IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
MIDLAND-ODESSA DIVISION

ADVANCED CLUSTER SYSTEMS, INC., *Plaintiff,* v. ADVANCED MICRO DEVICES, INC., *Defendant,*	Case No. 7:24-CV-00244-ADA
INTEL CORPORATION, *Defendant*.	Case No. 7:24-CV-00245-ADA

CLAIM CONSTRUCTION ORDER

On August 18, 2025, the Court conducted a claim construction hearing to construe the terms of U.S. Patent Nos. 10,333,768 (the "'768 Patent"); 11,563,621 (the "'621 Patent"); 11,570,034 (the "'034 Patent"); 11,811,582 (the "'582 Patent"); and 12,021,679 (the "'679 Patent"). The Court enters the following order.

I. LEGAL STANDARD

A. General principles

The general rule is that claim terms are given their plain-and-ordinary meaning. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (*en banc*); *Azure Networks, LLC v. CSR PLC*, 771 F.3d 1336, 1347 (Fed. Cir. 2014), *vacated on other grounds*, 575 U.S. 959, 959 (2015) ("There is a heavy presumption that claim terms carry their accustomed meaning in the relevant community at the relevant time.") (internal quotation omitted). The plain-and-ordinary meaning

of a 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." *Phillips*, 415 F.3d at 1313.

The "only two exceptions to [the] general rule" that claim terms are construed according to their plain-and-ordinary meaning are when the patentee (1) acts as his/her own lexicographer or (2) disavows the full scope of the claim term either in the specification or during prosecution. *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012). The Federal Circuit has counseled that "[t]he standards for finding lexicography and disavowal are exacting." *Hill-Rom Servs., Inc. v. Stryker Corp.*, 755 F.3d 1367, 1371 (Fed. Cir. 2014). To act as his/her own lexicographer, the patentee must "clearly set forth a definition of the disputed claim term" and "clearly express an intent' to [define] the term." *Thorner,* 669 F.3d at 1365 (internal quotation omitted).

"Like the specification, the prosecution history provides evidence of how the PTO and the inventor understood the patent." *Phillips*, 415 F.3d at 1317. "[D]istinguishing the claimed invention over the prior art, an applicant is indicating what a claim does not cover." *Spectrum Int'l, Inc. v. Sterilite Corp.*, 164 F.3d 1372, 1379 (Fed. Cir. 1998). The doctrine of prosecution disclaimer precludes a patentee from recapturing a specific meaning that was previously disclaimed during prosecution. *Omega Eng'g, Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). "[F]or prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both clear and unmistakable." *Id.* at 1325–26. Accordingly, when "an applicant's statements are amenable to multiple reasonable interpretations, they cannot be deemed clear and unmistakable." *3M Innovative Props. Co. v. Tredegar Corp.*, 725 F.3d 1315, 1326 (Fed. Cir. 2013).

A construction of "plain and ordinary meaning" may be inadequate when a term has more than one "ordinary" meaning or when reliance on a term's "ordinary" meaning does not resolve the parties' dispute. *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co*., 521 F.3d 1351, 1361 (Fed. Cir. 2008). In that case, the Court must describe what is the plain and ordinary meaning. *Id.*

"Although the specification may aid the court in interpreting the meaning of disputed claim language . . ., 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). "[I]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004).

Although extrinsic evidence can be useful, it is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317 (quoting *C.R. Bard, Inc. v. United States Surgical Corp.*, 388 F.3d 858, 862 (Fed. Cir. 2004)). Technical dictionaries may be helpful, but they may also provide definitions that are too broad or not indicative of how the term is used in the patent. *Id.* at 1318. Expert testimony may also be helpful, but an expert's conclusory or unsupported assertions as to the meaning of a term are not. *Id.*

B. Indefiniteness

"[I]ndefiniteness is a question of law and in effect part of claim construction." *ePlus, Inc. v. Lawson Software, Inc.*, 700 F.3d 509, 517 (Fed. Cir. 2012). Patent claims must particularly point out and distinctly claim the subject matter regarded as the invention. 35 U.S.C. § 112, ¶ 2. A claim, when viewed in light of the intrinsic evidence, must "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 (2014). If it does not, the claim fails § 112, ¶ 2 and is therefore invalid as indefinite. *Id.* at 901. Whether a claim is indefinite is determined from the perspective of one of ordinary skill in the art as of the time the application was filed. *Id.* at 911.

C. Means-Plus-Function Claiming

An element of 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 (Fed. Cir. 2015) (en banc in relevant part). The statute states:

> 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.

§ 112 ¶ 6.

The initial inquiry is whether § 112 ¶ 6 applies to a specific claim term. "The standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure." *Williamson*, 792 F.3d at 1349. In making this determination, courts have "long recognized the importance of the presence or absence of the word 'means.'" *Id.* at 1348. When a claim term recites the word "means," there is a rebuttable presumption that § 112, ¶ 6 applies. *Williamson*, 792 F.3d at 1348. Conversely, if the term does not recite the word "means," then it is rebuttably presumed not to be subject to § 112, ¶ 6. *Id.* "That presumption can be overcome, but only if the challenger demonstrates that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Samsung Elecs. Am., Inc. v. Prisua Eng'g Corp.*, 948 F.3d 1342, 1353–54 (Fed. Cir. 2020) (internal quotations removed) (citing *Williamson*, 792 F.3d at 1349). "The correct inquiry, when 'means' is absent from a limitation, is

whether the limitation, read in light of the remaining claim language, specification, prosecution history, and relevant extrinsic evidence, has sufficiently definite structure to a person of ordinary skill in the art." *Apple Inc. v. Motorola, Inc.*, 757 F.3d 1286, 1298 (Fed. Cir. 2014), *overruled on other grounds by Williamson*, 792 F.3d at 1349.

When § 112, ¶ 6 applies, it limits the scope of the functional term "to only the structure, materials, or acts described in the specification as corresponding to the claimed function and equivalents thereof." *Williamson*, 792 F.3d at 1347. Construing a means-plus-function limitation involves multiple steps. "The first step . . . is a determination of the function of the means-plus-function limitation." *Medtronic, Inc. v. Advanced Cardiovascular Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2001). "[T]he next step is to determine the corresponding structure disclosed in the specification and equivalents thereof." *Id.* A "structure disclosed in the specification is 'corresponding' structure only if the specification or prosecution history clearly links or associates that structure to the function recited in the claim." *Id.* The focus of the "corresponding structure" inquiry is not merely whether a structure is capable of performing the recited function, but rather whether the corresponding structure is "clearly linked or associated with the [recited] function." *Id.* The corresponding structure "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). However, § 112, ¶ 6 does not permit "incorporation of structure from the written description beyond that necessary to perform the claimed function." *Micro Chem., Inc. v. Great Plains Chem. Co.*, 194 F.3d 1250, 1258 (Fed. Cir. 1999).

For § 112, ¶ 6 limitations implemented by a programmed general-purpose computer or microprocessor, the corresponding structure described in the patent specification must include an algorithm for performing the function, *i.e.*, the corresponding structure is a processor +

algorithm. *WMS Gaming Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999). In this situation, the corresponding structure is not a general-purpose computer but rather a special purpose computer programmed to perform the disclosed algorithm. *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008). The algorithm may be described in "any understandable terms," such as "as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure." *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013). Federal Circuit caselaw does not require that the patent describe an algorithm "if the selection of the algorithm or group of algorithms needed to perform the function in question would be readily apparent to a person of skill in the art." *Aristocrat Techs. Australia Pty Ltd. v. Multimedia Games, Inc.*, 266 F. App'x 942, 947 (Fed. Cir. 2008). Where the claim itself describes the algorithm, § 112, ¶ 6 does not apply because the claim recites the required structure. *St. Isidore Rsch., LLC v. Comerica Inc.*, No. 2:15-CV-1390-JRG-RSP, 2016 WL 4988246, at *13 (E.D. Tex. Sept. 19, 2016).

II. CLAIM CONSTRUCTION

A. Term 1 – configured to

Term	Plaintiff's Proposal	Defendants' Proposal	Court's Construction
configured to '768 Patent, Claims 1, 20, 21, 26, 27, 29, 31, 33, 34, 35, 37 '621 Patent, Claims 1, 13, 24, 27 '034 Patent, Claims 1, 24, 25, 28, 30 '582 Patent, Claims 1, 14, 16, 20	Plain and ordinary meaning Alternatively, to the extent a construction is required, "reasonably capable of"	"programmed so that when in operation [it/they] will"	Plain and ordinary meaning

’679 Patent, Claims 1, 10, 17, 18			

Defendants argue that this term requires construction because some claims recite components “configured to” perform a function and other claims recite the same components “capable of” performing the same/similar function and the jury will be confused over the different scope of “configured to” and “capable of.” Dkt. 49 at 4. Plaintiff argues that Defendants’ construction would require “necessarily and continuously executing the claimed function.” Dkt. 50 at 5. However, Defendants respond that the construction would only require that the device be programmed to perform the claimed function when in operation, but need not continuously perform the claimed function. Dkt. 52 at 2.

The Court agrees with Defendants that “configured to” and “capable of” have different scopes. At the *Markman* hearing, Defendants argued that a construction is necessary to prevent Plaintiff from arguing that capability is sufficient for infringement. *Markman* Hearing Tr. at 5:3–6:2. However, the Court declines to construe a term with a plain and ordinary meaning as a precaution because the Plaintiff ***may*** later make an erroneous argument. If, after Plaintiff serves its expert report, Defendants determine that Plaintiff’s expert is applying a meaning of “configured to” different from its plain and ordinary meaning, Defendants should seek a supplemental claim construction. *See id*. at 7:15–22 (THE COURT: “[W]hen you get the infringement report that says why they believe they infringe using this claim term and you believe as a matter of law that that’s incorrect, let me know. We’ll do a mini Markman. I will either construe it further or say it doesn’t need to be construed further.”).

B. Term 2 – kernel

Term	**Plaintiff’s Proposal**	**Defendants’ Proposal**	**Court’s Construction**
kernel	Plain and ordinary	interpreter that executes	software module that

’768 Patent, Claims 1, 2, 5, 6, 12, 16, 19, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 35 ’621 Patent, Claims 1, 2, 3, 13, 14, 16, 24, 27 ’034 Patent, Claims 1, 4, 5, 11, 15, 18, 22, 23, 24, 25, 26, 28, 29, 30 ’582 Patent, Claims 1, 2, 3, 5, 16, 18 ’679 Patent, Claims 4, 5, 11, 15, 18	meaning Alternatively, to the extent a construction is required, “program code”	instructions provided by a user, a script, or another source	executes instructions provided to the program

Defendants argue that “kernel” had two meanings to a person of ordinary skill in the art at the time of the invention. Dkt. 49 at 7–8. Specifically, according to Defendants, “kernel” could mean the core of an operating system or an interpreter that executes instructions provided to the program. *Id*. Defendants assert that the patentee explicitly selected the later meaning. *Id*. at 7–9. Plaintiff contends that the term should be given its plain and ordinary meaning. Dkt. 50 at 5. Notably, Plaintiff does not dispute that the plain and ordinary meaning encompasses both meanings of “kernel” identified by the Defendants. Instead, Plaintiff argues that Defendants’ construction is overly limiting because interpreting is just one function a kernel may perform. *Id*. at 6. Plaintiff argues that a kernel may, for example, also carry out computational functions. *Id*. Therefore, the parties’ dispute centers around whether the ordinary meaning of “kernel” is an interpreter (Defendants) or any “program code” (Plaintiff). Dkt. 52 at 3.

The specification states that “[s]ome application programs include an interpreter that executes instructions provided to the program by a user, a script, or another source” and “[s]uch

an interpreter is sometimes called a 'kernel.'" '768 Patent at 1:29–37. The claims also describe that the kernel "is capable of causing the hardware processor to evaluate mathematical expressions." *Id*. at Claim 1. Further, the kernel is "configured to accept and execute a request." *Id*. at Claim 5.

Therefore, the Court agrees that an interpreter is merely an example of one type of kernel, and Defendants' construction is overly narrow in limiting "kernel" to an "interpreter." The intrinsic evidence, however, indicates a "kernel" is not just any program code or software, but rather software that "executes instructions provided to a program" including for example requests and instructions related to evaluating mathematical expressions. *Id.* at 1:29–37, Claims 1, 5. Because "kernel" had more than one plain and ordinary meaning at the time of the invention, a construction is appropriate. In accordance with the intrinsic evidence, the Court construes "kernel" as "a software module that executes instructions provided to the program."

C. Term 3 – single-node kernel

Term	Plaintiff's Proposal	Defendants' Proposal	Court's Construction
single-node kernel '768 Patent, Claims 1, 2, 5, 6, 12, 16, 19, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 35 '034 Patent, Claims 1, 4, 5, 11, 15, 18, 22, 23, 24, 25, 26, 28, 29, 30 '582 Patent, Claim 18 '679 Patent, Claims 4, 5, 11, 15, 18	Plain and ordinary meaning Alternatively, to the extent a construction is required, "kernel that can run on a single node"	kernel that is designed to run on a single node	Plain and ordinary meaning.

The parties' dispute centers on whether a single-node kernel must be ***designed to*** run on only one node. Dkt. 49 at 9-10; Dkt. 50 at 10; Dkt. 52 at 5; Dkt. 55 at 8. Plaintiff contends that a kernel that is designed to run on a single node is merely a disclosed embodiment. Dkt. 50 at 9. Defendants argue that the only embodiment of a single-node kernel disclosed in the specification is one that is designed to run on a single node. Dkt. 49 at 10. Additionally, in previous litigation, Plaintiff argued that the plain and ordinary meaning of "single-node kernel" is a kernel that "can run on one node." Dkt. 49 at 9 (citing Dkt. 49-12, Joint Claim Construction Statement, *ACS v. NVIDIA*, Case No. 19-2032-MN-CJB (Dec. 21, 2022).

At the *Markman* hearing, Defendants argued that a construction was necessary to prevent Plaintiff from arguing that a kernel that ***can*** run on a single node but is not intended to be run on a single node satisfies the claim limitations. *Markman* Hearing Tr. at 11:3–12:17. The Court agrees with the Defendants that "single-node kernel" must have some meaning beyond just a "kernel." However, Defendants' proposed construction adds an intent element to an apparatus claim, which is improper. *See Sorrell Holdings, LLC v. Infinity Headwear & Apparel, LLC*, 2024 WL 413432, at *3 (Fed. Cir. Feb. 5, 2024) (unpublished) (reversing a claim construction because it "improperly suggested a design intent requirement" and "[d]irect infringement has not intent element"). Under Defendants' proposed construction infringement could turn on the intent of the designer of the accused product rather than the configuration of the accused product.

Both parties' proposed constructions distort rather than clarify the plain and ordinary meaning of "single-node." Because neither party proposes a construction that clarifies the plain and ordinary meaning of this term, the Court adopts the plain and ordinary meaning. However, if Defendants determine that Plaintiff's expert is applying a meaning of "single-node kernel" that

deviates from the plain and ordinary, Defendants should seek a supplemental claim construction or move for summary judgment of non-infringement. *Markman* Hearing Tr. at 14:20–15:19.

D. Term 4 – Mechanism terms

Terms	Plaintiff's Proposal	Defendants' Proposal	Court's Construction
a mechanism for the nodes to communicate results of mathematical expression evaluation with each other using a peer-to-peer architecture '768 Patent, Claims 1, 3, 21	Not subject to § 112 ¶ 6; no construction necessary. Should the Court determine that § 112, ¶6 applies: Function: communicate results of mathematical expression evaluation and user instructions between nodes Structure: messaging modules that support communication using a peer-to-peer architecture	Subject to § 112 ¶ 6 Function: communicate results of mathematical expression evaluation with each other using a peer-to-peer architecture Structure: a Message-Passing Interface (MPI) module	Subject to § 112 ¶ 6 Function: communicate results of mathematical expression evaluation with each other Structure: modules that communicate using a peer-to-peer architecture
a mechanism for the nodes to communicate results of mathematical expression evaluation with each other using asynchronous calls '768 Patent, Claim 26	Not subject to § 112 ¶ 6; no construction necessary. Should the Court determine that § 112, ¶6 applies: Function: communicate results of mathematical expression evaluation and user instructions between nodes Structure: messaging modules that support asynchronous communication using a peer-to-peer architecture	Subject to § 112 ¶ 6 Function: communicate results of mathematical expression evaluation with each other using asynchronous calls Structure: a Message-Passing Interface (MPI) module	Subject to § 112 ¶ 6 Function: communicate results of mathematical expression evaluation with each other using asynchronous calls Structure: modules that communicate using a peer-to-peer architecture
a mechanism for the nodes to communicate results of mathematical expression evaluation with	Not subject to § 112 ¶ 6; no construction necessary. Should the Court determine that § 112, ¶6 applies:	Subject to § 112 ¶ 6 Function: communicate results of mathematical expression evaluation with each other Structure: a Message-	Subject to § 112 ¶ 6 Function: communicate results of mathematical expression evaluation with each other Structure: modules that

each other '768 Patent, Claim 29	Function: communicate results of mathematical expression evaluation and user instructions between nodes Structure: messaging modules that support communication using a peer-to-peer architecture	Passing Interface (MPI) module	communicate using a peer-to-peer architecture
a mechanism to communicate results of evaluation with other computer cluster nodes using peer-to-peer architecture '768 Patent, Claim 35	Not subject to § 112 ¶ 6; no construction necessary. Should the Court determine that § 112, ¶6 applies: Function: communicate results of evaluation and user instructions between nodes Structure: messaging modules that support communication using a peer-to-peer architecture	Subject to § 112 ¶ 6 Function: communicate results of evaluation with other computer cluster nodes using a peer-to-peer architecture Structure: a Message-Passing Interface (MPI) module	Subject to § 112 ¶ 6 Function: communicate results of evaluation with other computer cluster nodes Structure: modules that communicate using a peer-to-peer architecture

The parties disagree whether the "mechanism" terms should be interpreted under § 112 ¶ 6. Defendants argue that "mechanism" is a nonce word subject to § 112 ¶ 6. Dkt. 49 at 12–13. Plaintiff asserts that the claims provide structural context and that "mechanism" refers to a well-understood class of structures. Dkt. 50 at 11–12. In determining whether a claim term is to be interpreted under § 112 ¶ 6, the Court considers "whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure." *Williamson*, 792 F.3d at 1349. Because the claim terms do not include the word "means," Defendants must "demonstrate[] that the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function." *Samsung*, 948 F.3d at 1353–54 (internal citations removed). Defendants argue that "mechanism" has no modifier in the claims and the claims provide nothing more than pure

functional language. Dkt. 49 at 12. Plaintiff argue that the claims recite sufficient structure for the mechanism, specifically a "mechanism *for the nodes to communicate … using a peer-to-peer architecture*" which is "a well-understood class of structures (network communication hardware/software)." Dkt. 50 at 11.

The Court agrees with Defendants that the "mechanism" terms should be interpreted under § 112 ¶ 6. The claims merely recite a generic mechanism for performing a function. Thus, the court finds that "mechanism," as used in these claim terms, is a nonce word and fails to provide sufficient structure.

Having determined that § 112 ¶ 6 applies, the Court construes the structure for all "mechanism" terms as "modules that communicate using a peer-to-peer architecture." The specification describes a cluster node module that communicates with other cluster node modules using peer-to-peer architectures. *See, e.g.*, '768 Patent at 11:42–45. While Defendants seek a structure limited to "a Message-Passing Interface (MPI) module," an MPI module is just one structure disclosed. The specification also provides that the cluster node modules may use an advanced function module, received message queue, and message receiving queue. *See id*. at 12:41–16:67; 21:62–22:24. Because Defendants' proposed structure is too limiting, the Court declines to adopt Defendants' proposal.

The Court construes the function for each "mechanism" term as the function recited in each claim. Plaintiff proposes functions deviating from the functions recited in the claims. Dkt. 50 at 15–16. The Court finds that Plaintiff's proposals improperly adds functions to the limitation (i.e., communicating user instructions).

E. Term 5 – peer-to-peer architecture

Term	Plaintiff's Proposal	Defendants' Proposal	Court's Construction
peer-to-peer architecture '768 Patent, Claims 1, 35 '034 Patent, Claims 1, 30 '582 Patent, Claim 15 '679 Patent, Claim 1	architecture in which each node can communicate tasks and data with other nodes without the tasks and data being required to go through a central server or master node	architecture in which each node communicates tasks and data with other nodes without the tasks and data being required to go through a central server or master node	architecture in which each node is configured to communicate tasks and data with other nodes without the tasks and data being required to go through a central server or master node

The parties only disagreement regarding the meaning of this term is whether each node "communicates" tasks and data (Defendants) or merely "can communicate" (Plaintiff). Dkt. 49 at 16; Dkt. 50 at 20. Plaintiff's primary argument is that Defendants' construction require the nodes to ***constantly*** communicate between all nodes. Dkt. 50 at 20 (emphasis added); Dkt. 55 at 12–13.

The Court construes "peer-to-peer architecture" as "architecture in which each node is configured to communicate tasks and data with other nodes without the tasks and data being required to go through a central server or master node." This construction clarifies that the nodes are configured to communicate without a central server/master node but do not have to be actively communicating at all times.

F. Term 6 – cluster node module

Terms	Plaintiff's Proposal	Defendants' Proposal	Court's Construction
cluster node module '768 Patent, Claims 4, 6, 7, 8, 10, 14, 15 ,16, 17, 27, 28, 30, 31, 32 '621 Patent, Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 16, 17, 18, 19, 21, 24, 26, 27, 28, 30 '034 Patent, Claims 3, 5, 6, 7, 9, 13, 14, 15, 16, 26, 29 '582 Patent, Claims 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 15, 16, 19, 20 '679 Patent, Claims 3, 5, 6, 7, 9, 13, 14, 15, 16	a module that establishes intercommunication among nodes in a computer cluster and allows exchanging messages among nodes using peer-to-peer architecture	a module on each node in the computer cluster, configured to communicate messages with the kernel on the same node, and with other cluster node modules	Plain and ordinary meaning

The parties agree that a cluster node module communicates messages with other nodes, but disagree on whether the cluster node module must communicate with the kernel on the same node. Dkt. 49 at 20–21; Dkt. 50 at 23–24; Dkt. 52 at 12–13; Dkt. 55 at 13. Defendants criticize Plaintiff's construction as being inconsistent with the specification, arguing that the specification discloses no embodiment where a cluster node module does not communicate with the kernel on each node. Dkt. 49 at 20. Plaintiff argues that Defendants' construction is too narrow and improperly imports one embodiment into the construction. Dkt. 50 at 23–24.

The Court declines to construe this term. Each word, "cluster," "node," and "module," has a plain and ordinary meaning. Therefore, the term "cluster node module" also has a plain and ordinary meaning. *Markman* Hearing Tr. at 34:13–18.

G. Term 7 – communicate a result of the second mathematical expression evaluation to the first node

Term	Plaintiff's Proposal	Defendants' Proposal	Court's Construction
communicate a result of the second mathematical expression evaluation to the first node '768 Patent, Claim 35 '034 Patent, Claim 30	communicate a result of the second mathematical expression to the second node	Indefinite	Indefinite

Defendants contend this phrase is indefinite. Dkt. 49 at 22–23. Plaintiff concedes that the claim includes a "straightforward numbering error" and that the claimed "first node" should be the "second node." Dkt. 50 at 24–25. Plaintiff argues that the Court can correct the numbering error because it is clear on the face of the patent that the result should be communicated to the second node. Dkt. 50 at 25.

Claim 35 recites:

> 35. ***A computer cluster node*** for evaluating expressions in parallel with other computer cluster nodes, the computer cluster node comprising:
>
> a hardware processor configured to access one or more non-transitory memory devices comprising program code for a single-node kernel that, when executed, causes the hardware processor to interpret user instructions, to evaluate mathematical expressions, and to produce results of mathematical expression evaluation, wherein the hardware processor comprises multiple processor cores;
>
> a user connection interface configured to receive a command to start a cluster initialization process for a computer cluster;
>
> a mechanism to communicate results of evaluation with other computer cluster nodes using a peer-to-peer architecture; and

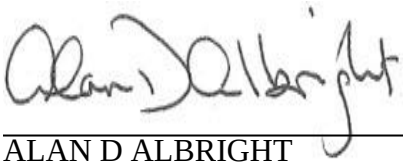
> program code that, when executed, is capable of causing the hardware processor to:
>
> receive calls from ***a second node*** comprising a second hardware processor configured to access a second memory comprising program code for a user interface and program code for a second single-node kernel, the second single-node kernel configured to interpret user instructions and distribute calls to at least one of a plurality of other nodes for execution;
>
> execute, using the hardware processor, at least a first mathematical expression evaluation; and
>
> communicate a result of the first mathematical expression evaluation to ***a third node*** comprising a third hardware processor with a plurality of processing cores, wherein the third node is configured to receive the result of mathematical expression evaluation from the computer cluster node, execute at least a second mathematical expression evaluation using the result of the first mathematical expression evaluation, and communicate a result of the second mathematical expression evaluation to ***the first node***;
>
> wherein the user connection interface is configured to return at least one result of mathematical expression evaluation to a user interface or a script; and
>
> wherein the computer cluster node is configured to:
>
> accept user instructions;
>
> after accepting user instructions, communicate at least some of the user instructions using the mechanism for the nodes to communicate with each other; and
>
> after communicating at least some of the user instructions using the mechanism, communicate at least some of the user instructions to the single-node kernel.

(emphasis added). Thus, Claim 35 recites a "computer cluster node," a "second node," and a "third node." There is no "first node" recited in Claim 35 except for in the subject claim limitation. According to Defendants, it is unclear whether the result of the second mathematical expression evaluation is to be communicated to the second node, the computer cluster node, or another node. Dkt. 49 at 23.

The Court agrees with Defendants that this term renders Claim 35 invalid under § 112 ¶ 2. Plaintiff argues that a POSITA would understand that the third node's result is to be communicated back to the node that initiated the evaluation request (i.e., the second node). Dkt.

50 at 25. However, the specification also teaches that the nodes are interconnected, therefore the result could be communicated back to any of the nodes. Additionally, other claims reciting three nodes recite communicating the result of the second mathematical expression to the node that distributed the calls (the "computer cluster node" in Claim 35) and not to the node that initiated the evaluation request. *See, e.g.*, Claims 1 and 26 of the '768 Patent ("a first node . . . configured to . . . distribute calls to at least one of the plurality of other nodes for execution" and "the third node is configured to . . . communicate the result of the second mathematical expression evaluation to the first node"). Therefore, a person of ordinary skill in the art may interpret the phrase in multiple ways, rendering the error unclear. The Court finds that this is not the type of error that can, or should be, corrected in claim construction.

SIGNED this 26th day of September, 2025.



ALAN D ALBRIGHT
UNITED STATES DISTRICT JUDGE