (recognizing that Defendants assert the term “access profile” “has no ordinary meaning” and not rebutting that assertion); Docket No. 74 at 2. The parties, however, disagree about what construction is mandated by the disclosure in the patent specification.

To support its proposal, Plaintiff refers to a portion of the patent specification that states:

In another aspect, a system for providing bandwidth sensitive data compression *comprises a plurality of access profiles*, operatively accessible by the controller that enables the controller to determine a compression routine that is associated with a data type of the data to be compressed. *The access profiles comprise information that enables the controller to select a suitable compression algorithm that provides a desired balance between execution speed (rate of compression) and efficiency (compression ratio).*

'535 Patent at 8:4-12.

Defendants' proposal, meanwhile, is based on some later passages of the specification. In describing Figure 1, the specification states that it “depicts a host system **10** comprising a controller **11** (e.g., a file management system), a compression/decompression system **12**, a plurality of compression algorithms **13**, a storage medium **14**, and *a plurality of data profiles 15.*” *Id.* at 10:34-38 (emphasis added); *see also id.* at 11:6-7 (“The controller **11** utilizes information comprising a plurality of data profiles.”). The specification goes on to state:

In a preferred embodiment, the overall throughput (bandwidth) of the host system **10** is one factor considered by the controller **11** in deciding whether to use an asymmetrical or symmetrical compression algorithm for processing data stored to, and retrieved from, the storage medium **14**. Another factor that is used to determine the compression algorithm is the type of data to be processed. *In a preferred embodiment, the data profiles 15 comprise information regarding predetermined access profiles of different data sets*, which enables the controller **11** to select a suitable compression algorithm

based on the data type. For instance, the data profiles may comprise a map that associates different data types (based on, e.g., a file extension) with preferred one(s) of the compression algorithms 13. For example, preferred access profiles considered by the controller 11 are set forth in the following table.

Access Profile 1:	Access Profile 2	Access Profile 3
Data is written to a storage medium once (or very few times) but is read from the storage medium many times	Data is written to the storage medium often but read few Times	The amount of times data is read from and written to the storage medium is substantially the same.

Id. at 11:25-48 (emphasis added). The specification explains each of the preferred access profiles and then goes on to state:

The following table summarizes *the three data access profiles* and the type of compression algorithm that would produce optimum throughput.

Access Profile	Example Data Types	Compression Algorithm	Compressed Data Characteristics	Decompression Algorithm
1. Write few, Read many	Operating systems, Programs, Web sites	Asymmetrical (Slow compress)	Very high compression ratio	Asymmetrical (Fast decompress)
2. Write many, Read few	Automatically updated inventory database	Asymmetrical (Fast compress)	Very high compression ratio	Asymmetrical (Slow decompress)
3. Similar number of Reads and Writes	User generated documents	Symmetrical	Standard compression ratio	Symmetrical

Id. at 12:47-67 (emphasis added).

In a later passage, the '535 Patent refers back to the access profiles described in these tables.

It states:

With the above-described method depicted in FIG. 2, the selection of the compression routine is performed automatically In another embodiment, a user . . . can command the system . . . to utilize a desired compression routine *Alternatively, the system can detect the type of data being installed or stored to disk (via file extension, etc.) and automatically select an appropriate algorithm using the Access Profile information as described above.* For instance, the user could indicate to the controller that the data being installed comprises an application program which the controller would

determine falls under Access Profile 1.

Id. at 14:27-42 (emphasis added).

Defendants state that technical dictionaries for the term “access” in the context of the relevant technology area also support their proposed construction. Docket No. 69 at 12 n.4 (citing McGraw-Hill Dictionary of Scientific and Technical Terms 13 (6th ed. 2003), Docket No. 69-6 at 4 (defining “access” as “[t]he reading of data from storage or the writing of data into storage”); The Authoritative Dictionary of IEEE Standards Terms 6 (7th ed. 2000), Docket No. 69-7 at 4 (defining “access” as “the process of obtaining data from or placing data into a storage device”); Microsoft Computer Dictionary 13 (5th ed. 2002), Docket No. 69-8 at 4 (defining “access” as “[t]he act of reading data from or writing data to memory”)); Declaration of Dr. Iain E. Richardson in Support of Defendants’ Claim Constructions (“Richardson Decl.”), Docket No. 69-2 ¶ 35.

Plaintiff’s proposed construction refers to a portion of the patent specification that is not definitional (it uses the claim-drafting term “comprises”) and, as Defendants note, only provides information about the intended use of an access profile rather than what information is actually included in an access profile. The specification’s proffered example of three types of “access profiles” is also generally consistent with the technical definitions of “access” submitted by Defendants. Although Defendants appear to acknowledge that the phrase “access profile” need not be limited to the exact three examples provided in the specification, the technical meaning of “access” and its consistency with what is disclosed in the intrinsic record factually support the conclusion that the term “access” should be given the same meaning in the context of the coined phrase “access profile” as it generally has in this field.

However, the Court still has some concerns with Defendants’ (and also Plaintiff’s) proposal. The disclosure in the specification supports the conclusion that the word “profile” as it is used in the phrase “access profile” also has meaning. That meaning does not necessarily appear to be captured by the phrase “information regarding.” The parties do not appear to otherwise dispute the meaning of the word “profile” and the Court is not persuaded on the current record that construction of the word “profile” itself is necessary.

The Court is separately concerned that using the words “reads” and “writes” in a construction for this term would not be helpful to a lay juror, who would likely be unfamiliar with their specific meaning in the context of the claimed technology.

Accordingly, the term “access profile” is construed as “profile relating to the number

and/or frequency at which information is obtained (“read”) or placed (“written”).”

2. “data profile” (’477 Patent Claim 17)

Realtime’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary Alternatively: “information associating data with a compression algorithm”	“information associating an access profile with a compression/decompression algorithm”

The term “data profile” appears only in asserted dependent Claim 17 of the ’477 Patent. Claim 17 depends from Claim 1 of the ’477 Patent. Together, these claims state in relevant part:

1. A system, comprising:

...

one or more processors configured to:

determine one or more data parameters, at least one of the determined one or more data parameters *relating to a throughput of a communications channel measured in bits per second*; and

select one or more asymmetric data compression encoders from among the plurality of different asymmetric data compression encoders *based upon, at least in part, the determined one or more data parameters*.

17. The system of claim 1, *wherein at least one of the determined one or more data parameters* comprises:

a video or image data profile.

’477 Patent at Claims 1, 17.

Defendants again suggest that the term “data profile” is a coined term that “does not have a recognized meaning outside the context of the ’477 Patent.” *See* Docket No. 74 at 3. Defendants argue that their proposal “aligns with the specification, which only describes ‘data profile’ as including information associating an ‘access profile’ with a compression algorithm.” *Id.*

One of the same passages of the specification relevant to the parties’ “access profile” dispute is similarly relevant to this dispute. As previously provided, it states:

Another factor that is used to determine the compression algorithm is the type of data to be processed. *In a preferred embodiment, the data profiles 15 comprise information regarding predetermined access profiles of different data sets*, which enables the controller 11 to select a suitable compression

algorithm *based on the data type*. For instance, the data profiles may comprise a map that associates different data types (based on, e.g., a file extension) with preferred one(s) of the compression algorithms 13.

'535 Patent at 11:29-38 (emphasis added).

The Court notes that the parties have disputed the meaning of the phrase “access profile” in the context of claims of the '535 Patent, but the term “data profile” only appears in Claim 17 of the '477 Patent. It does not appear appropriate to carry over the term “access profile” to use it in a construction of a term in another patent.

Even if it were appropriate to do so given the relationship between the Fallon Patents, Defendants’ assertion that this passage requires that data profiles include information associating an access profile with a compression/decompression algorithm is not persuasive. This passage states that a data profile including access profile/algorithm information is simply a preferred embodiment of a data profile.

Having rejected Defendants’ proposal and given the use of the term “data profile” in the context of the claim language, it is not construed.⁵

3. “parameter or attribute of at least a portion of a data block” ('535 Patent Claims 1, 14)

Realtime’s Proposed Construction	Google Defendants’ Proposed Construction
No construction necessary	“information, separate and distinct from the access profile, regarding the type of data in at least a portion of the data block”

The word “parameter” is used in various contexts in various claims across many of the Fallon Patents. *See, e.g.* '535 Patent at Claims 1, 14; '477 Patent at Claims 1, 7-9, 17; '907 Patent at Claims 1, 5, 6. Despite this, Google Defendants solely request construction of the larger phrase “parameter or attribute of at least a portion of a data block” as it appears in the Claims 1 and 14 of

⁵ In the tentative ruling, the Court questioned why Defendants did not proffer a construction for the term “data profile” that relates it to, for instance, data type. Defendants did not meaningfully respond to the Court’s question at the hearing, beyond suggesting that the term “data profile” relates to the table depicted in the specification showing three exemplary data profiles. '535 Patent at 12:47-67. Plaintiff presented its position that limiting a data profile to be somehow tethered to a data type, let alone limiting a data profile to the embodiments shown in the specification, would not be supported by the intrinsic record or by Defendants’ arguments related to the term. The Court finds Plaintiff’s largely un rebutted arguments persuasive.

the '535 Patent.

As stated in the Background section and the analysis section for the term “access profile,” Claim 1 of the '535 Patent states, *inter alia*

1. A method, comprising:

determining a parameter or attribute of at least a portion of a data block having audio or video data;
selecting an access profile from among a plurality of access profiles
based upon the determined parameter or attribute[.]

'535 Patent at Claim 1 (emphasis added); *see also id.* at Claim 14 (also reciting “determining a parameter or attribute of at least a portion of a data block”).

The Court agrees with Google Defendants that the terms “parameter or attribute” and “access profile(s)” as they are used in these two claims are separate requirements of the claim. The face of the claims makes clear that the parameter or attribute is determined from “at least a portion of a data block” itself, while the “access profile from among a plurality of access profiles” essentially sets out different categories of read or write number/frequency criteria with an access profile selected for a particular data block based on the data block’s determined parameter or attribute. Because the claims themselves include these limitations, the Court does not see a reason to additionally include this fact in a specific proposed construction for the term “parameter or attribute.”

The Court disagrees with Defendants that the parameter or attribute determined from the data block must be information related to the data type of the data block. Google Defendants again refer to the same passage of the specification that relates to the construction of the terms “access profile” and “data profile.” *See* Docket No. 69 at 20 (citing '535 Patent at 11:29-38). However, this excerpt of the specification (quoted twice *supra* and thus not quoted again here) does not even use the words “parameter” or “attribute.” Defendants do not otherwise argue that the plain meaning of “parameter or attribute” requires limiting this phrase to relate to a type of data, or that the patent applicant lexicographically defined the term or disavowed its full scope.

The Court also has concerns that Defendants’ proposal would create inconsistencies between Claim 1 and Claim 9 of the '535 Patent. Claim 9 states:

9. The method of claim 1, wherein the determining of the parameter or attribute of the at least the portion of the data block excludes determining based only upon reading a descriptor of the at least the portion of the data block.

'535 Patent at Claim 9. The doctrine of claim differentiation suggests that in the context of the broader, independent Claim 1, “parameter or attribute” would thus include reference to “a descriptor” of the portion of the data block. *See also* '477 Patent at Claims 15, 28 (“wherein a descriptor is associated with the one or more compressed data blocks that indicates the selected one or more asymmetric data compression encoders.”).

The Court finds that no construction is necessary for the phrase “parameter or attribute of at least a portion of a data block.”

4. Terms Google Defendants Argue Are Indefinite

Term	Realtime’s Proposed Construction	Google Defendants’ Proposed Construction
“asymmetric data compression” ('535 Patent Claim 1, '477 Patent Claims 1, 16, 20)	“a compression algorithm in which the execution times for compression and decompression differ significantly”	Indefinite
“slow compress encoder” / “fast decompress decoder” ('535 Patent Claim 14)	No construction necessary	Indefinite

Google Defendants argue that the terms “asymmetric data compression” and “slow compress encoder” / “fast decompress decoder” are indefinite. The Court finds it appropriate to consider these indefiniteness disputes together because they relate to similar disputes regarding the intrinsic evidence and terms of degree.

Google Defendants’ position appears to be that a person of skill in the art would be unable to understand the meaning of these terms with reasonable certainty because they would not know how to classify when compression is “asymmetric,” “fast,” or “slow.” *See, e.g.* Docket No. 74 at 5, 6. The specification states:

In the following description of preferred embodiments, two categories of compression algorithms are defined—an “asymmetrical” data compression algorithm and a “symmetrical[”] data compression algorithm[]. ***An asymmetrical data compression algorithm is referred to herein as one in which the execution time for the compression and decompression routines differ significantly.*** In particular, with an asymmetrical algorithm, either the compression routine is slow and the decompression routine is fast or the compression routine is fast and the decompression routine is slow. ***Examples***

of asymmetrical compression algorithms include dictionary-based compression schemes such as Lempel-Ziv.

On the other hand, a “symmetrical” data compression algorithm is referred to herein as one in which the execution time for the compression and the decompression routines are substantially similar. Examples of symmetrical algorithms include table-based compression schemes such as Huffman. For asymmetrical algorithms, the total execution time to perform one compress and one decompress of a data set is typically greater than the total execution time of symmetrical algorithms. But an asymmetrical algorithm typically achieves higher compression ratios than a symmetrical algorithm.

’535 Patent at 9:60-10:14 (emphasis added).

Regarding the terms “slow compress encoder” and “fast decompress encoder,” the claim language itself also supports the conclusion that a person of skill in the art would understand the meaning of these claim phrases with reasonable certainty. Claim 14 of the ’535 Patent states:

14. A method, comprising:

determining a parameter or attribute of at least a portion of a data block;
selecting an access profile from among a plurality of access profiles based upon the determined parameter or attribute; and
compressing the at least the portion of the data block with one or more compressors utilizing information from the selected access profile to create one or more compressed data blocks, the information being indicative of the one or more compressors to apply to the at least the portion of the data block,
wherein the one or more compressors utilize at least *one slow compress encoder* and at least *one fast decompress decoder*, and
wherein compressing the at least the portion of the data block with the at least one slow compress encoder takes more time than decompressing the at least the portion of the data block with the at least one fast decompress decoder if the time were measured with the at least one slow compress encoder and the at least one fast decompress decoder running individually on a common host system.

’535 Patent at Claim 14 (emphasis added). Google Defendants’ indefiniteness arguments do not sufficiently explain why this claim language is insufficient to inform the meaning of these terms, and are rejected.

Regarding the term “asymmetric data compression,” as stated, the specification explains that “*asymmetrical data compression algorithm is referred to herein as one in which the execution time for the compression and decompression routines differ significantly.*” ’535

Patent at 9:63-66. The specification then provides Lempel-Ziv compression algorithms as examples of schemes involving asymmetrical data compression. *Id.* at 10:2-4. Defendants' expert, Richardson, provides some thoughtful opinions regarding the term "asymmetric data compression" and the indefiniteness issue. Richardson states, for instance,

[i]t is true that a person of skill in the art would likely refer to some implementations of Huffman coding as "symmetric" because the times for compression and decompression (when both compression and decompression routines are running on the same system and the routines are designed in a similar way) are likely to be similar, and would likely refer to Lempel-Ziv coding as asymmetric because the time for compression would typically be over twice as long as the time for decompression (again, when both routines are running on the same system and when both routines are designed in a similar way). There is, however, uncertain area between the minor differences in compression and decompression times that a person of ordinary skill in the art would associate with symmetric algorithms and the large differences that such a person would associate with asymmetric algorithms. There is no recognized way to classify compression algorithms as symmetric or asymmetric when the differences between compression and decompression times are not as stark as with, for example, Lempel-Ziv coding In my experience, while persons of ordinary skill in the art do use the term "asymmetric" to refer to compression algorithms where the differences in execution time between compression and decompression are large, I know of no accepted standard specifying the extent of difference in execution time at which an algorithm crosses over from being deemed symmetric to being deemed asymmetric.

Richardson Decl., Docket No. 69-2 ¶ 55. Richardson does not suggest that asymmetric data compression is a coined term in the context of the Fallon Patents. Indeed, Richardson suggests that "persons of ordinary skill in the art *do* use the term 'asymmetric'" to refer to certain types of compression algorithms, *i.e.* "where the differences in execution time between compression and decompression are large." *See id.*

Although Richardson asserts that there is no accepted standard for identifying when an algorithm should be deemed asymmetric, on the current record, the Court declines to find that a technical term known and used by persons of skill in a particular field of technology is indefinite. Richardson has not identified an exemplary algorithm and asserted that two persons of skill might use different methods or otherwise disagree in determining whether that algorithm is asymmetric. At most, he presents one example that he argues "could not readily be categorized as 'symmetric' or 'asymmetric' by a person of ordinary skill in the art." *Id.* But this is a different

assertion/inquiry, and the Court is not persuaded that it provides clear and convincing evidence that this technical phrase is indefinite.

The Court finds that Google Defendants have not at this time presented clear and convincing evidence that the terms “asymmetric data compression,” “slow compress encoder,” or “fast decompress encoder” are indefinite. The Court finds that no construction is necessary for these terms on the current record. In doing so, the Court rejects Plaintiff’s proposed construction for the term “asymmetric data compression,” even though it is supported by the intrinsic record, such that the focus is on the understanding of the claim term to a person of skill in the art at the time of the invention.

5. “pending requests for data transmission” (’046 Patent Claims 1, 23)

Realtime’s Proposed Construction	Google Defendants’ Proposed Construction
No construction necessary	“requests to transmit data to a remote location that have not been fulfilled”

The phrase “pending requests for data transmission” appears in Claim 1 of the ’046 Patent, which states, *inter alia*,

1. A method comprising:

- compressing data using a first compression routine providing a first compression rate, wherein the first compression routine comprises a first compression algorithm;
- tracking the throughput of a data processing system to determine if the first compression rate provides a throughput that meets a predetermined throughput threshold, ***wherein said tracking throughput comprises tracking a number of pending requests for data transmission***[.]

’046 Patent at Claim 1 (emphasis added). Claim 23 is a system claim that similarly refers to “a controller for tracking throughput and generating a control signal to select a compression routine based on the throughput, wherein said tracking throughput comprises tracking a number of ***pending requests for data transmission***.” *Id.* at Claim 23 (emphasis added). Notably, other claims in the ’046 Patent refer to, for example, “pending requests for data transmission ***over a communication channel***.” *See, e.g. id.* at Claim 19; *see also id.* at Claims 26, 29.

Google Defendants support their argument that the term “pending requests for data

transmission” must be construed to require requests “to transmit data to a remote location” based on references to the patent specification. *See* Docket No. 69 at 22-23. Plaintiff argues that Google Defendants are impermissibly narrowing the meaning of the term and, in any event, Google Defendants’ cited portions of the patent specification do not support their position. *See, e.g.* Docket No. 73 at 9.

Google Defendants’ cited portions of the specification provide, for instance, that

[i]n [an] aspect [of the present invention], the system comprises a data transmission controller for controlling the compression and transmission of compressed data, as well as the decompression of compressed data received over a communication channel. ***The system throughput tracked by the controller comprises a number of pending transmission requests over the communication channel.***

’535 Patent at 8:14-27 (emphasis added). Elsewhere, the patent specification states:

The data compression system **12** preferably operates in real-time (or substantially real-time) to compress data to be stored on the storage device **14** and to decompress data that is retrieved from the storage device **14**. In addition, ***the compression system 12 may receive data (compressed or not compressed) via an I/O (input/output) port 16 that is transmitted over a transmission line or communication channel from a remote location,*** and then process such data (e.g., decompress or compress the data). The compression system **12** may further transmit data (compressed or decompressed) via the I/O port **16** to another network device for remote processing or storage.

id. at 10:61-11:5 (emphasis added); *see also id.* at 16:18-36. In yet another passage, the specification states:

It is to be appreciated that the present invention may be implemented in any data processing system, device, or apparatus using data compression. For instance, ***the present invention may be employed in a data transmission controller in a network environment to provide accelerated data transmission over a communication channel*** (i.e., effectively increase the transmission bandwidth by compressing the data at the source and decompressing data at the receiver, in real-time).

id. at 14:50-57 (emphasis added).

At the hearing, Google Defendants reiterated their position, including by attempting to draw a distinction between the asserted claims of the ’477 Patent and the asserted claims of the ’046 Patent. Google Defendants’ argument assumes certain scope differences between the claims of these two patents (that the Court is not particularly persuaded) is reflected in the claim language

itself. The Court is not otherwise particularly persuaded by Google Defendants’ argument.

Considering Google Defendants’ cited passages, the Court is not convinced that they support importing a requirement for *remote* transmission into Claims 1 and 43 of the ’046 Patent. As noted, these two particular claims do not require transmission over a communication channel. Moreover, Google Defendants’ cited passages do not demonstrate lexicography or that the patent applicant intended to limit the meaning of these claim terms.⁶ Notably, the parties do not suggest that the phrase “pending requests for data transmission” includes coined terms.

The Court finds that no construction is necessary for the phrase “pending requests for data transmission.”

6. “video data compression encoders” (’477 Patent Claims 20, 22)

Realtime’s Proposed Construction	Google Defendants’ Proposed Construction
No construction necessary	“encoders specifically for the compression of video data”

Although each party is somewhat cagey in presenting its arguments regarding the meaning of the term “video data compression encoders,” the Court gleans that the dispute is over whether an encoder must be “specifically for” the compression of video data, as Google Defendants assert, or can simply be any “encoder that compress[es] video data,” as Plaintiff asserts. *See* Docket No. 73 at 10. Both parties assert that their proposal represents the term’s plain meaning. *See* Docket No. 74 at 10.

Claim 20 of the ’477 Patent states, *inter alia*,

20. A system, comprising:

a plurality of *video data compression encoders*;
wherein *at least one of the plurality of video data compression encoders*

⁶ The Court acknowledges that *explicit* lexicography or *explicit* disavowal are not required for a patent applicant to express its intent to limit the meaning of a claim term, and further that claim terms must be read in the context of the intrinsic record. The Court simply finds that in the circumstances presented, Google Defendants have not shown that the patent applicant limited the meaning of the phrase “data transmission” itself to require remote transmission in the context of the ’046 Patent claims, particularly where that phrase does not always appear in conjunction with other phrases like “communication channel.” In some claims of the ’046 Patent, the patent applicant referred to a “communications channel,” and in other claims, the patent applicant did not. In addition to the other analysis provided here and in the tentative ruling, the Court finds that this difference supports finding that “data transmission” is not always necessarily limited to remote transmission in the context of the ’046 Patent (and further supports that the claims of the ’477 Patent are not necessarily limited to the opposite example of internal transmission of data (*see, e.g.* ’477 Patent at Claim 27)).

is configured to utilize an asymmetric data compression algorithm, and wherein ***at least one of the plurality of video data compression encoders*** is configured to utilize an arithmetic data compression algorithm, wherein ***a first video data compression encoder of the plurality of video data compression encoders*** is configured to compress at a higher compression ratio than a second data compression encoder of the plurality of data compression encoders[.]

'477 Patent, Claim 20 (emphasis added). Claim 22 depends from Claim 20 and states:

22. The system of claim 20, wherein the selected one or more ***video data compression encoders*** are configured to compress one or more data blocks containing video data for different data transmission rates measured in bits per second to produce a plurality of compressed data blocks.

Id. at Claim 22 (emphasis added).

In his expert declaration, Defendants' expert, Richardson, spends the majority of his opinions relating to this term implicitly suggesting that it is not supported by the written description. However, in one conclusory sentence, he states: "In the absence of guidance from the specification, a person of ordinary skill in the art would understand that 'video data compression encoders' refers to an encoder specifically for the compression of video data." Richardson Decl., Docket No. 69-2 ¶ 76. He then provides examples of encoders designed for video data. *Id.*

Plaintiff's expert, Zeger, for his part, simply states that he "agree[s] with Realtime that there is no need to construe this term," *see* Expert Declaration of Dr. Kenneth Zeger ("Zeger Decl."), Docket No. 70-2 ¶ 36, and then spends a cursory paragraph complaining about the (lack of) evidence to support Google Defendants' interpretation of the term, *see id.* ¶ 37.

At the hearing, Google Defendants provided a helpful analogy. They explained that there is a difference between a knife that can, incidentally, be used to cut steak and a "steak knife." In the example of the steak knife, someone would understand it to be a type of knife specifically designed for cutting steak and thus possibly having particular features compared to a broader category of types of knives (although of course, a steak knife can also be used to cut things besides steak). Moreover, even though a butter knife might also be used to cut steak, a person would be unlikely to refer to a butter knife as a "steak knife." Google Defendants used this analogy as a launching point to explain that because the adjective "video data compression" is being used to modify "encoder," the full phrase should similarly be understood as referring to a smaller category of encoders specifically for video data compression encoding (although as the Court understands

the analogy, if the video data compression encoder also happens to be able to encode things besides video data, that does not prevent it from being a video data compression encoder).

A footnote in the tentative order requested that the parties address certain other claims of the '477 Patent in the discussion of this term. In particular, Claim 6 of the '477 Patent refers to “[t]he system of claim 1, wherein at least one of the plurality of different asymmetric data compression encoders is configured to utilize a standardized data compression *algorithm capable of compressing video data.*” '477 Patent at Claim 6. Although ultimately not discussed at the hearing, the different phrases “algorithm capable of compressing video data” and “video data compression encoder” in different claims suggest to the Court that the patent applicant may have intended different claim scope in these two limitations. In other words, the patent applicant knew how to refer to a broader category of encoders or “algorithms *capable of* compressing video,” and chose not to do so in Claims 20 and 22 of the '477 Patent. Instead, the patent applicant referred to the phrase “video data compression encoder,” where general English grammar would support limiting the noun based on the modifying adjective. The fact that encoders specific for the compression of video data do indeed exist is another data point that that Court takes into consideration in its determination. Richardson Decl., Docket No. 69-2 ¶ 76.

For these reasons, the Court would construe the term “video data compression encoders” as “encoders specifically for the compression of video data.”

7. “processor” terms ('477 Patent Claims 1, 20; '907 Patent Claim 1)

Term	Realtime’s Proposed Construction	Adobe’s ⁷ Proposed Construction
“one or more processors configured to . . . ” ('477 Patent Claims 1, 20)	No construction necessary	<p>Governed by 35 U.S.C. § 112, ¶ 6.</p> <p>Function: determine one or more data parameters, at least one of the determined one or more data parameters relating to a throughput of a communications channel [measured in bits per section]; and select one or more [asymmetric/video] data compression encoders from among a plurality of different [asymmetric/video] data compression encoders based upon, at least in part, the determined one or more data parameters.</p> <p>Corresponding structure: Indefinite.</p>

⁷ At the hearing, Google Defendants stated that they “did not disagree” with Adobe’s position regarding the meaning of these claim terms.

		No structure provided.
“a processor configured . . . ” (’907 Patent Claim 1)	No construction necessary	Governed by 35 U.S.C. § 112, ¶ 6. Function: (1) analyze one or more data parameters from one or more data blocks containing video data, wherein at least one data parameter relates to an expected or anticipated throughput of a communications channel; (2) select two or more different data compression routines from among a plurality of different data compression routines based upon, at least in part, the one or more data parameters relating to the expected or anticipated throughput of the communications channel Corresponding structure: Indefinite. No structure provided.

Claim 1 of the ’477 Patent states

- 1. A system, comprising:
 - ...
 - one or more processors configured to:
 - determine one or more data parameters, at least one of the determined one or more data parameters relating to a throughput of a communications channel measured in bits per second; and
 - select one or more asymmetric data compression encoders from among the plurality of different asymmetric data compression encoders based upon, at least in part, the determined one or more data parameters.

’477 Patent, Claim 1. Claim 20 of the ’477 Patent is also an independent claim for “[a] system” that includes substantially similar limitations with respect to “one or more processors configured to” See *id.* at Claim 20.

Claim 1 of the ’907 Patent states, *inter alia*,

- 1. A system comprising:
 - ...
 - a processor configured:
 - to analyze one or more data parameters from one or more data blocks containing video data, wherein at least one data parameter relates to an expected or anticipated throughput of a communications channel; and

to select two or more different data compression routines from among a plurality of different data compression routines based upon, at least in part, the one or more data parameters relating to the expected or anticipated throughput of the communications channel.

'907 Patent, Claim 1. The parties dispute whether these “processor” phrases are governed by 35 U.S.C. § 112, ¶ 6.

In referring to one or more processors, these disputed claims do not use the word “means.” “Presumptively, therefore, § 112, ¶ 6 does not apply to the limitations.” *Zeroclick, LLC v. Apple Inc.*, 891 F.3d 1003, 1007 (Fed. Cir. 2018). Adobe argues that the presumption is overcome because the claims only describe the processors in functional terms. *See, e.g.* Docket No. 74 at 11. However, like the patent challenger in *Zeroclick*, Adobe does not offer any evidence to show that a person of ordinary skill in the art would not understand the word “processor” itself to connote a class of structures. *Zeroclick*, 891 F.3d at 1007-08 (“Apple argued that the limitations must be construed under § 112, ¶ 6, but provided no evidentiary support for that position. Accordingly, Apple failed to carry its burden, and the presumption against the application of § 112, ¶ 6 to the disputed limitations remained un rebutted.”).

Moreover, Plaintiff’s expert submits opinions, including by reference to dictionary definitions, to support the conclusion that a person of ordinary skill in the art would understand the meaning of the term “processor.” *See Zeger Decl.*, Docket No. 70-2 ¶¶ 38-40. Zeger states, for instance:

A person of ordinary skill would readily understand that “processor” . . . as used in the patents connotes a specific structure: the central processing unit (CPU) of a computer that processes data, comprising an instruction control unit and an arithmetic unit. For example, the IEEE technical dictionary defines “processor” as: “A device that interprets the executes instructions, consisting of at least an instruction control unit and an arithmetic unit.” *See Ex. B [Docket No. 70-2 at 51], The Authoritative Dictionary of IEEE Standards Terms, 7th ed., 2000 at 872. [footnote omitted].*

Id. ¶ 38.

Adobe has not presented any evidence to support the assertion that the term “processor” as it is used in the claims and understood by a person of ordinary skill in the art would not be understood as a sufficiently definite meaning for structure. *Williamson*, 792 F.3d at 1349 (“[t]he standard is whether the words of the claim are understood by persons of ordinary skill in the art to

have a sufficiently definite meaning as the name for structure.”). Because Adobe has failed to cite any evidence to overcome the presumption against means-plus-function claiming when the word “means” is not used, and indeed Plaintiff has presented evidence to the contrary, 35 U.S.C. § 112, ¶ 6 is not applied to the “processor” terms. Adobe has not offered an alternative proposed construction for these terms, and they will not be construed.

8. “quantizer” (R777 Patent, Claim 11)

Realtime’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary	“a hardware- or a software-controlled processor that reduces the quantity of information used to represent a video signal by mapping input values from a large set to output values in a smaller set”

The disputed term “quantizer” appears in Claim 11 of the R777 Patent. Claim 11 of the R777 Patent states, *inter alia*,

- 11. A coder for coding a video signal using hybrid coding, comprising:
 - ...
 - a quantizer that quantizes the prediction error signal in order to establish quantized values representing samples or coefficients, wherein the prediction error signal includes a plurality of subblocks[.]

Plaintiff argues that the R777 Patent uses the term “quantizer” consistent with its plain and ordinary meaning and, on that basis, asserts that the term need not be construed. *See, e.g.* Docket No. 73 at 14. Defendants assert that their proposed construction represents the plain meaning of the term and that construction is necessary to aid the fact-finder. *See, e.g.* Docket No. 74 at 14-15.

Defendants’ proposed construction is taken verbatim from a statement in the reexamination proceedings for the R777 Patent. In remarks accompanying certain claim amendments, the patent applicant stated: “a ‘quantizer’ is a well-known term of art of video signal coding for a structure [that] could be implemented by hardware or a software-controlled processor, that reduces the quantity of information used to represent a video signal.” R777 Patent Prosecution History, Applicant Amendment and Remarks (Sept. 5, 2017), Docket No. 69-14 at 7-8. Defendants do not identify this passage from the reexamination prosecution history as an instance demonstrating

prosecution history disclaimer. Nor could they. As Plaintiff notes, the patent applicant stated that a quantizer “*could be* implemented by hardware or a software-controlled processor.” *See id.*

In otherwise describing their position regarding the meaning of the term “quantizer,” Defendants state:

Multiple technical dictionaries confirm—and Realtime’s expert does not appear to context, *see* Zeger Decl. ¶ 51—that “quantization” is the process of mapping input values from a large set to output values in a smaller set in order to reduce the quantity of information used to represent a signal.

Docket No. 69 at 32 (citing Richardson Decl. ¶ 90). In arguing that no construction of the term “quantizer” is necessary, Plaintiff similarly asserts that a person of skill in the art would know that the term means “an encoder that maps input values (typically from a larger set) to output values (typically in a larger set).” Docket No. 73 at 14 (citing Zeger Decl. ¶ 51); *see also* R777 Patent Prosecution History, Notice of Allowability (Nov. 7, 2017), Docket No. 69-15 at ECF10-11 (“The examiner acknowledges that by definition a quantizer reducing [sic] the number or specifically, is the process of mapping input values from a large set (often a continuous set) to output values in a (countable) smaller set.”).

Although the Court agrees with Defendants that construction of the term “quantizer” is necessary to aid the fact-finder, it also agrees with Plaintiff that Defendants’ proposed construction impermissibly treats a portion of the prosecution history as definitional.

Based on the parties’ other statements regarding their understanding of the plain meaning of the term “quantization” as informed by their experts, the term “quantizer” is construed as “an encoder that maps input values from a large set to output values in a smaller set.”

9. “control means for . . .” (R777 Patent, Claim 11)

Realtime’s Proposed Construction	Defendants’ Proposed Construction
<p>Governed by 35 U.S.C. § 112 (f).</p> <p>Function: calculating a first quantization efficiency of at least one subblock of the plurality of subblocks; setting the quantized values of the at least one subblock to all zeroes; calculating a second quantization efficiency for the at least one subblock while all of the quantized values are zeroes; selecting which of the first and second</p>	<p>Governed by 35 U.S.C. § 112 (f).</p> <p>Function: calculating a first quantization efficiency of at least one subblock of the plurality of subblocks; setting the quantized values of the at least one subblock to all zeroes; calculating a second quantization efficiency for the at least one subblock while all of the quantized values are zeroes; selecting which of the first and second</p>

<p>quantization efficiencies is a higher efficiency; and selecting, for further proceeding, the at least one subblock with the quantized values prior to setting the quantized values of the at least one subblock to all zeroes if the first quantization efficiency is higher and selecting the at least one subblock with the quantized values set to zero, for further proceeding, if the second quantization efficiency is higher</p> <p>Corresponding structure: encoder, and equivalents thereof</p>	<p>quantization efficiencies is a higher efficiency; and selecting, for further proceeding, the at least one subblock with the quantized values prior to setting the quantized values of the at least one subblock to all zeroes if the first quantization efficiency is higher and selecting the at least one subblock with the quantized values set to zero, for further proceeding, if the second quantization efficiency is higher</p> <p>Corresponding Structure: an encoder that performs the algorithm of FIG. 3 of the R777 Patent and equivalents thereof</p>
--	---

Claim 11 of the R777 Patent states, *inter alia*,

11. A coder for coding a video signal using hybrid coding, comprising:

...

control means for:

- calculating a first quantization efficiency of at least one subblock of the plurality of subblocks;
- setting the quantized values of the at least one subblock to all zeroes;
- calculating a second quantization efficiency for the at least one subblock while all of the quantized values are zeroes;
- selecting which of the first and second quantization efficiencies is a higher efficiency; and
- selecting, for further proceeding, the at least one subblock with the quantized values prior to setting the quantized values of the at least one subblock to all zeroes if the first quantization efficiency is higher and selecting the at least one subblock with the quantized values set to zero, for further proceeding, if the second quantization efficiency is higher.

R777 Patent at Claim 11 (emphasis added). The parties agree that the “control means for” limitation is governed by 35 U.S.C. § 112 (f). They also agree that the claimed function for this means-plus-function term includes the five listed limitations recited in the claim for calculating quantization efficiencies, setting values of a particular subblock to zero, selecting between quantization efficiencies, and selecting between particular subblocks for further proceeding. The

parties' sole disagreement for this term relates to the corresponding structure.⁸

Plaintiff argues that the corresponding structure for the term should cover “the corresponding ‘encoders’ . . . disclosed in the patent specification and their equivalents.” Docket No. 73 at 14. Although Plaintiff does not include citations to the specification in its proposed construction to support its position, Plaintiff’s opening claim construction brief refers to Figure 2 of the R777 Patent and accompanying statements in the specification (*see* R777 Patent at 9:45-11:29); Figure 3 of the R777 Patent and accompanying statements in the specification (*see id.* at 11:21-12:20); and other portions of the specification (*see id.* at 9:2-20). Docket No. 70 at 12-14. Defendants argue that the corresponding structure for the term is limited only to the specific “encoder that performs the algorithm of FIG. 3 of the R777 Patent.” Docket No. 69 at 30-31. Defendants’ position is based on a similar determination reached by the PTAB in an IPR institution decision and statements in the prosecution history. *Id.* Plaintiff waves away these arguments in its responsive claim construction brief and focuses on an argument that the corresponding structure for this term should not be limited to an algorithm. Docket No. 73 at 13-14 (arguing in part that the reexamination prosecution history is not applicable because a different claim interpretation standard is applied).

During reexamination proceedings, the patent examiner stated the position that the “control means for . . .” term was a means-plus-function term. *See* R777 Patent Prosecution History, Office Action (June 7, 2017), Docket No. 69-12 at 10, 11-12. The examiner further stated:

[A]fter a claimed phrase has been shown to invoke 35 U.S.C. § 112 6th paragraph, the next step is to determine the corresponding structure, material, or acts described in the specification. With reference to figure 3 and col. 11, line 11-col. 12, line 2, the specification discloses an algorithm for quantization In light of the above citations, the examiner considers the structure corresponding to the claimed control means to be an encoder along with the algorithm disclosed in figure 3.

Id. at 11-12. There is no indication that the patent applicant responded to the examiner’s statements by identifying the other portions of the patent specification that Plaintiff identifies now, or otherwise asserting that the corresponding structure need not be limited to an algorithm.

⁸ Although the parties apparently originally disputed whether this claim phrase is definite (and Defendants’ opening brief suggests in a sentence that Adobe was maintaining an indefiniteness challenge, *see* Docket No. 69 at 30), in Defendants’ responsive claim construction brief, Adobe states, “Adobe told Realtime over a month before the deadline for filing opening briefs that it would withdraw its indefiniteness contention.” Docket No. 74 at 13 (footnote omitted).

However, as Plaintiff explained at the hearing, “it is the applicant, not the examiner, who must give up or disclaim subject matter that would otherwise fall within the scope of the claims.” *Sorensen v. Int’l Trade Comm’n*, 427 F.3d 1375, 1379 (Fed. Cir. 2005). Here, Defendants have not identified – and the Court is not aware of – statements made by the patent applicant adopting the examiner’s position and disclaiming claim scope for the corresponding structure relating to this claim term.

Plaintiff’s responsive claim construction brief appears to concede that Figure 2 and the other passages of the specification that it references besides Figure 3 do not disclose an algorithm for performing all of the recited functions in the claim. *See, e.g.* Docket No. 73 at 13; *see also* Docket No. 70 at 13 (suggesting an acknowledgement that the final “selecting” limitation is not explicitly disclosed in the specification with respect to Figure 2). Plaintiff argues that the corresponding structure need not include an algorithm because algorithms are only required “where the corresponding structure under § 112(6) is a general-purpose computer or a microprocessor.” *Id.* Plaintiff argues that because the corresponding structure is an “encoder,” the requirement for an algorithm does not apply. *Id.*

The Federal Circuit has explained that:

[i]n cases . . . involving a special purpose computer-implemented means-plus-function limitation, “this court has consistently required that the structure disclosed in the specification be more than simply a general purpose computer or microprocessor.” *Aristocrat Techs. Austl. Pty Ltd. v. Int’l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008). We require that the specification “disclose an algorithm for performing the claimed function.” *Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1367 (Fed. Cir. 2008); *Aristocrat*, 521 F.3d at 1333 (“Thus, in a means-plus-function claim ‘in which the disclosed structure is a computer, or microprocessor, programmed to carry out an algorithm, the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm.’” (quoting *WMS Gaming, Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999))). The specification can express the algorithm “in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure.” *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008) (internal citation omitted). Simply disclosing software, however, “without providing some detail about the means to accomplish the function[,] is not enough.” *Id.* at 1340–41 (citation omitted).

Noah Sys., Inc. v. Intuit Inc., 675 F.3d 1302, 1312 (Fed. Cir. 2012).

Plaintiff's position assumes that an encoder connotes a particular structure, class of structures, or algorithms. No evidence has been submitted to support this assertion, or moreover, an assertion that any off-the-shelf encoder would be able to perform the functions of the claim. *See, e.g. id.* at 1312 n.9 (“Because the [asserted] patent requires a special purpose computer specifically programmed to carry out the recited functions associated with the ‘access means’ limitation, this case is controlled by *Aristocrat* and its progeny and not *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303 (Fed. Cir. 2011), which is applicable only in situations involving functions that can be accomplished by ‘any general purpose computer without special programming.’ *In re Katz*, 639 F.3d at 1316.”). On such a limited record, the Court rejects the notion that an algorithm is not required for the corresponding structure of the claimed “control means . . .” term.

At the hearing, Plaintiff reiterated an argument that, because the structure provided in Figure 3 also refers to additional functions that are not recited in the claims, only portions of – and not the entirety of – the structure described with respect to Figure 3 in the specification should be required in the construction of the “control means . . .” term. Plaintiff's cited legal authority for this assertion, presented in its responsive brief, does not adequately support its position. *Telcordia Techs., Inc. v. Cisco Sys., Inc.*, 612 F.3d 1365, 1376 (Fed. Cir. 2010) (“While corresponding structure need not include all things necessary to enable the claimed invention to work, it must include all structure that actually performs the recited function.”). Based on the Court's review, older Federal Circuit cases appear to suggest that if the disclosed structure in the specification could not operate without certain components, even if those components are not “clearly linked” to a claimed function, they should still be included in a construction of the term as integral to performing the recited function. For instance, in *Asyst*, after finding in the context of another means-plus-function claim limitation that it need not include “communication line 51” because it did not perform the claimed function, the Federal Circuit stated:

The “fourth means” assigns two functions to the means – controlling activities on the workstation and transmitting information to the transportable container. The written description makes clear that the first function is performed by the local process controller 20 and the second function is performed by the communication means 50. The “means” that performs those two functions therefore consists of the entire complex comprising local process controller 20 and communication means 50. Because the “fourth means” encompasses both the local process controller 20 and the

communication means 50, it also necessarily encompasses structure that connects the two, i.e., communication line 51.

Asyst Techs., Inc. v. Empak, Inc., 268 F.3d 1364, 1372 (Fed. Cir. 2001).⁹

Here, Defendants have not argued that every step recited with respect to Figure 3 in the specification is integral to perform the claimed functions provided for the “control means . . .” term. Moreover, Zeger presents opinions suggesting that only steps 310, 312, 318, and 320 are clearly linked to the recited function. Zeger Decl., Docket No. 70-2 ¶ 43. The Court finds that no evidence or argument has been presented that supports the conclusion that the other steps described in the specification are similarly required to constitute part of the corresponding structure for this claim term.

Having considered the arguments presented, the term “control means for . . .” is construed as follows:

Governed by 35 U.S.C. § 112 (f).

Function: “calculating a first quantization efficiency of at least one subblock of the plurality of subblocks; setting the quantized values of the at least one subblock to all zeroes; calculating a second quantization efficiency for the at least one subblock while all of the quantized values are zeroes; selecting which of the first and second quantization efficiencies is a higher efficiency; and selecting, for further proceeding, the at least one subblock with the quantized values prior to setting the quantized values of the at least one subblock to all zeroes if the first quantization efficiency is higher and selecting the at least one subblock with the quantized values set to zero, for further proceeding, if the second quantization efficiency is higher”

Corresponding Structure: an encoder that performs at least steps 310, 312, 318, and 320 of the algorithm of FIG. 3 of the R777 Patent (*see* R777 Patent at Fig. 3, 11:21-12:20) and equivalents thereof.

⁹ A decision from the Northern District of California similarly explained:

Section 112 paragraph 6 does not “permit incorporation of structure from the written description beyond that necessary to perform the claimed function.” *Asyst Technologies, Inc. v. Empak, Inc.*, 268 F.3d 1364, 1369-70 (Fed. Cir. 2001) (quoting *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1257-58 (Fed. Cir. 1999)). “Structural features that do not actually perform the recited function do not constitute corresponding structure and thus do not serve as claim limitations.” *Id.* at 1370 (citing *Chiuminatta Concrete Concepts, Inc. v. Cardinal Indus., Inc.*, 145 F.3d 1303, 1308-09 (Fed. Cir. 1998)). By contrast, structure that is “integral to performing the stated function” does constitute corresponding structure. *Gemstar-TV Guide Intern., Inc. v. International Trade Com’n*, 383 F.3d 1352, 1362 (Fed. Cir. 2004).

Sun Microsystems, Inc. v. Network Appliance, Inc., 710 F. Supp. 2d 925, 937 (N.D. Cal. 2008).

10. “decode” / “decoding” (’298 Patent, Claims 1, 11)

Realtime’s Proposed Construction	Defendants’ Proposed Construction
No construction necessary	“recover/recovering information represented by data that was previously encoded”

The terms “decode” and “decoding” appear in Claims 1 and 11 of the ’298 Patent. Claim 1 of the ’298 Patent states,

1. A method for processing a video stream of digital images, the method comprising the steps of:
 - receiving the video stream which comprises at least one composite frame (FC), each composite frame containing a pair of stereoscopic digital images (L,R) according to a predetermined frame packing format;
 - generating an output video stream which can be reproduced on a visualization apparatus,
 - receiving metadata which determine an area occupied by one of the two images within said composite frame (FC), said metadata indicating either a geometry of the frame packing format or a frame packing type of said composite frame (FC);
 - determining the area in the composite frame (FC) which is occupied by said one image of the stereoscopic pair within the composite frame based on said metadata;
 - decoding*** only that part of the composite frame (FC) which contains said one image to be displayed, and
 - generating an output frame ***containing said decoded image***.

’298 Patent, Claim 1 (emphasis added).

Claim 11 of the ’298 Patent is also an independent claim, but instead of a method claim, it recites a “video processing device” with components that perform functions similar to those claimed in Claim 1. It recites, *inter alia*,

11. A video processing device for processing video streams of digital images, comprising:
 - ...
 - a decoder*** configured to read metadata which determine an area occupied by one of the two images within said composite frame (FC), wherein said metadata indicate either a geometry of the frame packing format or a frame packing type of said composite frame (FC);

said decoder configured to determine the area in the composite frame (FC) which is occupied by said one image of the stereoscopic pair within the composite frame based on said metadata, *and decode* only that part of the composite frame (FC) which contains the one image to be displayed, wherein the scaler is configured to generate an output frame containing *said decoded image*.

'298 Patent, Claim 11 (emphasis added).

Although Defendants argue that prosecution history disclaimer applies, they cite to excerpts of the prosecution history where the patent applicant was distinguishing prior art over the entire claim phrase “decod[e/ing] only that part of the composite frame (FC) which contains [the/said] one image to be displayed.” *See, e.g.* '298 Patent Prosecution History, Amendment and Response to Office Action (June 16, 2015), Docket No. 69-17 at 7, 11. Because this limitation is in the claim language itself and Defendants have not otherwise sufficiently shown unequivocal disclaimer as to the smaller words “decode” and “decoding” during prosecution, Defendants’ arguments citing to the prosecution history are not persuasive.

Defendants alternatively suggest that their proposed construction is actually not a disclaimer by citing to dictionary definitions that they assert “comport[] with” their proposed construction. Docket No. 69 at 36. In this alternative context, Plaintiff still raises concerns with the phrase “recover/recovering information” in Defendants’ proposal. *See* Docket No. 73 at 15. It is not clear exactly what Plaintiff’s concerns are, particularly where Defendants have agreed that their proposed construction is intended to cover both lossless and lossy data compression/decompression. *See* Docket No. 74 at 15. However, Plaintiff is correct that Defendants’ proposed construction uses terminology that is not actually found in the extrinsic evidence it cites. *See* Docket No. 69 at 36-37. The Court also notes the parties’ choice to request construction of the terms “decode” and “decoding” at this time, but not the term “decoder” in Claim 11 of the '298 Patent or “said decoded image” in both Claim 1 and Claim 11 of the '298 Patent.

Ultimately, given these concerns, including the surrounding context of the claim language itself and the lack of clarity from the parties regarding what they believe to be the actual root dispute regarding the meaning of the terms “decode” and “decoding” (including how that dispute

relates to dispositive issues in this case such as infringement or invalidity contentions),¹⁰ the Court declines Defendants’ insistence to construe these terms at this time.

V. CONCLUSION

For the reasons stated, the Court would adopt the following constructions for the disputed claim terms:

Term	Court’s Construction
“access profile” (’535 Patent Claims 1, 14)	“profile relating to the number and/or frequency at which information is obtained (“read”) or placed (“written”)
“data profile” (’477 Patent Claim 17)	no construction necessary
“parameter or attribute of at least a portion of a data block” (’535 Patent Claims 1, 14)	no construction necessary
“asymmetric data compression” (’535 Patent Claim 1, ’477 Patent Claims 1, 16, 20)	no construction necessary
“slow compress encoder” / “fast decompress decoder” (’535 Patent Claim 14)	no construction necessary
“pending requests for data transmission” (’046 Patent Claims 1, 23)	no construction necessary
“video data compression encoders” (’477 Patent Claims 20, 22)	“encoders specifically for the compression of video data”
“one or more processors configured to . . . ” (’477 Patent Claims 1, 20)	35 U.S.C. § 112, ¶ 6 does not apply; no construction necessary
“a processor configured . . . ” (’907 Patent Claim 1)	35 U.S.C. § 112, ¶ 6 does not apply; no construction necessary
“quantizer” (R777 Patent Claim 11)	“an encoder that maps input values from a large set to output values in a smaller set.”
“control means for . . . ” (R777 Patent Claim 11)	Governed by 35 U.S.C. § 112 (f). Function: “calculating a first quantization efficiency of at least one subblock of the plurality of subblocks; setting the quantized values of the at least one subblock to all zeroes; calculating a second quantization efficiency for the at least one subblock while all of the quantized values are zeroes; selecting which of the first and second quantization efficiencies is a higher efficiency; and selecting, for further

¹⁰ Defendants attempted to further explain their position at the hearing, but it was unclear how Defendants’ arguments were reflected by Defendants’ proposed construction for the term or the disputes the parties had presented for purposes of claim construction briefing. To the extent the dispute becomes relevant at a later date, the Court will address it then.

	<p>proceeding, the at least one subblock with the quantized values prior to setting the quantized values of the at least one subblock to all zeroes if the first quantization efficiency is higher and selecting the at least one subblock with the quantized values set to zero, for further proceeding, if the second quantization efficiency is higher”</p> <p>Corresponding Structure: an encoder that performs at least steps 310, 312, 318, and 320 of the algorithm of FIG. 3 of the R777 Patent (<i>see</i> R777 Patent at Fig. 3, 11:21-12:20) and equivalents thereof.</p>
<p>“decode” / “decoding” (’298 Patent Claims 1, 11)</p>	<p>no construction necessary</p>