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

SANDPIPER CDN, LLC, *Plaintiff*,	§	
v.	§	Case No. 2:24-cv-886-JRG-RSP
COMCAST CABLE COMMUNICATIONS, LLC d/b/a XFINITY; COMCAST CABLE COMMUNICATIONS MANAGEMENT, LLC d/b/a COMCAST TECHNOLOGY SOLUTIONS *Defendants*.	§	

CLAIM CONSTRUCTION ORDER

Before the Court is Plaintiff's Opening Claim Construction Brief (Dkt. No. 88) filed by Plaintiff Sandpiper CDN, LLC. Also before the Court is the Defendant's Responsive Claim Construction Brief (Dkt. No. 93) filed by Comcast Cable Communications, LLC and Comcast Cable Communications Management, LLC ("Defendant" or "Comcast"), along with Plaintiff's Reply Claim Construction Brief (Dkt. No. 94).

The Court held a hearing on February 3, 2026. Having considered the parties' briefing, submitted evidence, and heard arguments from counsel, the Court resolves the disputes as ordered herein.

I. BACKGROUND

Plaintiff alleges infringement of four patents: U.S. Patent No. 8,478,903 ("the '903 Patent"), U.S. Patent No. 9,762,692 ("the '692 Patent"), U.S. Patent No. 9,628,347 ("the '347 Patent"), and U.S. Patent No. 9,660,876 ("the '876 Patent") (collectively, "the Patents-at-Issue"). The Patents-at-Issue relate to Content Delivery Network (CDN) technology. In particular, the

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infrastructure and processes of delivering content to disparately located users in an efficient manner.

The ’903 Patent is titled, “Shared content delivery infrastructure,” and its Abstract sets forth as follows:

> A system in which a plurality of content providers provide multiple resources to multiple clients, wherein each content provider provides at least some resources via one or more content sources associated with that content provider. A client requests a resource from a content provider, where the resources includes references to other resources of the content provider. Referenced resources are served to requesting clients from a shared content delivery network (CDN) formed from a plurality of servers distinct from content sources associated with said content providers. The content sources may be origin servers associated with the respective content providers. The referenced resources may be video content, audio content, text, image content, web pages, HTML files, XML files, files in a markup language, documents, hypertext documents, data files, and embedded resources.

The ’692 Patent is titled, “Handling long-tail content in a content delivery network (CDN),” and its Abstract sets forth as follows:

> A content delivery network has at least a first tier of servers. A content delivery method includes, at a first server in the first tier of servers, obtaining a request from a client for a resource. If the resource is available at the first server or at a peer of the first server, then the resource is served to the client from the first server. Otherwise, it is determined whether the resource is popular, and if the resource is determined to be popular, then the first server obtains the resource and the first server serves the resource to the client. If the resource is determined not to be popular, the client is directed to a second server, not in the first tier of servers, and the second server serves the resource to the client. The second server may be in a second tier of servers or it may be an origin server.

The ’347 Patent is titled, “Layered request processing in a content delivery network (CDN),” and its Abstract sets forth as follows:

> In a content delivery network (CDN a method includes: receiving a request for a CDN service of a particular type, wherein a CDN service of said particular type defines a fixed number of configurable layers of request processing, sequentially from a first layer to a last layer; and processing said request, starting at said first layer, said processing being based on a modifiable runtime environment, said processing continuing conditionally through each of said layers in turn until either said request is terminated by one of said layers or said last layer processes said

> request. The CDN service may be selected from: delivery services, collector services, reducer services, rendezvous services, configuration services, and control services.

The '876 Patent is titled, "Collector mechanisms in a content delivery network," and its Abstract sets forth as follows:

> A computer-implemented method operable in a content delivery service (CDN), includes, by a collector system: receiving multiple event streams of event data, said multiple event streams comprising event data from a plurality of CD services in said CDN, each event of said event streams comprising: (i) a timestamp for said event, (ii) information relating to said event; and producing state data relating to information represented in said event data of said multiple event streams while being able to asynchronously respond to queries relating to said state data.

II. LEGAL STANDARDS

"'[T]he 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) (*en banc*) (quoting *Innova/Pure-Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). "[T]he court has the power and obligation to construe as a matter of law the meaning of language used in the patent claim." *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995) (*en banc*); *aff'g,* 517 U.S. 370, 390 (1996).

To ascertain the meaning of claims, courts look to three primary sources: the claims, the specification, and the prosecution history. *Markman*, 52 F.3d at 979. The specification must contain a written description of the invention that enables one of ordinary skill in the art to make and use the invention. *Id.* A patent's claims must be read in view of the specification, of which they are a part. *Id.* For claim construction purposes, the description may act as a sort of dictionary, which explains the invention and may define terms used in the claims. *Id.* "One purpose for examining the specification is to determine if the patentee has limited the scope of the claims."

Watts v. XL Sys., Inc., 232 F.3d 877, 882 (Fed. Cir. 2000).

When construing claims, "[t]here is a heavy presumption that claim terms are to be given their ordinary and customary meaning." *Aventis Pharm. Inc. v. Amino Chems. Ltd.,* 715 F.3d 1363, 1373 (Fed. Cir. 2013) (citing *Phillips,* 415 F.3d at 1312–13). Courts must therefore "look to the words of the claims themselves . . . to define the scope of the patented invention." *Id.* (citations omitted). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.,* as of the effective filing date of the patent application." *Phillips,* 415 F.3d at 1313. This "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, including the specification." *Id.*

There are, however, two exceptions to this rule. The first exception is when a patentee sets out a definition and acts as his own lexicographer. The second exception is when the patentee disavows the full scope of a claim term either in the specification or during prosecution. *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1580 (Fed. Cir. 1996).

The patentee is free to be his own lexicographer, but any special definition given to a word must be clearly set forth in the specification. *Intellicall, Inc. v. Phonometrics, Inc.*, 952 F.2d 1384, 1388 (Fed. Cir. 1992). As the Supreme Court stated long ago, "in case of doubt or ambiguity it is proper in all cases to refer back to the descriptive portions of the specification to aid in solving the doubt or in ascertaining the true intent and meaning of the language employed in the claims." *Bates v. Coe*, 98 U.S. 31, 38 (1878). Although the specification may indicate that certain embodiments are preferred, particular embodiments appearing in the specification will not be read into the claims when the claim language is broader than the embodiments. *Electro Med. Sys., S.A.*

v. Cooper Life Sciences, Inc., 34 F.3d 1048, 1054 (Fed. Cir. 1994).

But "[w]here the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question." *Scimed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001). "The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope." *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). "Absent a clear disavowal in the specification or the prosecution history, the patentee is entitled to the full scope of its claim language." *Home Diagnostics, Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1358 (Fed. Cir. 2004). A disavowal or disclaimer must be clear and unmistakable. *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1366-67 (Fed. Cir. 2012),

The prosecution history also continues to play an important role in claim interpretation. Like the specification, the prosecution history helps to demonstrate how the inventor and the United States Patent and Trademark Office ("PTO") understood the patent. *Phillips*, 415 F.3d at 1317. Because the file history, however, "represents an ongoing negotiation between the PTO and the applicant," it may lack the clarity of the specification and thus be less useful in claim construction proceedings. *Id.* Nevertheless, the prosecution history is intrinsic evidence that is relevant to the determination of how the inventor understood the invention and whether the inventor limited the invention during prosecution by narrowing the scope of the claims. *Id.*; *see Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1350 (Fed. Cir. 2004) (noting that

"a patentee's statements during prosecution, whether relied on by the examiner or not, are relevant to claim interpretation").

Intrinsic evidence, therefore, is the primary resource for claim construction. *See Power-One, Inc. v. Artesyn Techs., Inc.,* 599 F.3d 1343, 1348 (Fed. Cir. 2010) (citing *Phillips,* 415 F.3d at 1312). But for claim terms with less-apparent meanings, courts consider " '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 words of the claims themselves, the remainder of the specification, 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 (quoting *Innova*, 381 F.3d at 1116). In those situations, "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." *Teva Pharm. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 841 (2015) (citation omitted). "In cases where those subsidiary facts are in dispute, courts will need to make subsidiary factual findings about that extrinsic evidence. These are the 'evidentiary underpinnings' of claim construction that we discussed in *Markman*, and this subsidiary factfinding must be reviewed for clear error on appeal." *Id.* (citing 517 U.S. 370).

However, the intrinsic record may not be sacrificed in favor of extrinsic evidence. According to *Phillips*, reliance on dictionary definitions, for example at the expense of the specification had the effect of "focus[ing] the inquiry on the abstract meaning of words rather than on the meaning of claim terms within the context of the patent." *Id.* at 1321.

The Supreme Court of the United States has "read [35 U.S.C.] § 112, ¶ 2 to require that a patent's claims, viewed in light of the specification and prosecution history, inform those skilled

in the art about the scope of the invention with reasonable certainty." *Nautilus, Inc. v. Biosig Instruments, Inc.*, 572 U.S. 898, 910, 134 S. Ct. 2120, 2129 (2014). "[A] patent is invalid for indefiniteness if its claims, read in light of the specification delineating the patent, and the prosecution history, fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention." *Id.* The claims "must be precise enough to afford clear notice of what is claimed," but that consideration must be made while accounting for the inherent limitations of language. *Id.* at 908. "Indefiniteness must be proven by clear and convincing evidence." *Sonix Tech. Co. v. Publ'ns Int'l, Ltd.*, 844 F.3d 1370, 1377 (Fed. Cir. 2017).

III. AGREED TERMS

The parties have reached agreement on the following term as reflected in their Joint Claim Construction Chart Pursuant to P.R. 4-5(d) (Dkt. No. 98):

Claim Term	Agreed Construction
"CD service" ('347 Patent, claims 1, 17) ('876 Patent, claim 1)	"Content Delivery service"
"first alias name" / "second alias name" ('903 Patent, claims 28, 37)	Plain and ordinary meaning

IV. DISPUTED TERMS

1. **"the first portion of the content provider's library is distinct from the second portion" / "a second portion of the content provider's library distinct from the first portion"**

Claim term	Plaintiff's Construction	Defendant's Construction
"the first portion of the content provider's library is distinct from the second portion" / "a second portion of the content provider's library distinct from the first portion" ('692 Patent, claims 1, 15)	Not indefinite; Plain and ordinary meaning	Indefinite

The parties' dispute as to these terms centers on the meaning of the word "distinct" as it relates to the first and second portions. In particular, whether the patentee acted as his own lexicographer in defining "distinct," and if so, whether the measurement of "distinct" as permitting portions to "overlap only minimally" is a term of degree that cannot be reasonably ascertained by one of skill in the art, and is thus indefinite.

Plaintiff contends no lexicography exists and argues for "distinct" to be given its plain and ordinary meaning as a well-known and easily understood term. Plaintiff notes that Defendant's lexicography argument rests upon a single statement in the specification that clearly describes an embodiment rather than a definition: "According to one example embodiment, the first portion is distinct from the second portion (i.e., the portions/subsets of the library do not overlap, or overlap only minimally)." ('692 Patent at 12:13-16.) Plaintiff argues that the patentee is using "i.e." to provide examples, and here it is followed by two separate examples, neither of which are express definitions.

As to the ordinary meaning of portions being "distinct," Plaintiff acknowledges that it generally means the two portions do not overlap, which is consistent with the first example of "distinct" provided by the patentee in the embodiment. As to the portions overlapping "only

minimally," Plaintiff contends the claims are not indefinite merely because they do not specify the precise amount of overlap. Plaintiff argues there is no need for a numerical ceiling to quantify "minimal" because "distinct" is the operative claim language and there is no inventor disavowal otherwise.

Defendant responds that the patentee acted as his own lexicographer with respect to defining "distinct" portions because the use of "i.e." signals an intent to define the word to which it refers. The prosecution history confirms this lexicography, Defendant argues, because the patentee explained before the Board on appeal that "distinct . . . means they have no overlap or some overlap. Minimal overlap." (Dkt. No. 92-1 at 13:15-14:1.) The patentee further clarified that "[a]bsent the word 'distinct,'" portions could "overlap more than minimally." (*Id.* at 16:9-17:3.) Defendant asserts that the patentee's definition allows "distinct" portions to "overlap only minimally," and that a term of degree such as "minimal" is indefinite unless the intrinsic evidence informs a person of ordinary skill in the art about its scope with reasonable certainty. Defendant argues the '692 Patent provides no objective boundaries for determining when portions "overlap only minimally" and are thus "distinct," so it must be rendered indefinite.

The Court begins its analysis with an examination of the claim language. Here, claim 1 is representative and it reads as follows, with the disputed term in bold:

> 1. A method of content delivery in a content delivery network comprising at least a first tier of servers, the method comprising:
>
> > at a first server in the first tier of servers, obtaining a request from a client for a resource, wherein the resource is available as part of a content provider's library;
> >
> > if the resource is not available at the first server or at a peer of the first server, determining if the resource is popular;
> >
> > if the resource is determined to be popular, then the first server obtaining the resource and the first server serving the resource to the client, otherwise,

> if the resource is determined not to be popular, directing the client to a second server in a second tier of servers distinct from the first tier of servers, wherein the second server comprises a first portion of the content provider's library, the first portion comprising at least the resource, wherein at least one other server in the second tier comprises a second portion of the content provider's library, wherein **the first portion of the content provider's library is distinct from the second portion**, and wherein the second tier is any intermediate tier between the first tier and an origin server that stores resources associated with the content provider's library, and
>
> the second server serving the resource to the client.

As written, the claims do not quantify "distinct" beyond providing context that there are at least two portions of the content provider's library that are distinct from each other. In other words, the two portions are distinguishable from each other. They cannot be identical. On this point, the parties agree.

The disagreement arises on whether the patentee intended to broaden the meaning of "distinct" by providing an express but undefined allowance in the written description. If so, then "distinct" can include some minimal overlap between the two portions of the content provider's library. The dispute then shifts to whether minimal overlap needs to be objectively quantifiable or else is rendered indefinite.

Turning to the written description, "distinct" is only addressed in this context once: "According to one example embodiment, the first portion is distinct from the second portion (i.e., the portions/subsets of the library do not overlap, or overlap only minimally)." ('692 Patent at 12:13-16.) The Court notes that it is introduced as "one example embodiment" and provides two mutually exclusive explanations for the meaning of "the first portion is distinct from the second portion." In some circumstances, it means the portions/subsets of the library do not overlap. In other circumstances, it means the portions may overlap but only minimally. Clearly, these two explanations cannot both be true simultaneously. The statement, therefore, functions as two

alternative definitions of what "distinct" means for portions of a content provider's library, which is the embodiment claimed in the '692 Patent in claims 1 and 15.

In general, the use of "i.e." "signals an intent to define the word to which it refers." *Edwards Lifesciences LLC v. Cook Inc.*, 582 F.3d 1322, 1334 (Fed. Cir. 2009). Such usage is definitional when it "comports with the inventors' other uses . . . in the specification and with each and every other reference." *SkinMedica, Inc. v. Histogen Inc.*, 727 F.3d 1187, 1202 (Fed. Cir. 2013). Here, despite the "i.e." appearing within a sentence introduced as an example, the embodiment of the first portion being distinct from the second portion is the claimed scenario. The "i.e.," therefore, explains what that distinction means by providing two alternative definitions. Accordingly, the "i.e." in this instance demonstrates the patentee's lexicographic intent to define what "distinct" means in the context of identifying portions of content provider libraries.

Indeed, the applicant's statements during prosecution confirm the lexicographic intent. During oral argument on appeal, the Board asked about the exact embodiment in the specification passage quoted above, inquiring whether the patentee's intent was for the embodiment to be limited to that one instance or whether it should be read more broadly to mean that other embodiments may overlap more than minimally. The applicant responded that absent the word "distinct," the portions could overlap more than minimally. In other words, "distinct" is a term of delineation that means one of either no overlap or minimal overlap only.

The definitional act is underscored by the Decision on Appeal, which demonstrates the Board's understanding of the close correlation between the word "distinct" and the "i.e." definition by emphasizing both in italics. Accordingly, the use of "i.e." combined with the prosecution history statements exhibits a clear intent to define. The Court concludes that the patentee acted as a lexicographer in this instance.

However, just because the patentee defined "distinct" using two definitions does not mean they must both be applied. This is particularly true where the definitions are obviously in the alternative, are mutually exclusive in meaning, and applying them both would render a claim term indefinite.

The definition the patentee imparted to "the first portion is distinct from the second portion" is "the portions/subsets of the library do not overlap" **or** the portions/subsets of the library "overlap only minimally." Only one of the two definitions can be applied as they cannot both be true at the same time. If two portions do not overlap, they cannot also overlap only minimally. Therefore, the Court must determine which of the two alternative definitions applies to claims 1 and 15. The obvious answer is the former: Two portions in the content provider's library being distinct means the portions do not overlap.

The no-overlap concept of the first and second portions of the content provider's libraries is clear from the claim language, specification, and prosecution history. The claim states the two portions must be distinct without additional quantification or nuance. The specification provides the two mutually exclusive definitions and offers no further descriptions of what "overlap only minimally" can mean. In fact, the only examples disclosed are those with zero overlap, such as when the libraries are logically partitioned across servers alphabetically A-F in server A, G-R in server B, and S-Z in server C. (*See* '692 Patent at 12:17-28.) During oral argument, both parties stated on the record that the clean alphabetical partition is the best example of what distinct means as disclosed in the specification.

For the foregoing reasons, portions of the content provider's library being "distinct" means they contain different content and there is no overlap. The Court is persuaded that a person having ordinary skill in the art would agree as both parties have reached the same conclusion. In

determining whether a claim term is indefinite, Defendant has the burden to show invalidity by clear and convincing evidence. Close questions are properly resolved in favor of the patentee. Here, Comcast has not met its burden.

Therefore, the Court finds the terms "the first portion of the content provider's library is distinct from the second portion" / "a second portion of the content provider's library distinct from the first portion" **are not indefinite and mean "the first and second portions of the content provider's library do not overlap."**

2. **"[a] at a first server in the first tier of servers, obtaining a request from a client for a resource; [b] if the resource is not available at the first server or at the peer of the first server, determining if the resource is popular; [c] if the resource is determined to be popular, then the first server obtaining the resource and the first server serving the resource to the client; [d] if the resource is determined not to be popular, directing the client to a second server; [e] the second server serving the resource to the client"**

Claim term	Plaintiff's Construction	Defendant's Construction
"[a] at a first server in the first tier of servers, obtaining a request from a client for a resource; [b] if the resource is not available at the first server or at the peer of the first server, determining if the resource is popular; [c] if the resource is determined to popular, then the first server obtaining the resource; and the first server serving the resource to the client [d] if the resource is determined not to be popular, directing the client to a second server; [e] the second server serving the resource to the client" ('692 Patent, claim 1)	Plain and ordinary meaning	The claim requires performance of steps [a], [b], and [c], and separately the performance of steps [a], [b], [d], and [e]

The dispute as to this term is whether the claim requires performance of all recited steps in a specific order, or whether the conditional language establishes alternative methods such that only one branch of the condition must be performed.

Plaintiff contends that the required performance of steps is readily ascertainable from the plain words of the claim. Plaintiff points to FIG. 7, which illustrates a flowchart of the processing steps showing that each step is only performed if the conditional language is met. Plaintiff argues that Defendant's proposal is one of proving noninfringement because it improperly relates to how claims should be conditionally applied, which is not appropriate for claim construction. According to Plaintiff, the claim language itself makes clear that steps [c] and [d] are mutually exclusive alternatives. Step [c] is performed if the resource is determined to be popular, and step [d] is performed if the resource is determined not to be popular.

Defendant responds that the parties need to know whether claim 1 is met if an accused system satisfies only one branch of the condition, such that the remaining limitations are eliminated from consideration. Defendant relies on the Federal Circuit's reasoning in *Hytera Commc'ns Co. v. Motorola Sols., Inc.*, 841 F. App'x 210, 217-18 (Fed. Cir. 2021), which is an invalidity finding that a prior art reference must perform all alternative conditions in order to anticipate a method claim that "contains a clear indication that the method requires performance . . . in response to each of the two alternative conditions." Defendant argues that the method claim requires all steps to be performed, regardless of whether only one set of conditional statements is satisfied.

The Court's analysis begins with the language of claim 1, with the steps enumerated and conditional language noted in bold:

> 1. A method of content delivery in a content delivery network comprising at least a first tier of servers, the method comprising:

> **[a]** at a first server in the first tier of servers, obtaining a request from a client for a resource, wherein the resource is available as part of a content provider's library;
>
> **[b]** if the resource is not available at the first server or at a peer of the first server, determining if the resource is popular;
>
> **[c] if the resource is determined to be popular**, then the first server obtaining the resource and the first server serving the resource to the client, otherwise,
>
> **[d] if the resource is determined not to be popular**, directing the client to a second server in a second tier of servers distinct from the first tier of servers, wherein the second server comprises a first portion of the content provider's library, the first portion comprising at least the resource, wherein at least one other server in the second tier comprises a second portion of the content provider's library, wherein the first portion of the content provider's library is distinct from the second portion, and wherein the second tier is any intermediate tier between the first tier and an origin server that stores resources associated with the content provider's library, and
>
> **[e]** the second server serving the resource to the client.

The plain language of the claim is clear and unambiguous. Neither party argues that the words need construction to clarify the scope of what the invention covers. The dispute is whether each step must be actually performed for the claim to be met. As the claim provides for a method comprising a series of steps that branch conditionally based on a popularity determination, the plain language only requires performance of one condition per iteration without an express requirement to double back and perform the other so long as the conditional determination is made and either condition can be performed as a result of the determination.

During oral argument, Plaintiff stated that it intends to prove each step of claim 1 in the ’692 Patent will be met by the accused product, although the steps of the method will not all be met at the same time. In other words, Plaintiff believes the accused product is configured to perform all the claim steps and, in some instances, one branch of the steps will be met, and in other instances, the other branch of the steps will be met. Defendant responded with agreement that such is the scope of its request as well. Defendant explained that its proposed construction is for the

steps in each branch of the method to be performed even if they are not performed at the same time.

Accordingly, the scope of the disputed term is resolved by agreement of the parties. The parties have submitted nothing else on this issue that requires clarification by claim construction.

The Court has also reviewed the submitted caselaw and finds that it comports with the parties' agreement on the performance of the method claim steps. The Federal Circuit has established that "[i]f the condition for performing a contingent step is not satisfied, the performance recited by the step need not be carried out in order for the claimed method to be performed." *Cybersettle, Inc. v. Nat'l Arbitration Forum, Inc.*, 243 F. App'x 603, 606-07 (Fed. Cir. 2007); *see also GREE, Inc. v. Supercell Oy*, 2020 U.S. Dist. LEXIS 152920, at *10 (E.D. Tex. July 10, 2020) (quoting *Cybersettle*). As this Court explained in *GREE*, "[a] more complete understanding of this would be that if a conditional statement on a limitation is met, the subsequent steps are mandatory and limiting, and if a conditional statement on a limitation is not met, the subsequent steps are nonlimiting and do not need to be performed in order for infringement to occur." *Id.* at *10-11.

Defendant's reliance on *Hytera* is misplaced because there, the claim language was fundamentally different. In *Hytera*, the Federal Circuit found the claim at issue "requires that a specific action be taken in response to each of two alternative specified conditions." 841 F. App'x at 216. The claim in *Hytera* required both "knowing . . . a first set of synchronization patterns associated with a desired timeslot and a second set of synchronization patterns" and then performing a "selecting" step regardless of which condition was met. *Id.* at 217. The court explained:

> "The claim requires 'knowing . . . a second set of synchronization patterns,' *id.* at col. 17 ll. 38-41, precisely because it is essential that, under the second condition

> when the timeslot is not the current desired timeslot, the transmitting device must 'select[] a synchronization pattern selected from the second set of synchronization patterns.' *Id.* at col. 17 ll. 55-58. Therefore, whereas the Board construed the claim in *Schulhauser* as presenting two distinct methods depending on the prerequisite conditions, the Board here correctly determined claim 7 to be one method in which the response to either alternative condition in the "selecting" step must be performed."

Id. at 217-18. Thus, the claim in *Hytera* contained no condition that would excuse performance of the "selecting" step, which means the claim is essentially **one** method rather than **two** distinct alternative methods. In the case of a one-method claim, of course each step must be performed for a finding of anticipation.

In contrast, claim 1 of the '692 Patent is written to claim two distinct methods that depend upon the prerequisite condition. It is more akin to the claim in *Ex Parte Schulhauser*, No. 2013-007847, 2016 WL 6277792 (P.T.A.B. Apr. 28, 2016) where the Board found the "triggering" and "determining" steps to be mutually exclusive such that "[i]f the electrocardiac signal data is not within the threshold electrocardiac criteria, then an alarm is triggered and the remaining method steps need not be performed." *Id.* at *4.

Similarly, claim 1 of the '692 Patent presents two alternative paths:

> Path 1: Determining if the resource is popular, and if the resource is popular, then the first server obtaining and serving the resource to the client.
>
> Path 2: Determining if the resource is popular, and if the resource is not popular, then directing the client to a second server (which serves the resource).

The steps of "first server obtaining the resource" (step [c]) and "directing the client to a second server" (step [d]) are mutually exclusive such that either one can be performed to completion without the other being performed. The claim structure makes this explicit through the "if the resource is determined to be popular" versus "if the resource is determined not to be popular" conditional language, each eliciting different next steps.

This situation is also similar to *Eon Corp. IP Holdings, LLC v. T-Mobile USA, Inc.*, where the court addressed claims with binary conditional statements. 2012 WL 405492, at *11-14 (E.D. Tex. Feb. 8, 2012). In *Eon*, the claims set up two scenarios: (1) "if said subscriber unit is receiving a signal . . . performing the steps of: . . . ." and (2) "if said subscriber unit is not receiving a signal . . . performing the steps of . . . ." The *Eon* court found the claims "speak for themselves" and held that "[t]he method steps listed after 'if said subscriber unit is not receiving a signal . . .' are not performed if the 'determining' step determines that the subscriber unit is receiving a digital signal." *Id.* at *14. The same principle applies here.

Furthermore, this Court has previously addressed a similar issue and found *Cybersettle* to be on point. So long as the accused system has the recited capability, the claim does not actually require performance of the conditional step if the condition is not satisfied. *See PLS IV, LLC v. GDC Tech. Ltd*., 2025 WL 3281842, at *8-9 (E.D. Tex. Nov. 25, 2025).

For the foregoing reasons, the Court concludes that the claim language is clear and unambiguous. The conditional structure of the claim establishes two alternative methods: one performed when the resource is determined to be popular, and another performed when the resource is determined not to be popular. Under Federal Circuit precedent, if the condition for performing a contingent step is not satisfied, the performance recited by that step need not be carried out. *Cybersettle*, 243 F. App'x at 606-07. No further construction is necessary.

The Court finds the steps recited in claim 1 of the '692 Patent **should be given their plain and ordinary meaning.**

3. "origin server"

Claim term	Plaintiff's Construction	Defendant's Construction
"origin server" ('692 Patent, claims 1, 15)	Plain and ordinary meaning	"A content provider's / customer's server"

The disputed issue as to this term is whether the patentee acted as a lexicographer in defining "origin server" to include an ownership or association requirement.

Plaintiff argues that Defendant's proposal improperly adds an ownership requirement to avoid infringement in situations where Defendant owns and operates the origin server. According to Plaintiff, the claim contains no ownership requirements and merely describes the "origin server" with respect to its orientation in the network as a server that sits beyond an intermediate CDN tier and serves as the ultimate source of storage for "resources associated with the content provider's library." ('692 Patent at 13:38.) Plaintiff argues that Defendant's proposal is unsupported by the specification, which expressly acknowledges that an "origin server" can be owned or related to any number of parties, including by the content-provider, the customer, or a third-party.

The relevant portion of the specification is: "A content provider's/customer's server (or servers) are also referred to as origin servers. A content provider's origin servers may be owned and/or operated by that content provider or they may be servers provided and/or operated by a third party such as a hosting provider. The hosting provider may also provide CDN services to that content provider." (*Id.* at 3:65-4:4.) Plaintiff contends this language shows that who owns the servers is not a limitation.

Defendant asserts that the cited sentence from the specification defines "origin server" because it uses the phrase "referred to," which demonstrates the patentee's intent to expressly and unambiguously define the term. For support, Defendant also points to FIG. 3, which labels the relevant servers as "origin/content provider servers." Defendant states it is not seeking to create an ownership requirement but, without this definition, the term is ambiguous because the claims do not explain what an origin server is or how it differs from the other servers in the claims from which content is also obtained.

Having reviewed the parties briefing, the Court provided the parties with a preliminary construction of this term in advance of the hearing wherein "origin server" was construed as "a server outside the content delivery network that provides resources to servers in the content delivery network." Plaintiff largely agreed with the Court's preliminary construction but added a request for a revision shown in underline: "a server **connected to** the content delivery network that provides resources to servers in the content delivery network." Plaintiff expressed its concern that the word "outside" would preclude a network connection between the server and the CDN.

Defendant agreed with the Court's preliminary construction as issued. Defendant objected to Plaintiff's revision, explaining that it adds ambiguity and because the network connection is already made clear from the definition because the origin server must provide resources to servers in the CDN.

Having considered the parties' arguments, the Court agrees with Defendant that the network connection between the origin server and the CDN is made clear from its preliminary construction. The claim language and patent specification plainly shows the origin server is connected to the CDN via a wider network, and the word "outside" in the construction does not sever that connection.

Therefore, the Court adopts its preliminary construction as to this term and finds "origin server" **to mean "a server outside the content delivery network that provides resources to servers in the content delivery network."**

4. "control environment"/"request environment"

Claim term	Plaintiff's Construction	Defendant's Construction
"control environment" ('347 Patent, claims 1, 3[1])	Plain and ordinary meaning	"A list { . . . } of Name=Value assignments which must be constants, not functions of the request"
"request environment" ('347 Patent claims 1, 2)	Plain and ordinary meaning	"Another list [. . .] of Name=Value assignments which may be functions of the request"

The Court considers the claim terms "control environment" and "request environment" together since the issue and arguments are closely related. The parties dispute whether the specification's description at column 65:4-17 constitutes express lexicography that limits "control environment" and "request environment" to specific data structures, or whether these terms should be given their plain and ordinary meaning as understood by persons of ordinary skill in the CDN field. The relevant specification passage recites as follows, with the two subject parameters noted in bold:

> The effects of matching a request collection are to constrain the next set of nodes to examine and to specify one or more of the following optional attributes:
>
> **a. A control environment: (CE) (a list of { . . . } Name=Value assignments which must be constants, not functions of the request);**

[1] The parties' reference to clam 13 appears to be in error because "control environment" does not appear in claim 13. Instead, it appears in claim 3.

b. A request environment: (RE) (another list [. . .] of Name=Value assignments which may be functions of the request);
c. A behavior identifier: B (a string); and
d. A single layer control instruction <I>

('347 Patent, 65:4-17.)

Plaintiff argues the specification describes control and request environments as modifiable environments that are functionally distinct from each other: The control environment carries categorization information while the request environment captures request-specific data. Plaintiff contends their plain and ordinary meaning should apply because these functional distinctions are readily understood by a person of ordinary skill in the CDN field. Plaintiff argues that Defendant's construction improperly imports an embodiment into the claims by lifting implementation details from an "optional attribute" list in a parenthetical, (*id.* at 65:4-12), and that Defendant isolates a single quote representing one non-limiting embodiment while ignoring that the specification uses "environment" more broadly, (*see id.* at 67:1-3, 67:56-58, 70:35-37). Plaintiff argues that Defendant's proposed construction creates a contradiction with the claims' requirement that the control environment be "modifiable" while limiting it to "constant" values. Additionally, Plaintiff contends that Defendant's construction adds confusing technical jargon that will not aid the jury's understanding.

Defendant responds that the specification provides express definitions using clear lexicographic signals in the form of a colon, abbreviation, and a parenthetical definition when introducing these terms for the first time. Doing so demonstrates the patentee's intent to dictate lexicography. Defendant argues that the parenthetical format is the conventional manner to define a term, and the specification consistently uses these terms in accordance with these definitions, which should be limiting on the claims.

The Court reviews the language of the claims, reproduced below, with the disputed terms in bold.

> 1. A computer-implemented method in a content delivery network (CDN), and on a device comprising hardware including memory and at least one processor, the computer-implemented method comprising:
>
> > (A) receiving a request for a CD service of a particular service type, wherein a CD service of said particular service type defines a particular number of configurable layers of request processing associated with said CD service of said particular service type, sequentially from a particular first layer to a particular last layer;
> >
> > (B) processing said request, starting at said particular first layer, said processing being based on a modifiable runtime environment, said processing continuing conditionally through each of said particular layers in turn until either said request is terminated by one of said layers or said particular last layer processes said request,
> >
> > wherein said runtime environment comprises a modifiable **control environment** and a modifiable **request environment**, said modifiable **request environment** being based on said request, wherein said modifiable **control environment** comprises a modifiable global **control environment**, and wherein said modifiable **control environment** is distinct from said modifiable **request environment**,
> >
> > wherein the first layer determines the modifiable **request environment** from information associated with the request initially received in (A), and wherein each subsequent layer obtains the modifiable **request environment** from the previous layer,
> >
> > wherein, in processing of said request, at least one of said layers modifies said modifiable **control environment** to produce a modified **control environment**, and wherein processing of said request by a subsequent layer is based on the modified **control environment**,
> >
> > wherein, in processing of said request, at least one of said layers modifies said runtime environment.
>
> 2. The computer-implemented method of claim 1 wherein, in processing of said request, at least one of said layers modifies said **request environment** to produce a modified **request environment**, and wherein processing of said request by a subsequent layer is based on the modified **request environment.**

> 3. The computer-implemented method of claim 1 wherein said **control environment** for said first layer is independent of said request.

Claim 1 provides that the runtime environment for processing data requests in a CDN comprises two components: (1) a modifiable control environment, which itself comprises a modifiable global control environment and is distinct from the modifiable request environment; and (2) a modifiable request environment, which is based on the request for a CD service of a particular service type that defines a particular number of configurable layers. The claim language emphasizes that both environments are modifiable and functionally distinct from each other, but does not specify what structural form these environments take or how they store and represent data.

Notably, Plaintiff does not argue that "control environment" and "request environment" are well-known terms of art in CDN technology; nor has Plaintiff submitted an expert opinion expressing a skilled artisan's understanding of the terms. These are coined terms and Plaintiff has not articulated any explanation of their plain and ordinary meaning beyond asserting that they should be given their plain and ordinary meaning.

The Court can discern no established meaning from the written description besides the definitional passage. The specification contains a section titled "Request Processing" in which the disputed passage appears under the sub-heading "Request Collection Lattices" (RCL). ('347 Patent at 63:49-65:67.) This section describes how request processing operates through a layered decision-tree structure where each node can specify certain attributes that govern how requests are handled. The specification introduces "optional attributes" that get incrementally updated as request collections match and move to the next set of nodes, and identifies the "control environment" and "request environment" as two such optional attributes. (*Id*. at 65:4-23.)

The specification states:

The effects of matching a request collection are to constrain the next set of nodes to examine and to specify one or more of the following optional attributes:

1. **A control environment: (CE) (a list { . . . } of Name=Value assignments which must be constants, not functions of the request);**
2. **A request environment: (RE) (another list [. . .] of Name=Value assignments which may be functions of the request);**
3. A behavior identifier: B (a string); and
4. A single layer control instruction <I> (where I is one of a small number of predefined opcodes governing the flow from layer to layer).

(*Id*. at 65:4-17 (emphasis added).)

This passage exhibits the conventional hallmarks of lexicographic definition. The patentee uses a colon immediately after each term to signal definition, follows with an abbreviation in parentheses (CE and RE), and then provides the definitional phrase in a second set of parentheses. The Federal Circuit has recognized that the use of parentheses "is a conventional manner by which one may define another term used in a document." *MyPAQ Holdings Ltd. v. Samsung Elecs. Co.*, 2025 WL 1189920, at *3 (Fed. Cir. Apr. 24, 2025). Similarly, the use of colons signals definitional intent. *See Sharp v. Fed. Sav. & Loan Ins. Corp.*, 858 F.2d 1042, 1045 (5th Cir. 1988) (colon in contractual provision would "unambiguous[ly]" signal definition). Indeed, the patent uses this same colon-plus-parenthetical format consistently to define other terms. (*See, e.g.,* '347 Patent at 28:27-46 ("Reference slots: A slot with a name beginning with a single '@' is a reference slot.")).

The cited passage is the first and only substantive identification of these terms in the patent. The only other description appears immediately after the definitional passage: "Control environments are intended as symbolic categorization labels of the requests that match to that point, whereas request environments capture information from the particular request matched." (*Id*. at 65:24-27.) But despite Plaintiff's arguments, this sentence adds no real information and is unhelpful to aid in understanding the terms.

Furthermore, the label of "optional attributes" does not detract from the patentee's definitional intent. While the specification describes the use of these attributes within the RCL system as "optional," the definitions of the attributes themselves are not optional. The sentence introducing the list states that matching a request collection may "specify one or more of the following optional attributes," meaning that *using* a control environment or request environment is optional in any given implementation. (*Id*. at 65:4-6.) But when these attributes are used (as they are in the asserted claims), the definitions clearly establish what they are. The specification confirms this understanding by consistently using the defined terms in accordance with their definitions throughout the patent. Immediately following the definitional passage, the specification explains that both environments comprise name-value pairs: "In the end, the combination of both of these environments can be thought of as a single environment of name value pairs." (*Id*. at 65:27-29.)

Plaintiff argues that the specification provides other embodiments of control and request environments (*e.g.*, *id.* at 67:1-3, 67:56-58, and 70:33-37). But none of these passages are about the disputed terms and none supports its position. Column 67:1-3 states: "Note that the control and request environments have been combined, and it is assumed that the behavior is identified with an environment variable." This passage addresses "behavior," which is a separately identified optional attribute. Column 67:56-58 states: "Normal Application Level request/response processing (with a set of environment variables, a set of data, and a script)." This generic reference to "environment variables" is in the context of general processing and does not describe the specific structure of "control environment" or "request environment" that sets them apart from the "environment." Column 70:33-37 states: "As the request, behavior, and environment may be modeled simply as an environment (variables and their values), the term 'environment' is used

here as a general way to refer to all of these items." This clearly explains that the word "environment" is used broadly throughout the specification to encompass multiple concepts. It does not describe an alternative data structure for the specific claim terms "control environment" and "request environment." The reference to "variables and their values" is entirely consistent with the defined Name=Value assignments.

The Court also does not find a contradiction exists between the claims requiring the environments to be "modifiable" and the specification defining the control environment as "constants, not functions of the request." The "constants" here do not mean that they cannot be modified. Rather, it means they are constant values rather than dynamic functions that compute values based on incoming request data. This distinguishes control environment from request environment, where assignments "may be functions of the request" where they dynamically compute values based on the particular request being processed. Indeed, the specification explains that these "constant" assignments are modifiable: "Each node may inherit the settings for each of these optional attributes from a previous node. . . . Some or all of these may then be incrementally updated." (*Id*. at 65:17-23.) Thus, the patentee's definition is fully consistent with the claim language.

For the foregoing reasons, the Court finds that the patentee set forth a definition for the disputed terms in the patent specification at column 65:4-17. The Court finds "control environment" **means "A list { . . . } of Name=Value assignments which must be constants, not functions of the request"** and "request environment" **means "Another list [. . .] of Name=Value assignments which may be functions of the request"**

5. **"wherein a CD service of said particular service type defines a particular number of configurable layers of request processing associated with said CD service of said particular service type, sequentially from a particular first layer to a particular last layer"**

Claim term	Plaintiff's Construction	Defendant's Construction
"wherein a CD service of said particular service type defines a particular number of configurable layers of request processing associated with said CD service of said particular service type, sequentially from a particular first layer to a particular last layer" ('347 Patent, claim 1)	Not indefinite; Plain and ordinary meaning	Indefinite

The issue as to this term is whether the claim is indefinite due to grammatical ambiguity regarding what "sequentially" modifies—whether it modifies (i) how the CD service "defines" the layers, or (ii) how the layers of request processing occurs.

Plaintiff argues that the claim structure is clear: The CD service (subject) "defines" (verb) "a particular number of configurable layers of request processing" (direct object), with this requirement articulated in a dependent clause. The word "sequentially" appears in the latter clause after the CD service has already defined the layers, demonstrating that it describes the order of request processing through the defined layers, not the act of definition by the CD service. Thus, "sequentially" modifies "processing," not "defines," based on proper grammatical syntax. Plaintiff submits that disclosures in the specification confirm this interpretation and notes that Defendant recognizes that the specification says "nothing about sequential definition." This is because the claim does not require sequential definition but rather sequential processing. Plaintiff submits that the patent as a whole provides sufficient general guidelines and examples, including Figure 3F

showing layers L0, L1, etc. executed sequentially, to enable a person of ordinary skill in the art to discern the claimed scope of the invention.

Defendant contends that the claim is indefinite because it grammatically supports two equally valid but different interpretations. The first one is that the CD service type sequentially defines a particular number of configurable layers, where "sequentially" modifies the verb "defines." Under this interpretation, a system where the layers are defined in parallel or all at once would not infringe, and there would be no limitation on the sequence of processing. The second interpretation is that the CD service type defines a particular number of configurable layers of request processing and the sequence for processing such layers, where "sequentially" modifies the "processing" of the layers. Under this second option, the layers could be defined all at once, but the CD service must also define the processing sequence. Thus, a system where something other than the CD service type defines the sequence would not infringe. Defendant asserts the specification provides no guidance to resolve this ambiguity. Because the claim language grammatically supports two equally correct interpretations and the intrinsic evidence provides no means to choose between them, Defendant submits the claim must be found indefinite.

A patent claim is indefinite if it fails to inform those skilled in the art about the scope of the invention with reasonable certainty. *Nautilus*, 572 U.S. at 899. The definiteness requirement "must take into account the inherent limitations of language." *Id*. Defendant bears the burden of proving indefiniteness by clear and convincing evidence. The Court concludes that Defendant has not met its burden, as explained below.

The disputed term appears in claim 1 of the '347 Patent, which reads in relevant part as follows:

> 1. A computer-implemented method in a content delivery network (CDN), and on a device comprising hardware including memory and at least one processor, the computer-implemented method comprising:
>
> (A) receiving a request for a CD service of a particular service type, **wherein a CD service of said particular service type defines a particular number of configurable layers of request processing associated with said CD service of said particular service type, sequentially from a particular first layer to a particular last layer;**
>
> (B) processing said request, starting at said particular first layer, said processing being based on a modifiable runtime environment, said processing continuing conditionally through each of said particular layers in turn until either said request is terminated by one of said layers or said particular last layer processes said request,
>
> . . .

The grammatical structure of the claim language, although cumbersome to parse, supports only a single reasonable interpretation. Clearly, the prepositional phrase "from a particular first layer to a particular last layer" modifies "sequentially." And the sequential movement from layer to layer can only sensibly modify the "configurable layers of request processing" as both refer to the movement between layers. Thus, the most understandable reading of the phrase describes how "configurable layers of request processing" flows sequentially from the first layer to the last, and not how the CD service defines the layers.

The next element in the claim helps to resolve the ambiguity. Claim 1 step (B) immediately follows the disputed language and recites: "processing said request, starting at said particular first layer . . . and continuing conditionally through each of said particular layers in turn until said particular last layer . . . ." This description makes clear that the defined "layers of request processing" is actually performed in sequence. The claim is internally consistent with this interpretation.

In addition, the written description only describes sequential processing and not sequential definition. Every relevant passage in the specification addresses the sequence of processing, not the sequence of definition. The specification states:

- "[T]he processing of each request proceeds through each layer in turn." (*Id*. at 63:54-55.)
- "As each layer is processed in turn for each request (from layer (NT-1) to layer 0) . . . ." (*Id*. at 63:63-64.)
- "The general algorithm for processing a request is to compute the applicable configuration for each layer . . . , apply it, and conditionally move to the next layer until the last layer is reached or a stop control is issued." (*Id*. at 65:55-62.)
- FIG. 3F is titled "Layered (Request Processing)" and shows layers L0, L1, L2, etc., illustrating the flow of request processing through the layers.

Defendant acknowledges that the specification says "nothing about sequential definition" precisely because the claim does not impose sequential definition, only sequential processing.

Wherever the specification describes defining layers, it has the layers being defined as a complete set. Column 63:52-55 states: "each service type T defines an arbitrary but fixed number NT of configurable layers of request processing." The phrase "fixed number" means that all the layers are defined at the same time, not one after another. The service type configuration specifies the complete set of layers and then requests process through them sequentially.

Defendant argues a third possible interpretation: that "sequentially" modifies the CD service such that it pre-defines the precise sequence of request processing as a separate element from defining the layers themselves. The Court does not find this interpretation materially different from the straightforward reading that the layers of request processing occur sequentially. Defendant has not pointed to anything in the intrinsic record showing the CD service must separately and explicitly define the processing sequence as a distinct element beyond the natural

consequence of defining a fixed number of layers that are processed in order from first to last. Defendant's third argument lacks both textual support and logical coherence.

Defendant bears the burden of proof in alleging indefiniteness yet offers only attorney argument that disregards the claim's internal structure and the specification's consistent usage. The Court is persuaded that a person of ordinary skill in the art reading the claim in the context of the specification would understand that "sequentially from a particular first layer to a particular last layer" describes how requests process through the defined layers. Guidance from the claim structure and the patent as a whole provides reasonable certainty and resolves any ambiguity in favor of definiteness.

The Court therefore finds the term "wherein a CD service of said particular service type defines a particular number of configurable layers of request processing associated with said CD service of said particular service type, sequentially from a particular first layer to a particular last layer" **is not indefinite and means "wherein a CD service of said particular service type defines a particular number of configurable layers of sequential request processing, from a particular first layer to a particular last layer, that is associated with said CD service of said particular service type."**

6. "collector system"

Claim term	Plaintiff's Construction	Defendant's Construction
"collector system" ('876 Patent claims 1, 7, 8, 9, 11, 12, 13, 16, 20, 21)	Not a means-plus-function term; Plain and ordinary meaning	This is a means-plus-function term. **Function**: The functions disclosed in Claims 1(A), 1(B), 1(C), and any applicable dependent claim steps.

		Corresponding Structure(s): Collector systems disclosed in Table 4-Collector 1, Table 4-Collector 2, Table 4-Collector 3, and Table 4-Collector 4.

The parties dispute whether "collector system" invokes 35 U.S.C. § 112, paragraph 6 despite not using the word "means," and if so, whether the corresponding structure is limited to the four specific collectors disclosed in Table 4.

Plaintiff contends that claims without the word "means" are presumed not to invoke 35 U.S.C. § 112 (f). Plaintiff asserts that the claims are not means-plus-function claiming because they provide a complete description of the collector system's operation (receiving multiple event streams, producing state data, asynchronously responding to queries, and providing state data) and include substantial language describing interaction with other components. Plaintiff argues this operational description is similar to *Smartflash LLC v. Apple Inc.*, 77 F. Supp. 3d 535, 542 (E.D. Tex. 2014), where "processor: coupled with "controlling access to data" and "implementing . . . code" was not found subject to § 112(f). Plaintiff points to extrinsic evidence confirming "collector system" refers to a known class of structures in the art and notes that the patent repeatedly uses "collector" in a manner consistent with its accepted and known structure.

Defendant responds that "collector system" is a nonce word invoking § 112(f) because it is a verbal construct connoting nothing more than something defined by its function. Defendant argues the word "system," like "mechanism," "element," or "device," is a generic description for software or hardware that performs a function, and that "collector" simply reflects that the system collects. Defendant argues that both the specification and claim language solely defines the "collector system" by its function and that the preamble's recitation of a "computer-implemented

method" with "memory and at least one processor" is insufficient to demonstrate structure. Defendant asserts that the patent fails to identify any known type of software structure, and that references to a "generic collector" and "pure collector" is evidence that the term is defined purely functionally. Defendant parallels this case to *Koninklijke*, where the Court found "information collector" to be a coined term lacking sufficient structural connotations. *Koninklijke KPN N.V. v. Telefonaktiebolaget LM Ericsson*, 2022 WL 811072, at *13-15 (E.D. Tex. Mar. 16, 2022). Because § 112(f) applies, Defendant argues that the term must be limited to the disclosed Collectors 1-4 in Table 4 of the '876 Patent.

The Court begins its analysis by examining the claim language with the disputed claim in bold, as follows.

> 1. A computer-implemented method in a content delivery (CD) network (CDN), said CDN comprising multiple CD services, said method operable on at least one device comprising hardware including memory and at least one processor, the method comprising:
>
> by a **collector system**:
>
> > (A) receiving multiple event streams of event data, said multiple event streams comprising event data from a plurality of CD services in said CDN, said plurality of CD services including a first CD service, each event of said event streams comprising: (i) a timestamp for said event, (ii) information relating to said event;
> >
> > (B) producing state data relating to and based on information represented in said event data of said multiple event streams, wherein, while said collector system is producing said state data, said collector system asynchronously responds to at least one query relating to said state data; and
> >
> > (C) in response to a query from said first CD service, said query relating to said state data, providing at least some of said state data to said first CD service, wherein said state data are used to inform a peering policy of a set of peer caches.

Because "collector system" does not recite the word "means," there is a presumption that § 112(f) does not apply. *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015) (*en banc*). This presumption "can be overcome . . . only if [Comcast] demonstrate[s] that the claim term fails to recite sufficiently definite structure." *Id*. at 1348 (internal quotation marks omitted). Defendant bears the burden but presents no evidence from a person of ordinary skill in the art—only attorney argument. *See M2M Solutions LLC v. Sierra Wireless Am., Inc.*, 2015 WL 5826816, at *2 (D. Del. Oct. 2, 2015) (attorney argument insufficient to overcome presumption without expert testimony).

The word "system" combined with the descriptive modifier "collector" provides some structural context. Unlike the generic standalone terms found to invoke § 112(f) such as "mechanism," "element," or "device" (*Williamson*, 792 F.3d at 1350), a "collector system" is more analogous to hardware terms like "processor" or "circuit" coupled with operational descriptions. Indeed, claim 1 recites "a device having at least a processor" on which the collector system operates.

What's more, the claim language provides extensive operational detail about the collector system. It receives multiple event streams of event data from a plurality of CD services, each event stream comprising a timestamp and related information; produces state data based on the event data while asynchronously responding to at least one query relating to that state data; and in response to the query, it provides state data back to the CD service to inform a peering policy. This is not merely functional language. It describes:

- **Input structure**: Multiple event streams with timestamps and information;
- **Processing capability**: Producing state data from events while responding to queries;
- **Output structure**: Providing state data to services.

The operational descriptions provide structural guidance. *Smartflash* is directly on point: "Structure may also be provided by describing the claim limitation's operation such as its input, output, or connections." 77 F. Supp. 3d at 542 (internal citation and quotation omitted). In *Smartflash*, the court found "processor" was not means-plus-function where "coupled with a description of the processor's objective and operation" including "controlling access to data" and "implementing . . . code." *Id*. Similarly, "collector system" is coupled with extensive operational description that informs its structure.

35 U.S.C. § 112(f) provides: "An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof." Here, "collector system" is not drafted as "a step for performing a specified function." Rather, it is the entire system that receives input, processes information, and responds to queries. It recites a combination of capabilities, not a single function. This holistic description of a system with multiple operational characteristics distinguishes it from the narrow functional claiming § 112(f) addresses.

In addition, the written description treats "collector system" as a component known in the art by consistently referring to "collector" as a structural component in CDN architecture. The '876 Patent refers to "collector" as one of many CDN component types, alongside "control" and "reducer" service endpoints. (*See, e.g.*, '876 Patent at 13:57-59; 76:50-52; 88:37-44.) The specification uses "collector" as a structural classification, not as a purely functional placeholder. Indeed, Defendant's reliance on the references to "generic collector" and "pure collector" (*id*. at 99:30-35, 97:46-51) actually undermines its argument. These references describe types of collectors with different characteristics, suggesting "collector" is a known structural classification

with variants. Likewise, Table 4 is not limiting. It contains only "example collectors" (*id*. at 103:17), and the specification provides other examples and instructions throughout, including describing a generic collector's table (*id*. at 99:29-41) and disclosing that "a particular collector may provide multiple [operation/measurement/administration] OMA services or functionality," such as a load analyzer (*id*. at 101:6-18). Thus, collector functions exceed the embodiments specifically disclosed in Table 4.

The submitted extrinsic evidence confirms that "collector system" has a known meaning in the art as a class of monitoring and aggregation infrastructure in CDN and networking technology. The CableLabs DOCSIS 3.0 Specification (2007) states: "A collector system is often referred to as an 'IPDR Collector' . . . The collector systems benefit from [IPDR/SP] by reducing the costs associated with reliable data collection, scalable growth in number of records . . . ." (Dkt. No. 88-6 at 30.) By 2007, "collector system" was an established term in the industry. Other extrinsic evidence also shows "collector" is used consistently to refer to network components with specific structural characteristics—servers, devices with network locations, systems that can be "installed" in networks. (Dkt Nos.. 88-6, 88-7, 88-8, 88-11, 88-12.) The Court is persuaded that a person of ordinary skill in the art familiar with CDN technology would understand "collector system" as referring to specific architectural components with known characteristics, especially in context of the patent as a whole.

Defendant submitted no evidence to the contrary and cannot overcome the presumption against § 112(f)'s application.

Defendant's reliance on *Koninklijke* is also misplaced. There, the Court found "information collector" was linked to "means for selecting" language in the disclosure, which directly connected it to acknowledged means-plus-function language. 2022 WL 811072, at *7. No such connection

exists here. Moreover, *Koninklijke* had no extrinsic evidence of accepted usage in the art and the disputed claims lacked the extensive operational description present here.

The Court rejects Defendant's theory that every "system" performing functions invokes § 112(f). Such a breadth of coverage is not intended by the rule. The Federal Circuit has cautioned against overly aggressive § 112(f) application: "we have not previously held that a claim term that includes functional language is inherently means plus function." *Williamson*, 792 F.3d at 1349. The Court refrains from doing so here.

Accordingly, the Court finds "collector system" **is not a means-plus-function term under 35 U.S.C. § 112(f).**

V. CONCLUSION

The Court adopts the constructions as set forth in this opinion for the disputed terms of the Patents-at-Issue.

The parties are ordered that they may not refer, directly or indirectly, to each other's claim construction positions in the presence of the jury. Likewise, the parties are ordered to refrain from mentioning any portion of this opinion, other than the actual definitions adopted by the Court, in the presence of the jury. Any reference to claim construction proceedings is limited to informing the jury of the definitions adopted by the Court.

SIGNED this 18th day of February, 2026.



ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE