IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION

REALTIME DATA, LLC,	§	
	§	
	§	
Plaintiff,	§	**CIVIL ACTION NO. 6:16-CV-00961**
	§	**RWS-JDL**
	§	
v.	§	
	§	
RACKSPACE US, INC., NETAPP, INC., and SOLIDFIRE, INC.,	§	
	§	
	§	
Defendants.	§	

MEMORANDUM OPINION AND ORDER

On June 29, 2016, Plaintiff filed this action for patent infringement. Plaintiff alleges that Defendants NetApp, Inc. and SolidFire, LLC (collectively, "NetApp") infringe six Realtime patents and Defendant Rackspace infringes seven Realtime patents. (Doc. No. 33.) Specifically, Realtime alleges that all Defendants infringe U.S. Patent No. 7,415,530 ("the '530 Patent"); U.S. Patent No. 9,116,908 ("the '908 Patent"); U.S. Patent No. 8,643,513 ("the '513 Patent"); U.S. Patent No. 7,378,992 ("the '992 Patent"); U.S. Patent No. 7,161,506 ("the '506 Patent") and U.S. Patent No. 9,054,728 ("the '728 Patent"). (*Id.*) Realtime alleges that Rackspace additionally infringes U.S. Patent No. 7,358,867 ("the '867 Patent"). (*Id.*)

This claim construction opinion construes disputed claim terms in the Asserted Patents. Realtime has filed an Opening Claim Construction Brief (Doc. No. 128), Defendants have filed a Response (Doc. No. 139), and Realtime has filed a Reply (Doc. No. 145). The parties additionally submitted a Joint Claim Construction Chart pursuant to P.R. 4-5(d). (Doc. No. 148.) On April 27, 2017, the Court held a claim construction hearing. (*See* Doc. No. 157

(Hearing Tr.).) Upon consideration of the parties' arguments and for the reasons stated herein, the Court adopts the constructions set forth below.

OVERVIEW OF THE PATENTS

The Asserted Patents can be categorized into two distinct families: (1) the content compression family, which includes the '992, '513, '506, '728, and '867 Patents; and (2) the data acceleration family, which includes the '530 and '908 Patents. (*See* Doc. No. 128 (Realtime Opening Claim Const. Br.), at 1.) The Court has previously construed terms of the '992, '513, and '728 Patent claims in *Realtime Data LLC v. Actian Corp. et al.*, No. 6:15-cv-463, Doc. No. 362 (E.D. Tex. Jul. 28, 2016) ("*Actian* Order"). The Court also previously construed terms of the '530 and '908 Patent claims in the *Actian* Order as well as in *Realtime Data LLC v. MetroPCS Texas, LLC*, No. 6:10-cv-493, Doc. No. 438 (E.D. Tex. Oct. 1, 2012) ("*MetroPCS* Order").

The content compression patent family relates to systems and methods of data compression using different techniques based on the content of the data. '513 Patent, at Abstract, 3:55-58. The Asserted Patents in the "content compression" patent family are related and have substantially the same specification. Two representative independent claims of the '513 Patent recite:

> 1. A method of compressing a plurality of data blocks, comprising:
>
> analyzing the plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks;
>
> applying the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion;
>
> analyzing a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and

applying the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the characteristic, attribute, or parameter is identified,

wherein the analyzing the plurality of data blocks to recognize when the appropriate content independent compression algorithm is to be applied excludes analyzing based only on a descriptor indicative of the any characteristic, attribute, or parameter, and

wherein the analyzing the data block to recognize the any characteristic, attribute, or parameter excludes analyzing based only on the descriptor.

15. A device for compressing data comprising:

a first circuit configured to analyze a plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks;

a second circuit configured to apply the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion;

a third circuit configured to analyze a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and

a fourth circuit configured to apply the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the any characteristic, attribute, or parameter is identified,

wherein the first circuit is further configured to analyze the plurality of data blocks to recognize when the appropriate content independent compression algorithm is to be applied by excluding analyzing based only on a descriptor indicative of the any characteristic, attribute, or parameter, and

wherein the third circuit is further configured to analyze the data block to recognize the any characteristic, attribute, or parameter by excluding analyzing based only on the descriptor.

’513 Patent, at 26:22–46, 27:32–28:19. Claim 48 of the ’992 Patent recites:

48. A computer implemented method comprising:

receiving a data block;

associating at least one encoder to each one of several data types;

analyzing data within the data block to identify a first data type of the data within the data block;

compressing, if said first data type is the same as one of said several data types, said data block with said at least one encoder associated with said one of said several data types that is the same as said first data type to provide a compressed data block; and

compressing, if said first data type is not the same as one of said several data types, said data block with a default encoder to provide said compressed data block;

wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block.

'992 Patent, *Inter Partes* Reexamination Certificate (Jan. 8, 2014), at 2:7–25. Claim 105 of the '506 Patent recites:

105. A computer implemented method comprising:

receiving a data block in an uncompressed form, said data block being included in a data stream;

analyzing data within the data block to determine a type of said data block; and

compressing said data block to provide a compressed data block;

wherein if one or more encoders are associated to said type, compressing said data block with at least one of said one or more encoders, otherwise compressing said data block with a default data compression encoder, and

wherein the analyzing of the data within the data block to identify one or more data types excludes analyzing based only on a descriptor that is indicative of the data type of the data within the data block.

'506 Patent, *Inter Partes* Reexamination Certificate (Jan. 8, 2014), at 2:50–64. Claim 1 of the '728 Patent recites:

1. A system for compressing data comprising:

a processor;

one or more content dependent data compression encoders; and

a single data compression encoder;

wherein the processor is configured:

to analyze data within a data block to identify one or more parameters or attributes of the data wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block;

to perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified; and

to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified.

'728 Patent, at 26:29–48. Claim 16 of the '867 Patent recites:

16. A method comprising:

receiving a plurality of data blocks;

determining whether or not to compress each one of said plurality of data blocks with a particular one or more of several encoders;

if said determination is to compress with said particular one or more of said several encoders for a particular one of said plurality of data blocks:

compressing said particular one of said plurality of data blocks with said particular one or more of said several encoders to provide a compressed data block;

providing a data compression type descriptor representative of said particular one or more of said several encoders;

outputting said data compression type descriptor and said compressed data block;

if said determination is to not compress said particular one of said plurality of data blocks:

providing a null data compression type descriptor representative of said determination not to compress; and

outputting said null data compression type descriptor and said particular one of said plurality of data blocks.

'867 Patent, Certificate of Correction (Jul. 8, 2008), pages 1–2.

The data acceleration patent family generally relates to systems and methods to accelerate the storage and retrieval of data blocks from a memory device. '530 Patent, at 12:38–40. The two Asserted Patents in the data acceleration patent family also share a common specification. Claim 1 of the '530 Patent is representative and recites:

1. A system comprising:

a memory device; and

a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block and a

> second data block, said data stream is compressed by said data accelerator to provide a compressed data stream by compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form, a first data descriptor is stored on said memory device indicative of said first compression technique, and said first descriptor is utilized to decompress the portion of said compressed data stream associated with said first data block.

'530 Patent, at 18:24–42; *see also Inter Partes* Reexamination Certificate (Aug. 16, 2013) (confirming patentability of Claim 1 and other claims). Claim 1 of the '908 Patent recites:

> 1. A system comprising:
>
> a memory device; and
>
> a data accelerator configured to compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block;
>
> wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form.

'908 Patent, at 18:50–62.

LEGAL STANDARD

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent's intrinsic evidence to define the patented invention's scope. *Id.* at 1313–14; *Bell Atl. Network Servs., Inc. v. Covad*

Commc'ns Group, Inc., 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification, and the prosecution history. *Phillips*, 415 F.3d at 1312–13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003). Claim language guides the Court's construction of claim terms. *Phillips*, 415 F.3d at 1314. "[T]he context in which a term is used in the asserted claim can be highly instructive." *Id.* Other claims, asserted and unasserted, can provide additional instruction because "terms are normally used consistently throughout the patent." *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex. Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning than it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–44 (Fed. Cir. 2001). This presumption does

not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms "where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone." *Teleflex, Inc.*, 299 F.3d at 1325. For example, "[a] claim interpretation that excludes a preferred embodiment from the scope of the claim 'is rarely, if ever, correct." *Globetrotter Software, Inc. v. Elan Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics Corp.*, 90 F.3d at 1583). But, "[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims." *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); *see also Phillips*, 415 F.3d at 1323.

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of the patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent."). The well-established doctrine of prosecution disclaimer "preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution." *Omega Eng'g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). The prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002); *see also Springs Window Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 994 (Fed. Cir. 2003) ("The disclaimer . . . must be effected with 'reasonable clarity and deliberateness.'")

(citations omitted)). "Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover." *Spectrum Int'l v. Sterilite Corp.*, 164 F.3d 1372, 1378–79 (Fed. Cir. 1988) (quotation omitted). "As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution." *Omega Eng'g, Inc.*, 334 F.3d at 1324. Statements in the prosecution history that are subject to multiple reasonable interpretations do not constitute a clear and unmistakable departure from the ordinary meaning of a claim term. *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1332 (Fed. Cir. 2004).

Although "less significant than the intrinsic record in determining the legally operative meaning of claim language," the Court may rely on extrinsic evidence to "shed useful light on the relevant art." *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but "conclusory, unsupported assertions by experts as to the definition of a claim term are not useful." *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

In patent construction, "subsidiary fact finding is sometimes necessary" and the court "may have to make 'credibility judgments' about witnesses." *Teva v. Sandoz*, 135 S.Ct. 831, 838 (2015). In some cases, "the district court will need to look beyond the patent's intrinsic evidence and to consult extrinsic evidence in order to understand, for example, the background science or

the meaning of a term in the relevant art during the relevant time period." *Id.* at 841. "If a district court resolves a dispute between experts and makes a factual finding that, in general, a certain term of art had a particular meaning to a person of ordinary skill in the art at the time of the invention, the district court must then conduct a legal analysis: whether a skilled artisan would ascribe that same meaning to that term *in the context of the specific patent claim under review*." *Id.* (emphasis in original). When the court makes subsidiary factual findings about the extrinsic evidence in consideration of the "evidentiary underpinnings" of claim construction, those findings are reviewed for clear error on appeal. *Id.*

A patent claim may be expressed using functional language. *See* 35 U.S.C. § 112, ¶ 6; *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1347–49 & n.3 (Fed. Cir. 2015) (en banc in relevant portion). Section 112, paragraph 6,[1] provides that a structure may be claimed as a "means . . . for performing a specified function" and that an act may be claimed as a "step for performing a specified function." *Masco Corp. v. United States*, 303 F.3d 1316, 1326 (Fed. Cir. 2002).

But section 112, paragraph 6 does not apply to all functional claim language. There is a rebuttable presumption that section 112, paragraph 6 applies when the claim language includes "means" or "step for" terms, and that it does not apply in the absence of those terms. *Masco Corp.*, 303 F.3d at 1326; *Williamson*, 792 F.3d at 1348. The presumption stands or falls according to whether one of ordinary skill in the art would understand the claim with the functional language, in the context of the entire specification, to denote sufficiently definite structure or acts for performing the function. *See Media Rights Techs., Inc. v. Capital One Fin.*

[1] The America Invents Act renumbered section 112, paragraph 6 to section 112(f). However, because each of the patents at issue in this case was originally filed before September 16, 2012, the Court will refer to this code section by its previous numbering, section 112, paragraph 6.

Corp., 800 F.3d 1366, 1372 (Fed. Cir. 2015) (§ 112, ¶ 6 does not apply when "the claim language, read in light of the specification, recites sufficiently definite structure" (quotation marks omitted) (citing *Williamson*, 792 F.3d at 1349; *Robert Bosch, LLC v. Snap-On Inc.*, 769 F.3d 1094, 1099 (Fed. Cir. 2014))); *Williamson*, 792 F.3d at 1349 (§ 112, ¶ 6 does not apply when "the words of the claim are understood by persons of ordinary skill in the art to have sufficiently definite meaning as the name for structure"); *Masco Corp.*, 303 F.3d at 1326 (§ 112, ¶ 6 does not apply when the claim includes an "act" corresponding to "how the function is performed"); *Personalized Media Commc'ns, L.L.C. v. Int'l Trade Comm'n*, 161 F.3d 696, 704 (Fed. Cir. 1998) (§ 112, ¶ 6 does not apply when the claim includes "sufficient structure, material, or acts within the claim itself to perform entirely the recited function . . . even if the claim uses the term 'means.'" (quotation marks and citation omitted)).

DISCUSSION

I. DISPUTED CLAIM TERMS

a. Compression/Compressing/Compress

Claim Term	Plaintiffs' Proposal	Defendants' Proposal
compression / compressing /compress ('728 cl. 1, 9, 10, 17, 20, 24; '867 cl. 16–17; '908 cl. 1–3, 21, 22, 25; '513 cl. 1, 4, 6, 14, 15, 22; '530 cl. 1, 18; '506 cl. 105; '992 cl. 48)	[representation of / representing / represent] data with fewer bits **Alternative proposed construction:** [reduction of / reducing / reduce] the amount of data required to process, transmit, or store a given quantity of information	encoding input data in an effort to reduce the amount of data required to process, transmit, or store a given quantity of information

Realtime argues that its proposed construction, "representation of data with fewer bits," is effectively the ordinary meaning of the term "compression" and that this construction is supported by the specification. (Doc. No. 128, at 5 (*citing* '530 Patent, at 2:15–19 ("data

compression economizes on data storage and allows more information to be stored for a fixed memory size by representing information more efficiently.")).) "To narrow the scope of the dispute," Realtime also submits an alternative proposal, "[reduction of / reducing / reduce] the amount of data required to process, transmit, or store a given quantity of information." Realtime argues that this construction is likewise consistent with the intrinsic evidence. (*Id.* at 6 (*citing* '513 Patent, at 1:65–67 ("Data compression is widely used to reduce the amount of data required to process, transmit, or store a given quantity of information.")).)

Defendants argue that compression, in the context of the specification, does not always result in less data. (Doc. No. 139, at 3 (*citing* '513 Patent, 2:43–47 ("A further problem is that negative compression may occur when certain data compression techniques act upon many types of highly compressed data. Highly compressed data appears random and ***many data compression techniques will substantially expand, not compress this type of data***.")).) Defendants argue that the specification accounts for the fact that compression algorithms may not result in a smaller data output compared to input. (*Id.* at 4 (citing '513 Patent, 7:58–66 (a compression ratio module determines "if at least one of the encoded data blocks output from the enabled encoders E1 . . . En achieves a compression that exceeds an a priori-specified threshold. As is understood by those skilled in the art, the threshold limit may be specified as any value inclusive of data expansion, no data compression or expansion, or any arbitrarily desired compression limit.")).) Defendants also argue that Claims 16 and 17 of the '728 Patent and Claims 12 and 15 of the '867 Patent support this reading by reciting, for example:

> 16. The system of claim 1, wherein the processor is further configured to output the data block in uncompressed form if the content dependent data compression results in a compressed data block indicative of data expansion.

'728 Patent, at 27:29–31. To support the use of the phrase "encoding input data" in their proposed construction, Defendants argue that the specification equates compression with encoding. (Doc. No. 139, at 6.)

In reply, Plaintiff compares "compressing" to "shredding":

> Running an object through a shredding ***machine*** may not always result in a shredded object, but that does not change the ordinary meaning of 'shred' to one with an aspirational requirement. "Shred" means to "cut," not acting "in an effort to cut." Likewise, running data through a compression ***system (or encoder, algorithm, or technique)*** may not always result in a compressed data, but that does not change the ordinary meaning of "compressing," which is reducing the amount of data.

(Doc. No. 145, at 1.) Plaintiff argues that Defendants' citations are similarly referencing compression techniques, not compression itself, and are thus consistent with this plain understanding of compression. (*Id.*) Plaintiff argues that using the term "encoding" in the construction is unnecessary and likely to confuse the jury. (*Id.* at 3.)

The specifications of the Asserted Patents consistently refer to the term "compression" in its plain and ordinary sense. For instance, the '530 Patent states "data compression economizes on data storage and allows more information to be stored for a fixed memory size by representing information more efficiently." '530 Patent, at 2:15–19. Similarly, the '513 Patent states, "Data compression is widely used to reduce the amount of data required to process, transmit, or store a given quantity of information." '513 Patent, at 1:65-67; *see also* '530 Patent, at 1:50–52. Defendants' argument that compression in the context of the Asserted Patents may not always result in a smaller data output is unpersuasive.

Defendants refer to a section of the '513 Patent that states, "[a] further problem is that negative compression may occur when certain data compression techniques act upon many types of highly compressed data. Highly compressed data appears random and many data compression

techniques will substantially expand, not compress this type of data." '513 Patent, 2:43–47. However, this excerpt from the specification specifically refers to the problem of "negative compression," acknowledging that compression in its normal sense does not refer to expanding data. Further, by stating "many data compression techniques will substantially expand, not compress this type of data," the patentee again uses the term "compress" in a plain and ordinary fashion; that is, juxtaposed against the term "expand."

Defendants also refer to an example repeated several times in the Asserted Patents where a "compression ratio" is calculated for compressed data and compared to a "prior-specified compression ratio threshold." *See, e.g.*, '513 Patent, 7:58–66. The Asserted Patents state "[i]t is to be understood that the threshold limit may be specified as any value inclusive of data expansion, no data compression or expansion, or any arbitrarily desired compression limit." *Id.* Defendants argue that this example acknowledges that compression may not always result in the representation of data with fewer bits. This example merely shows, however, that using an encoder, *i.e.* a compression *technique*, may not always result in actual compression. This is a distinct issue from whether the Asserted Patents have departed from the plain and ordinary meaning of the word "compression." Indeed, the patentee continues to refer to data expansion in this example, rather than assuming that the word compression itself implies the possibility of expansion. This example is not a sufficient basis to depart from the plain meaning of "compression" in the context of the patent claims.

Nor do Claims 16 and 17 of the '728 Patent lead to a different result. These claims recite:

> 16. The system of claim 1, wherein the processor is further configured to output the data block in uncompressed form if the content dependent data compression results in a compressed data block indicative of data expansion.

> 17. The system of claim 1, wherein the processor is further configured to output the data block in uncompressed form if the data compression with the single data compression encoder results in a compressed data block indicative of data expansion.

As with the specification example described above, these claims relate to whether the output of a specific encoder, *i.e.* a specific compression *technique*, is expanded data. Indeed, the claims use the phrase "results in a compressed data block *indicative of* data expansion." They do not say that the compressed data block itself is expanded.

At the hearing, Defendants also argued that Claims 12 and 15 of the '867 Patent show that compression includes expansion in the context of the patents. (*See* Doc. No. 157 (Hearing Tr.), 7:21–8:2.) Claim 12 recites comparing a compression output to a pre-determined threshold. Claim 15 depends from Claim 12 and recites, "wherein said pre-determined threshold is that no expansion occurred." Defendants argue that under the doctrine of claim differentiation, Claim 12 must be broader than Claim 15, and thus must include pre-determined thresholds where data expansion has occurred. This argument is also unpersuasive. Again, whether an encoder results in data expansion is a distinct issue from whether the patentee departed from the plain and ordinary meaning of the term "compression."

After considering the parties' arguments, the Court construes the term "compression"/ "compressing"/ "compress" as "[representation of/ representing/ represent] data with fewer bits."

b. Data Accelerator

Claim Term	Plaintiffs' Proposal	Defendants' Proposal
data accelerator ('908 cl. 1–4, 6; '530 cl. 1–4)	hardware or software with one or more compression encoders Not means-plus-function **Alternative proposed construction, should the term be treated as means-plus-**	*35 U.S.C. § 112(6) term* ***Function**: (1 of '908) compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique,*

	function: **Function:** (’908 patent, cl. 1) compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block; (’530 patent, cl.1) compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different **Structure**: one or more compression encoders, and equivalents thereof	*different from the first compression technique, to provide a second compressed data block; wherein the compressed first and second data blocks are stored on the memory device, and the compression and storage occurs faster than the first and second data blocks are able to be stored on the memory device in uncompressed form; (1 of ’530) compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different, said compressed data stream is stored on said memory device, said compression and storage occurs faster than said data stream is able to be stored on said memory device in said received form* ***Structure**: Element 10 in FIG. 8*

Plaintiff argues that the specification supports its proposed construction of the term “data accelerator.” (Doc. No. 128, at 23 (*citing* ’530 Patent, at Abstract, 5:29–32 (“data storage accelerator includes *one or a plurality* of high speed data *compression encoders* that are configured to compress data.”); *id.* at 4:47–50 (the “invention may be implemented in various forms of *hardware, software,* firmware or a combination thereof.”)).) Plaintiff relies on Dr. Zeger to argue that a person of skill in the art would understand the meaning of the term in the context of the patents. (*See* Doc. No. 128-11 (“Zeger Decl.”), ¶¶42–49.) Plaintiff also argues that Claim 1 of the ’530 Patent further describes that the “data accelerator” “receives input of a data stream, sends output of a compressed data stream, and is coupled to a memory device.” (Doc. No. 128, at 24.) According to Plaintiff, “[a] person of ordinary skill would rely on the

specific input, output, coupling, and objective of the 'data accelerator' to understand the claimed structures." (*Id.*) Plaintiff also argues that Defendants' position is inconsistent with the position they have taken in IPR proceedings, where they have not argued that "data accelerator" was subject to means-plus-function treatment. (*Id.* at 25.)

Defendants argue that the term "data accelerator" was coined by the inventor and that there is not definite structure for the term in the claims. (Doc. No. 139, at 19–20.) Defendants argue that Claim 1 of the '908 Patent does not recite any connections between the "data accelerator" and other claimed elements. (*Id.* at 20.) Likewise, Defendants argue that Claim 1 of the '530 Patent does not provide enough information to inform the structure of the term. (*Id.*) Defendants further argue that the fact that many components in the data accelerator are described as modules further confirms that the data accelerator lacks a definite structure. (*Id.*)

On reply, Plaintiff notes that Defendants initially argued that the term "encoder" was also indefinite, but in their Response brief, withdrew this argument and agreed to Plaintiff's proposal for construing "encoder." (Doc. No. 145, at 8.) Plaintiff argues that the fact that Defendants have acknowledged that an encoder is not subject to means-plus (*i.e.*, has sufficient structure) likewise indicates that the term "data accelerator" has sufficient structure. (*Id.* at 8-9.)

Claim 1 of the '530 Patent recites, *inter alia*,

> a data accelerator, wherein said data accelerator is coupled to said memory device, a data stream is received by said data accelerator in received form, said data stream includes a first data block and a second data block, said data stream is compressed by said data accelerator to provide a compressed data stream . . . said compressed data stream is stored on said memory device . . .

'530 Patent, at 18:24–42; *see also Inter Partes* Reexamination Certificate (Aug. 16, 2013) (confirming patentability of Claim 1 and other claims). On the other hand, Claim 1 of the '908 Patent recites, *inter alia*,

> a data accelerator configured to compress: (i) a first data block . . . and (ii) a second data block . . . wherein the compressed first and second data blocks are stored on the memory device . . .

'908 Patent, at 18:50–62.

The Court previously construed the term "data accelerator" with the construction that Plaintiff proposes here: "hardware or software with one or more compression encoders." *See Actian* Order, at 21–26. However, in *Actian*, neither party submitted a means-plus-function argument.

At the Markman hearing, the parties agreed that the term "data accelerator" is a coined term. (Doc. No. 157 (Hearing Tr.), 31:22–25 ("Realtime does not dispute that the term 'data accelerator' read in a vacuum, just those two words, would not have a commonly understood meaning to a person of ordinary skill in the art.").) The Federal Circuit has recently provided guidance on construing coined terms. *See Advanced Ground Info. Sys., Inc. v. Life360, Inc.*, 830 F.3d 1341, 1346–48 (Fed. Cir. 2016). In *Advanced Ground*, the Federal Circuit construed "symbol generator"—a term that was not used "in common parlance or by persons of skill in the pertinent art to designate structure"—as a means-plus function term. *Id.* at 1348 (*citing Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 1354, 1359 (Fed. Cir. 2004), *overruled on other grounds by Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1348–49 (Fed. Cir. 2015) (en banc)). The Federal Circuit noted that "[i]rrespective of whether the terms 'symbol' and 'generator' are terms of art in computer science, the *combination* of the terms as used in the context of the relevant claim language suggests that it is simply an abstraction that describes the function being performed (i.e., the generation of symbols)." *Id.* The panel also noted that the asserted claims did not suggest a definite structure with respect to the term "symbol generator." *Id.*

Realtime's analysis, and likewise Dr. Zeger's analysis, begins with citations to the specification. (*Id.* at ¶42 (*citing* '530 Patent, at Abstract, 5:29–32).) By first relying on the specification, Realtime implicitly recognizes that on the face of the patent claims, particularly Claim 1 of the '980 Patent, the term "data accelerator" is "simply an abstraction that describes the function being performed." *Advanced Ground*, 830 F.3d at 1348. Without any structural guidance from the claim, the presumption against means-plus-function claiming is rebutted, and this term must be construed as a means-plus-function term.

"The court must construe the function of a means-plus-function limitation to include the limitations contained in the claim language, and only those limitations." *Cardiac Pacemakers, Inc. v. St. Jude Medical, Inc.*, 296 F.3d 1106, 1113 (Fed. Cir. 2002). The Court agrees with Plaintiff's proposal that the function of the data accelerator is:

> ('908 patent, cl. 1) compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block; ('530 patent, cl.1) compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different

Defendants' proposal seeks to further add claimed functions relating to storing the compressed data on the memory device, wherein the compression and storage occurs faster than data can be stored on the memory device in uncompressed form. However, neither claim requires that the data accelerator's function include these "storage" steps. In Claim 1 of the '908 Patent, the "storage" steps are set out as a separate "wherein" clause, in contrast to the "data accelerator configured to compress . . . ." limitation. Claim 1 of the '530 Patent likewise includes the "storage" steps as separate "said" clauses from the description of the "data accelerator." Thus, the claim does not so closely tie the "storage" functions to this means-plus element in a way that requires the data accelerator to be solely responsible for not only storing data, but also a

decreasing the time to compress and store data. *Cf. Baran v. Med. Device Techs., Inc.*, 616 F.3d 1309, 1317 (Fed. Cir. 2010); *see also* '530 Patent, at 55–57 (describing an example where the "data storage accelerator" is capable of compressing data faster than the data can be stored by the "data storage device," thus indicating 1) the data storage device stores data, not the data accelerator, and 2) the speed of compression/storage is not dictated by the speed of the data accelerator alone.)

"Structure disclosed in the specification qualifies as 'corresponding structure' if the intrinsic evidence clearly links or associates that structure to the function recited in the claim." *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1352 (Fed. Cir. 2015) (*citing Noah Sys., Inc. v. Intuit Inc.*, 675 F.3d 1302, 1311 (Fed. Cir. 2012)). "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." *Default Proof Credit Card Sys. v. Home Depot U.S.A., Inc.*, 412 F.3d 1291, 1298 (Fed.Cir.2005).

The term at issue here is unique from the classic means-plus-function scenario, where the phrase "means for []" is written in the claims and requires a search of the specification for any and all possible structures that can perform the claimed means. Here, the term "data accelerator" appears in the claims as well as in the specification, which refers to both a "data storage accelerator" and a "data retrieval accelerator." *See, e.g.*, '530 Patent, at Abstract, 5:6-63. Because the independent claims require only the data storage function, the Court focuses its review of the specification on only the "data storage accelerator." The specification states that "[a] data storage accelerator includes one or a plurality of high speed compression encoders that are configured to simultaneously or sequentially losslessly compress data at a rate equivalent to or faster than the transmission rate of an input data stream." '530 Patent, at Abstract. The

specification further states that the "invention may be implemented in various forms of hardware, software, firmware or a combination thereof." *Id.* at 4:47–50.

The parties have agreed that plain and ordinary meaning applies to the term "encoder." (*See* Doc. No. 139, at 27.) Realtime's expert, Dr. Zeger, further states, "[a] person of ordinary skill in the art would readily understand the term 'encoder,' when read in the context of the patents, to mean hardware and/or software that performs data compression." (Zeger Decl., ¶25.) Based on the disclosure in the specification relating to the "data storage accelerator," in combination with Dr. Zeger's unrebutted statements indicating that a person of ordinary skill in the art would understand encoders to have sufficient structure, the Court finds that the structure of the data accelerator is adequately disclosed as "hardware or software with one or more compression encoders."

Defendants argue that the structure of the data accelerator must be specifically tied to the structure disclosed as element 10 in Figure 8 of the '530 Patent. The defendants in *Actian* set forth a similar argument. *Actian* Order, at 24–26. The Court in *Actian* found that Figure 8 is merely a preferred embodiment of a "data accelerator," and determined it would be improper to import the specific structure of element 10 of Figure 8 into the claims. *Id.* Likewise, in the means-plus-function context, "[a] court may not import into the claim features that are unnecessary to perform the claimed function." *Northrop Grumman Corp. v. Intel Corp.*, 325 F.3d 1346, 1352 (Fed. Cir. 2003) (*citing Acromed Corp. v. Sofamor Danek Group, Inc.*, 253 F.3d 1371, 1382, 59 USPQ2d 1130, 1138 (Fed.Cir.2001).) At its core, the claimed function of the data accelerator is to compress data. *See* '530 Patent, Claim 1. The specification states that the data accelerator "includes one or a plurality of high speed compression encoders." '530 Patent, at Abstract. Encoders perform data compression. (Zeger Decl., ¶25.) The additional features set

forth in element 10 of Figure 8 are simply additional aspects of a preferred embodiment. Indeed, the specification states: "the embodiment of the data storage accelerator 10 of FIG. 8 is exemplary of a preferred compression system which may be implemented in the present invention, and [ ] other compression systems and methods known to those skilled in the art may be employed for providing accelerated data storage in accordance with the teachings herein." '530 Patent, at 13:16–22; *see also id.* at 14:42–48.

Accordingly, the Court construes "data accelerator" as a means-plus-function term. The function of "data accelerator" is

> ('908 patent, cl. 1) compress: (i) a first data block with a first compression technique to provide a first compressed data block; and (ii) a second data block with a second compression technique, different from the first compression technique, to provide a second compressed data block; ('530 patent, cl.1) compressing said first data block with a first compression technique and said second data block with a second compression technique, said first and second compression techniques are different.

The structure of "data accelerator" is "hardware or software with one or more compression encoders."

c. First Circuit/Second Circuit/Third Circuit/Fourth Circuit

Claim Term	Plaintiffs' Proposal	Defendants' Proposal
first circuit / second circuit / third circuit / fourth circuit ('513 cl. 15)	No construction necessary Not means plus function	**"First Circuit"** 35 U.S.C. § 112(6) term Indefinite **Function**: analyze a plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks;
		"Second Circuit" 35 U.S.C. § 112(6) term

		Function: apply the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion **Structure:** processor programmed with any of a "run length, Huffman, Lempel-Ziv Dictionary Compression, arithmetic coding, data compaction, and data null suppression" algorithm
		"Third Circuit" 35 U.S.C. § 112(6) term Indefinite **Function**: analyze a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block
		"Fourth Circuit" 35 U.S.C. § 112(6) term **Function:** apply the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the any characteristic, attribute, or parameter is identified **Structure:** processor programmed with any of a "MPEG4, various voice codecs, MPEG3, AC3, AAC, as well as lossless algorithms such as run length, Huffman, Lempel-Ziv Dictionary Compression, arithmetic coding, data compaction, and data null suppression" algorithm

Plaintiff argues that pursuant to the Federal Circuit's decision in *Linear Technology*, the term "circuit" is not a means-plus function term. (Doc. No. 128, at 21.) In *Linear Technology*, the Federal Circuit turned to technical dictionaries to determine whether the term "circuit" had an understood meaning in the art. *Linear Tech. Corp. v. Impala Linear Corp.*, 379 F.3d 1311, 1320 (Fed. Cir. 2004). The Federal Circuit found that a number of technical dictionaries indicated a structural connotation with the term "circuit." *Id.* The Federal Circuit further found that "when the structure-connoting term 'circuit' is coupled with a description of the circuit's operation, sufficient structural meaning generally will be conveyed to persons of ordinary skill in the art, and § 112 ¶ 6 presumptively will not apply." *Id.* Plaintiff argues that the same analysis in *Linear Technology* applies here. (Doc. No. 128, at 22.) Plaintiff also relies on the testimony of Dr. Zeger for its understanding of the "circuit" claim terms. (Zeger Decl., ¶¶39–41.)

Defendants cite various PTAB cases and out-of-district opinions for the assertion that "circuit" requires a means-plus analysis. (Doc. No. 139, at 23–24.) Defendants also argue that the claims only explain how the circuits function, not how they operate or connect to other circuits or devices to carry out that function. (*Id.* at 25.) Defendants further argue that "Plaintiff's expert does not elucidate a *definite* structure, but merely suggest some *unspecified* arrangement of 'electronic components.'" (Doc. No. 139, at 25.) Defendants argue that this case is "in stark contrast" from *Linear Technology* because there, the Federal Circuit found that a person of skill in the art would understand "the structural arrangement of circuit components." (*Id.*)

In reply, Plaintiff cites additional Federal Circuit opinions and cases from this District to support its proposition that the term "circuit" has a known structural meaning. (Doc. No. 145, at

9 (*citing Mass. Inst. Of Tech. v. Abacus Software*, 462 F.3d 1344, 1355 (Fed. Cir. 2006); *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003); *NFC Tech., LLC v. Samsung Elecs. Co., Ltd.*, No. 2:15-cv-283-JRG-RSP, 2016 WL 1704770, at *9–10 (E.D. Tex. Apr. 28, 2016); *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, No. 2:14-CV-0911-JRG-RSP, 2015 WL 6956722, at *17-18 (E.D. Tex. Nov. 9, 2015).) Plaintiff reiterates that a person of skill in the art would "understand the structural arrangements of each claimed 'circuit' based on the configurations, objectives, and operations recited in the claims." (*Id.* (*citing* Zeger Decl., ¶¶40-41).)

Claim 15 of the '513 Patent recites:

> 15. A device for compressing data comprising:
>
> a first circuit configured to analyze a plurality of data blocks to recognize when an appropriate content independent compression algorithm is to be applied to the plurality of data blocks;
>
> a second circuit configured to apply the appropriate content independent data compression algorithm to a portion of the plurality of data blocks to provide a compressed data portion;
>
> a third circuit configured to analyze a data block from another portion of the plurality of data blocks for recognition of any characteristic, attribute, or parameter that is indicative of an appropriate content dependent algorithm to apply to the data block; and
>
> a fourth circuit configured to apply the appropriate content dependent data compression algorithm to the data block to provide a compressed data block when the any characteristic, attribute, or parameter is identified,
>
> wherein the first circuit is further configured to analyze the plurality of data blocks to recognize when the appropriate content independent compression algorithm is to be applied by excluding analyzing based only on a descriptor indicative of the any characteristic, attribute, or parameter, and
>
> wherein the third circuit is further configured to analyze the data block to recognize the any characteristic, attribute, or parameter by excluding analyzing based only on the descriptor.

The claim provides a sufficient description of the circuits' operations such that, in combination with the "structure-connoting term 'circuit'", sufficient structural meaning is conveyed to persons of skill in the art. *See Linear Tech.*, 379 F.3d at 1320. Thus, § 112, ¶ 6 does not apply. As provided above, the first and third circuits operate to analyze data blocks for recognition of certain criteria. Meanwhile, the second and fourth circuits apply compression algorithms to particular data blocks based on the criteria recognition. The claim thus further requires that the information collected from the first and third circuits' analyses is used to determine whether the second and third circuits should apply their described data compression protocols. The fact that a person of ordinary skill in the art would find sufficient structural meaning with respect to the "circuit" terms is confirmed by Dr. Zeger. In his declaration, Dr. Zeger states that a person of ordinary skill in the art would understand the possible structural arrangements associated with each of these circuits based on the operations disclosed in the claims "(such as, *e.g.*, transistors, resistors, etc.)". (Zeger Decl., ¶41.)

According to Defendants, Dr. Zeger "merely suggest[s] some unspecified arrangement of 'electronic components,'" in "stark contrast" with *Linear Technology*, where the Federal Circuit found that a person would understand the "structural arrangement of circuit components." (Doc. No. 139, at 25.) This argument is unpersuasive. As the Court noted in *Core Wireless*, "[t]hough Defendants attempt to distinguish *Linear Tech.* based on the extent of the circuit descriptions in the stated function, *Linear Tech.* first noted that the general term [circuit] connotes structure." *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, No. 2:14-CV-0911-JRG-RSP, 2015 WL 6956722, at *17 (E.D. Tex. Nov. 9, 2015). Further, nowhere in *Linear Technology* does the Federal Circuit hold that a patent claim or specification must lay out in detail the *exact* potential circuit structures that would satisfy the claims. Here, Dr. Zeger provides unrebutted testimony

that a person of ordinary skill in the art would read the operations provided for each circuit and understand what potential electronic components could perform those operations. The Court finds that this is sufficient, and Defendants have failed overcome the presumption against § 112, ¶ 6.

Accordingly, the Court finds that the term "circuit" is not governed by §112, ¶6, and that no construction of the term "circuit" is necessary.

d. Processor

Claim Term	Plaintiffs' Proposal	Defendants' Proposal
processor ('728 cl. 1, 9, 10, 17, 20, 24)	No construction necessary Not means-plus-function **Alternative proposed construction, should the term be treated as means-plus-function:** **Function:** undisputed **Structure:** structure for "analyzing" is content dependent recognition module, and equivalents thereof.	35 U.S.C. § 112(6) term Indefinite **Function**: (1 of '728) to analyze data within a data block to identify one or more parameters or attributes of the data wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block; to perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified; and to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified; (24 of '728) to analyze

		data within a data block to identify one or more parameters or attributes of the data wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block; and to compress the data block to provide a compressed data block, wherein if one or more encoders are associated with the one or more parameters or attributes of the data, compressing the data block with at least one of the one or more data compression encoders, otherwise compressing the data block with the default data compression encoder.

Like "circuit," the main dispute with respect to the term "processor" is whether it is governed by means-plus claiming. The parties cite to various cases to support their positions. For instance, Realtime emphasizes *Syncpoint Imaging, LLC v. Nintendo of Am. Inc.*, No. 215CV00247JRGRSP, 2016 WL 55118, at *19–21 (E.D. Tex. Jan. 5, 2016). In *Syncpoint*, the Court found that the term "processor" was not a means-plus-function term because (1) the term itself connotes structure; (2) the claims at issue recited the objectives and operations of the processor; and (3) a person of skill in the art "would understand the structural arrangements of the processor from the recited objectives and operations." *Id.* at *20. Realtime argues that the same analysis holds true in the current case. (Doc. No. 128, at 18-19.) Realtime also cites to a number of other cases from this District holding that "processor" is not a means-plus-function term. (*Id.* at 18 n.6 (*citing Optis Cellular Tech., LLC v. Kyocera Corp.*, Nos. 2:16-cv-0059-JRG-

RSP, 2:16-cv-60-JRG-RSP, 2017 WL 541298, at *23–26 (E.D. Tex. Feb. 8, 2017); *Panoptis Patent Mgmt., LLC v. Blackberry Ltd.*, No. 2:16-cv-62-JRG-RSP, 2017 WL 497571, at *18–19 (E.D. Tex. Feb. 7, 2017); *Celllular Comm'ns Equip. LLC v. AT&T*, No. 2:15-cv-576-RWS-RSP, 2016 WL 7364266, at *14–17 (E.D. Tex. Dec. 18, 2016); *Advanced Mktg. Sys., LLC v. CVS Pharm., Inc.*, Nos. 6:15-cv-134-JRG-KNM, 6:15-cv-137-JRG-KNM, 2016 WL 1741396, at *19-20 (E.D. Tex. May 3, 2016); *Smartflash LLC v. Apple Inc.*, No. 6:13-cv-447-JRG-KNM, 2015 WL 4208754, at *3 (E.D. Tex. Jul. 7, 2015).)

On the other hand, Defendants emphasize *St. Isidore Research, LLC v. Comerica Inc.*, No. 2:15-CV-1390-JRG-RSP, 2016 WL 4988246, at *14–15 (E.D. Tex. Sept. 19, 2016). In *St. Isidore*, the Court found the term "processor" was an indefinite means plus function term because the claims and specification did not "detail the objectives and operations of the 'processor configured to . . .' term[] in a way that connotes structure sufficient to avoid the application of § 112, ¶ 6." *Id.* at *14. Defendants further argue that Plaintiff's analysis conflates "function" with "operation." (Doc. No. 139, at 15.) Specifically, Defendants argue, "Plaintiff relies on the claim language which merely recites the ***functions*** of the 'processor'—analyzing data to identify parameters or attributes of the data and performing data compression '***with***' some encoders." (*Id.* at 15–16.)

On reply, Plaintiff compares Claim 1 of the '728 Patent to the claim at issue in *St. Isidore* to argue that there is much more information denoting the operations and objectives of the processor in the '728 Patent. (Doc. No. 145, at 7.) Plaintiff also argues that the term "processor" in the context of Claim 1 of the '728 Patent includes encoders, which Defendants have already agreed denote sufficient structure. (*Id.*)

Claim 1 of the '728 Patent recites:

1. A system for compressing data comprising:
a processor;
one or more content dependent data compression encoders; and
a single data compression encoder;
wherein the processor is configured:
to analyze data within a data block to identify one or more parameters or attributes of the data wherein the analyzing of the data within the data block to identify the one or more parameters or attributes of the data excludes analyzing based solely on a descriptor that is indicative of the one or more parameters or attributes of the data within the data block;
to perform content dependent data compression with the one or more content dependent data compression encoders if the one or more parameters or attributes of the data are identified; and
to perform data compression with the single data compression encoder, if the one or more parameters or attributes of the data are not identified.

'728 Patent, at 26:29–48 (emphasis added). "Here, 'processor' is not a 'nonce' term but rather connotes a class of structures." *Panoptis Patent Mgmt., LLC v. Blackberry Ltd.*, No. 2:16-CV-62-JRG-RSP, 2017 WL 497571, at *18–19 (E.D. Tex. Feb. 7, 2017); *Syncpoint Imaging, LLC v. Nintendo of Am. Inc.*, No. 215-cv-00247-JRG-RSP, 2016 WL 55118, at *20 (E.D. Tex. Jan. 5, 2016). Indeed, "Defendants have not pointed to an intrinsic record that establishes that 'processor' is meant here to generically be anything that manipulates data as opposed to connoting structure representing what is generally known as a processor." *Optis Cellular Tech., LLC v. Kyocera Corp.*, No. 2:16-CV-0059-JRG-RSP, 2017 WL 541298, at *25–26 (E.D. Tex. Feb. 9, 2017).

Claim 1 of the '728 Patent also discloses the objectives and operations of the processor, such that in combination with the "structure-connoting term" itself, means-plus-function claiming is inapplicable. For instance, the claim recites that that the processor is configured to analyze data and then perform either (1) content dependent data compression with one or more

encoders or (2) data compression with a single encoder. In other words, the encoders are claimed as part of the processor. As explained with respect to the term "data accelerator", the parties do not presently dispute that encoders connote sufficient structure to a person of skill in the art. (*See* Zeger Decl., ¶25.) Here, the claimed encoders likewise impart sufficient structure to the term processor in the context of Claim 1 of the '728 Patent, such that a person of ordinary skill in the art would understand the structural arrangements of the processor. (*See also id.* at ¶35-38 ("A person of ordinary skill would readily understand that 'processor' as used in the patent 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 these reasons, *St. Isidore* is distinguishable. In *St. Isidore*, only two portions of the claim referred to the processor, and they did so in purely functional language. 2016 WL 4988246, at *14–15. Indeed, the Court in *St Isidore* noted, "in many instances, the term 'processor' itself connotes sufficient structure" and "the Court has typically found 'processor' to connote sufficient structure to avoid [means-plus function claiming]." *Id.* Defendants have not provided a sufficient basis to depart from the Court's typical practice in this instance. Instead, the record here is consistent with the numerous precedent from this District finding the term "processor" is not a means-plus-function term. *See Optis Cellular Tech., LLC v. Kyocera Corp.*, Nos. 2:16-cv-0059-JRG-RSP, 2:16-cv-60-JRG-RSP, 2017 WL 541298, at *23–26 (E.D. Tex. Feb. 8, 2017); *Panoptis Patent Mgmt., LLC v. Blackberry Ltd.*, No. 2:16-cv-62-JRG-RSP, 2017 WL 497571, at *18–19 (E.D. Tex. Feb. 7, 2017); *Celllular Comm'ns Equip. LLC v. AT&T*, No. 2:15-cv-576-RWS-RSP, 2016 WL 7364266, at *14–17 (E.D. Tex. Dec. 18, 2016); *Advanced Mktg. Sys., LLC v. CVS Pharm., Inc.*, Nos. 6:15-cv-134-JRG-KNM, 6:15-cv-137-JRG-KNM,

2016 WL 1741396, at *19-20 (E.D. Tex. May 3, 2016); *Smartflash LLC v. Apple Inc.*, No. 6:13-cv-447-JRG-KNM, 2015 WL 4208754, at *3 (E.D. Tex. Jul. 7, 2015).

The Court finds that the term "processor" is not governed by §112, ¶6, and that no construction of the term "processor" is necessary.

e. Analyzing [analyze] data within [a/the] data block / analyzing [analyze] [a/the] plurality of data blocks

Claim Term	Plaintiffs' Proposal	Defendants' Proposal
analyzing [analyze] data within [a/the] data block / analyzing a data block / analyzing [analyze] [a/the] plurality of data blocks ('992 cl. 48; '513 cl. 1, 4, 15; '728 cl. 1, 24; '506 cl. 105)	"analyzing / analyze" means directly examining / directly examine; no further construction necessary	directly examining the content of the data to be compressed

The parties agree that "analyzing" means "directly examining." Thus, the only dispute with respect to this term is whether it should be further construed with the phrase "the content of the data to be compressed." Plaintiff argues that analyzed data is not always compressed. (Doc. No. 128, at 15 (*citing* '513 Patent, 18:14–53 ("The data block is then analyzed . . .the original ***unencoded*** input data block is selected for output.")).) Defendants argue that Plaintiff's quotation is misleading and further argue that the claim language, for instance Claim 24 of the '728 Patent, specifically states "analyz[ing] data within ***a*** data block" and "compressing ***the*** data block to provide a compressed data block." (Doc. No. 139, at 13.) On reply, Plaintiff argues that there is no "clear and unmistakable disclaimer" limiting this term as Defendants propose. (Doc. No. 145, at 5.)

The "analyzing . . ." claim term appears in claims in four of the five "content dependent" patents. To the extent certain claims indicate that all analyzed data must be compressed, this is due to claim limitations besides the "analyzing . . ." term itself. For instance, after setting forth the "analyzing . . ." step, Claims 1 and 24 of the '728 Patent state that content dependent data compression is performed if one or more parameters or attributes of the data are identified (during the analyzing step). *See* '728 Patent, Claim 1. Otherwise, if one or more parameters or attributes of the data are not identified (during the analyzing step), content independent data compression is performed. The "performance" steps in these claims indicate what data is compressed, not the "analyzing" steps.

On the other hand, Claim 15 of the '513 Patent states, *inter alia*, "a first circuit configured to analyze a plurality of data blocks ***to recognize when*** an appropriate content independent compression algorithm is to be applied to the plurality of data blocks." (Emphasis added.) Claim 15 does not require that all analyzed data be compressed, through this limitation or its other limitations. The Court presumes, "unless otherwise compelled, that the same claim term in the same patent or related patents carries the same construed meaning." *Omega Eng'g, Inc, v. Raytek Corp.*, 334 F.3d 1314, 1334 (Fed. Cir. 2003). The Court also gives claims their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312–13. Given the use of the "analyzing . . ." claim term in its various forms across the content dependent patent family, there is no basis to limit the term as Defendants propose.

Further, upon review of the rest of the intrinsic record, the Court finds no clear disclaimer or disavowal with respect to the "analyzing . . ." term. Defendants argue the specification requires that analyzed data always be compressed. *See* '513 Patent, 18:14–53. Defendants are

effectively asking the Court to import a limitation into the claims based on a specific embodiment of the specification. But "particular embodiments and examples appearing in the specification will not generally be read into the claims." *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); *see also Phillips*, 415 F.3d at 1323. The Court declines to read such a limitation into the claims here.

The Court adopts the parties' agreed construction of "analyzing/analyze" as "directly examining," but finds no further construction of this term is necessary.

II. AGREED CLAIM TERM CONSTRUCTIONS

During the Claim Construction Hearing, the parties agreed to the Court's proposed construction of the term "decompressing/decompress," as "[reconstructing/reconstruct] compressed data." (Doc. No. 157 (Hearing Tr.), 27:1–6.) This term appears in Claim 17 of the '867 Patent; Claims 2, 3, 6, and 22 of the '908 Patent; and Claim 1 of the '530 Patent. In light of the parties' agreement, the Court adopts its proposed construction.

Finally, the parties submitted the following terms for which they agreed on constructions:

Term/Phrase	**Agreed Construction**
data block ('506 cl. 105; '728 cl. 1, 2, 9, 10, 17, 20, 24; '992 cl. 48; '867 cl. 16, 17; '513 cl. 1, 2, 6, 14, 15, 22; '908 cl. 1, 2, 3, 6, 21, 22, 25; '530 cl. 1, 20)	a single unit of data, which may range in size from individual bits through complete files or collection of multiple files
data stream ('530 cl. 1, 3, 4, 19, 20; '506 cl. 105)	one or more data blocks transmitted in sequence
content independent [data] compression algorithm ('513 cl. 1, 15)	compression algorithm that is applied to input data that is not compressed with content dependent data compression, the compression applied using one or more encoders without regard to the encoder's (or encoders') ability to effectively encode the data type or content of the data block

Term/Phrase	Agreed Construction
content dependent [data] compression (’513 cl. 1, 4, 6, 14, 15, 22; ’728 cl. 1, 9)	compression algorithm that is applied to input data that is not compressed with content independent data compression, the compression using one or more encoders selected based on the encoder’s (or encoders’) ability to effectively encode the data type or content of the data block
default [data compression] encoder (’728 cl. 24; ’992 cl. 48; ’506 cl. 105)	an encoder used automatically in the absence of a designated alternative
data type(s) (’992 cl. 48, ’506 cl. 105)	categorization of the data as one of ASCII, image data, multimedia data, signed and unsigned integers, pointers, or other kind of data

After reviewing the parties’ agreed constructions in light of the asserted claims, specifications, and prosecution history, the Court finds the parties’ agreed constructions appropriate and construes the terms as set forth above.

CONCLUSION

For the foregoing reasons, the Court adopts the constructions set forth above.

So ORDERED and SIGNED this 14th day of June, 2017.

JOHN D. LOVE
UNITED STATES MAGISTRATE JUDGE