

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

RULE 14 LLC

Plaintiff,

v.

UIPATH INC.,

Defendant.

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CASE NO. 2:23-CV-00627-JRG-RSP

CLAIM CONSTRUCTION ORDER

Before the Court is Plaintiff's Opening Claim Construction Brief (Dkt. No. 68) filed by Rule 14 LLC ("Rule 14"). Also before the Court is the Defendant's Responsive Claim Construction Brief (Dkt. No. 70) filed by UiPath Inc. ("UiPath"), along with Plaintiff's Reply Claim Construction Brief (Dkt. No. 72).

The Court held a hearing on March 26, 2025. Having considered the parties' briefing along with arguments of counsel, the Court resolves the disputes as ordered herein.

I. BACKGROUND

Plaintiff alleges infringement of three patents in the field of data mining and analysis. The three patents are: U.S. Patent No. 9,229,977 ("the '977 Patent"), U.S. Patent No. 10,108,679 ("the '679 Patent"), and U.S. Patent No. 11,048,712 ("the '712 Patent") (collectively, the "Patents-at-Issue").

The title of both the '977 Patent and the '679 Patent is "Real-time and adaptive data mining" and they share a common Abstract, which states:

A method of analyzing data is presented. The method includes generating a query based on a topic of interest, expanding search terms of the query, executing the query on one or more data sources, monitoring a specific data source selected from the one or more data sources. The monitoring is performed to monitor for matches to the query.

The title of the '712 Patent is also "Real-time and adaptive data mining" and the Abstract states:

A method of analyzing data is presented. The method includes receiving a query based for non-textual data, expanding search terms of the query, executing the query on one or more data sources, monitoring a specific data source selected from the one or more data sources. The monitoring is performed to monitor for matches to the query.

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.*

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).

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 and construction as submitted in their Joint Claim Construction Chart Pursuant to P.R. 4-5(d). (Dkt. 74).

Term	Agreed Construction
“at not publically accessible” (’977 Patent, claims 6, 15) (’712 Patent, claims 6, 15)	“are not publically accessible”
“a query for non-textual data” (’712 Patent, claims 1, 10, 19)	Plain and ordinary meaning, that is “a query for data that is not text, such as an image, audio, or an object within the image/audio that is not text”

IV. DISPUTED TERMS

1. “[generating/generate], via a first user, a query based at least in part on a topic of interest” / “[generating/to generate], by an entity, a query based at least in part on a topic of interest”

Claim Term	Plaintiff’s Construction	Defendant’s Construction
“[generating/generate], via a first user, a query based at least in part on a topic of interest” (’977 Patent, claims 1, 10, 19)	No construction necessary, plain and ordinary meaning. Not indefinite, not subject to § 112(f) If subject to § 112(f), then:	Subject to § 112(f) and indefinite if interpreted as Rule 14 contends to cover queries generated by a computer instead of a user/entity, as the only structure in the specification for such query generation is a “query generator”, which is nothing more than a general purpose computer or processor.
“[generating/to generate], by an entity, a query based at least in part on a topic of interest” (’679 Patent, claims 1, 11, 16)	Function: generating, via a first user, a query based at least in part on a topic of interest / generate, by an entity, a query based at least in part on a topic of interest Structure: “query setup module 402,” “query module 400,” “query generator,” and “electronic hardware, computer software, or combinations of both” implementing the algorithm described in the ’977 Patent at 4:9-15 and the ’679 Patent at 4:14-20.	Function: [generating/generate] a query Structure: “query generator” without algorithmic support and, therefore, indefinite. If the “query setup module 402,” “query module 400,” “query generator,” and/or “electronic hardware, computer software, or combinations of both” are also considered structure, the structure remains nothing more than a general purpose computer or processor and the term is still indefinite for lack of algorithmic support.

The issue to be considered regarding these terms is two-fold. First, whether these “generating” terms are subject to means-plus-function claiming. And second, whether corresponding structure is disclosed in the specification. As part of the first inquiry is also the

question of whether a distinction exists between generating “via a first user” as compared to “by an entity” for purposes of determining if § 112(f) applies.

Plaintiff asserts as a preliminary matter that none of these terms are drafted as means-plus-function claims because they do not use the word “means” or similar nonce words, and are therefore not subject to § 112(f). Regarding the method claims, Plaintiff argues that they do not recite a function at all because a step within a method is not a function and, thus, fails the first requirement of a means-plus-function claim. As for the apparatus claims, Plaintiff submits they recite definite structures within the claim language that are used to accomplish the function of generating a query and that fail the second requirement to find a means-plus-function claim. In particular, Plaintiff points to the recited structures of “processor” which is “coupled to the memory unit” (’977 Patent, claim 10 and ’679 Patent, claim 11) and the “program code” recorded on “a non-transitory computer-readable medium” (’977 Patent, claim 19 and ’679 Patent, claim 16) as sufficiently definite structures. If § 112(f) is found to apply, Plaintiff submits that the specification discloses multiple associated structures that accomplish the “generating . . . a query” function to satisfy the requirement of definiteness. Specifically, Plaintiff points to the “query generator” and the “query setup module” within the “query module” disclosed in the written description and figures of the Patents-at-Issue.

Defendant divides its response between the ’977 and ’679 Patent claims. First, regarding the ’977 Patent claims that recite “generating” “via a first user,” Defendant argues that a “user” must be an individual and not a computer. But if a “user” includes a computer, Defendant alternatively argues that it would be subject to § 112(f) because it would then recite a computer performing special purpose functions without algorithm support. As for the ’679 Patent claims, Defendant contends that the “generating claims” performed “by an entity” include computers and

therefore invokes § 112(f); so they should be held indefinite for the reason that no corresponding structure is disclosed in the specification. Specifically, Defendant submits that the structure of a “query generator” discussed in the specification is nothing more than a processor in a general-purpose computer with no specifically disclosed algorithm capable of performing the claimed “generating” function.

During the hearing, Defendant clarified that even if “user” is found to be an individual and not a computer, claims 10 and 19 in the ’977 Patent are still indefinite because the claim confusingly recites both the processor/program code and the user as responsible for generating the query.

To begin its analysis, the Court reviews the claim language. The ’977 Patent claims read in relevant part as follows, with the disputed claim terms in bold:

1. A method of analyzing data, comprising:
generating, via a first user, a query based at least in part on a topic of interest;
...
10. An apparatus configured to analyze data, the apparatus comprising:
a memory unit; and
at least one processor coupled to the memory unit, in which the at least one processor is configured:
to generate, via a first user, a query based at least in part on a topic of interest;
...
19. A computer program product for data analysis, the computer program product comprising:
a non-transitory computer-readable medium having program code recorded thereon, the program code comprising:
program code to generate, via a first user, a query based at least in part on a topic of interest;
...

The ’679 Patent claims read in relevant part as follows, with the disputed claim terms in bold:

1. A method of analyzing data, comprising:
generating, by an entity, a query based at least in part on a topic of interest;
...

11. An apparatus for analyzing data, the apparatus comprising:
a memory; and
at least one processor coupled to the memory, the at least one processor being configured:
to generate, by an entity, a query based at least in part on a topic of interest;
...
16. A non-transitory computer-readable medium having program code recorded thereon for analyzing data, the program code being executed by a processor and comprising:
program code to generate, by an entity, a query based at least in part on a topic of interest;
...

The relevant limitations in the claims are quite similar and each of the '977 and '679 Patents contains one method claim followed by two apparatus claims. A notable difference, however, is that the '977 Patent recites the generating is performed “via a first user” whereas the '679 Patent recites the generating is performed “by an entity.”

The Court then considers the disputed issue between the parties of whether generating “via a first user,” like generating “by an entity,” encompasses a general-purpose computer.

The patentee’s use of two different words—“user” and “entity”—is significant to this analysis because different claim terms are presumed to have different meanings. *MicroStrategy Inc. v. Bus. Objects Americas*, 238 F. App'x 605, 609 (Fed. Cir. 2007). A “user” in typical parlance is used to reference an individual whereas “entity” has a much broader scope. Here, the specification aligns with this common understanding because it distinguishes between users being individuals or organizations made up of individuals as contrasted with automated systems or computer systems. In identifying examples of queries, the specification explains: “The query may be a natural language query generated by a user. Alternatively, the query generation may be automated from a query generator. The query generator may be based on artificial intelligence or a similar system.” ('977 Patent, 4:11-15.) The specification goes on to provide examples of “how

the data mining system may be used by governments, individuals, corporations, and/or any desired user,” which suggests that users are individuals or at least institutions made up of individuals who make use of this invention. (*Id.*, 14:58-61.) Moreover, the specification is replete with distinguishing references to “user input and/or” automatic or automated systems. (*See, e.g.*, 4:22-26 and 16:41-44 (“a user and/or the data mining system”).)

Indeed, Plaintiff agrees that the “user” is an individual rather than an automated system. In its Reply Brief, Plaintiff submitted that “via a user” means the query is created based on *input from the user* where the user utilizes a computer to generate the query. This means the user is distinct from a computer because the user generates the input and communicates with the system performing the data mining through a computer. During oral argument, Plaintiff established that “a user is a person” and “via” means the person operates a computer to input information because that is the only way for a human to interact with the claimed computerized invention. Hence, in claim 1 of the ’977 Patent, the query is generated by a person (the user) interacting with a computer terminal.

The Court therefore finds that the term in claim 1 of the ’977 Patent of “generating, via a first user, a query based at least in part on a topic of interest” recites a person generating a query and does not constitute means-plus-function claiming. As for claims 10 and 19, though they are apparatus claims that recite a “processor” and “program code,” they contain similar language in that the “processor is configured: to generate, via a first user, a query based at least in part on a topic of interest” and “program code to generate, via a first user, a query based at least in part on a topic of interest.” Again, the user, or person, is identified as the one who generates the query through interacting with a processor or program code and inputting it into the system. Accordingly,

none of the “generating” terms in claims 1, 10, and 19 in the ’977 Patent are subject to § 112(f). The Court’s analysis of the ’977 Patent ends here.

Turning to the ’679 Patent, claims 1, 11, and 16 contain the term “[generating/generate] by an entity,” which has a broader scope and can include automated systems running on a computer. Defendant does not say an entity must be a person or argue a distinction between an entity and a computer. Notably, the word “entity” does not appear in the patent specification in a meaningful way. Rather, the patent discusses users or automated systems like query generators as the actors generating a query. Without importing limitations from the specification, the term “entity” is broad enough to encompass both.

In briefing and at oral argument, the Plaintiff drew a clear distinction between the claim language of generating “*via* a first user” versus generating “*by* an entity,” emphasizing the patentee’s choice in choosing different propositions. As discussed, Plaintiff states “via a first user” is where the user inputs into the system. And at the hearing, Plaintiff explained that “by an entity” means “based on or from an entity,” which identifies the entity as performing the act of generating a query, where the entity may be a computer. In other words, generating “via a first user” means a person provides an input into the computer to generate the query, whereas generating “by an entity” can be the computer entity doing the generating itself. Thus, “entity” includes computers and automated systems that perform the “generating” limitation.

The breadth of the meaning of “entity” requires further consideration as to whether § 112(f) claiming applies. The ’679 Patent has three claims that contain the “generating” limitation. One appears in a method claim, one in an apparatus claim, and the third in a computer program product claim.

The Court finds that a means-plus-function term can exist in a method claim and does so here. *See Rain Computing, Inc. v. Samsung Elecs. Am., Inc.*, 989 F.3d 1002, 1006 (Fed. Cir. 2021) (“Applicants are free to invoke § 112 ¶ 6 for a claim term nested in a method claim. We have never held otherwise.”) Claim 1 recites “generating, by an entity, a query based at least in part on a topic of interest,” which provides the entity as the means for performing the function of generating the query. If the entity were a person, then the person would be generating the query and the analysis would end here. But as the entity includes a computer, more information is needed for a skilled artisan to reasonably ascertain how a computer can perform the task of generating a query based at least in part on a topic of interest. The identification of a means for performing the query in this step, therefore, makes it a nested means-plus-function term.¹

Perhaps because the claim language itself is phrased unartfully as to which component is responsible for generating, there is a disconnect in Plaintiff’s arguments that confuse the structure doing the generating function from the larger structure performing the method, or the structure of the claimed apparatus. This disconnect is most clearly evident in the parties’ argument about the apparatus claims. In particular, Plaintiff contends claims 11 and 16 are not subject to means-plus-function claiming because they recite the structures used to generate the query as: A “processor,” which is “coupled to the memory unit,” and “program code” recorded on “a non-transitory

¹ While the claim term lacks the word “means” that typically signifies application of § 112(f), the word “entity” is similar to other “[g]eneric terms such as ‘mechanism,’ ‘element,’ ‘device,’ and other nonce words” that “reflect nothing more than verbal constructs . . . used in a claim in a manner that is tantamount to using the word ‘means’ because they ‘typically do not connote sufficiently definite structure’ and therefore may invoke § 112, para. 6.” *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1350 (Fed. Cir. 2015) (citations omitted). The Court is persuaded that the word “entity” would not be understood by one of skill in the art to connote sufficiently definite meaning as a name for structure.

computer-readable medium.” However, these are not the structures (or at least the specific structures) responsible for generating the query.

Claim 11 recites “to generate, *by an entity*, a query based at least in part on a topic of interest.” Claim 16 recites “program code to generate, *by an entity*, a query based at least in part on a topic of interest.” Thus, in both instances, it is the entity that performs the action of “to generate . . . a query” and not the processor or program code. Otherwise, the clause “by an entity” would be entirely superfluous. It may be the case that the entity is running on the processor or a part of the program code as it generates a query. Clearly, the processor and program code are integral to the data analysis because they must necessarily be in possession of the query in order to then execute the query on a plurality of data sources, as later claimed. Alternatively, the processor and program code are the systems on which the entity generates a query as when the user generates the query using a computer terminal, discussed *supra*. Yet here, the entity’s role in generating the query is essential yet the mechanics are unknown. This crucial information is absent from the claim.

Consequently, the claims expressly provide for “an entity,” a component distinct from the processor or program code, that requires some structure uniquely attributable to it. This structure is not found in the claim language. So, although the apparatus claims do not recite the term “means” and a rebuttable presumption exists that § 112(f) does not apply, the presumption is overcome by the claim reciting function without reciting sufficient structure for performing that function. *Williamson*, at 1348-49.² Accordingly, each of the “generating” terms in the ’679 Patent is means-plus-function claiming and § 112(f) applies.

² From reviewing the patent record, the submitted claim construction briefing, and listening to the parties’ arguments, the Court concludes that the most reasonable reading of this claim term is the entity must generate the query. However, the Court’s opinion does not change if the entity,

Once application of § 112(f) is established, the parties are aligned that the function of this term is: Generating a query based at least in part on a topic of interest. The parties also do not seriously dispute that the structures for performing the function are identified in the written description as:

- (i) a “query module 202 for generating a query” (’977 Patent, 5:40-41) and a “query module 400 . . . for creating a query.” (*Id.*, 9:24-31.)
- (ii) a “query setup module 402” is part of the “query module 400” and “may receive query elements via an input 406.” (*Id.*, 9:24-31.)
- (iii) a “query generator,” that automates query generation and may be based on artificial intelligence or a similar system. (*Id.*, 4:12–16.)
- (iv) “Aspects of the data mining systems . . . may be implemented using electronic hardware, computer software, or combinations of both.” (*Id.*, 3:27–37.)

The inquiry for the Court at this junction is whether the specification does “disclose with sufficient particularity the corresponding structure for performing the claimed function and clearly link that structure to the function.” *Nevro Corp. v. Bos. Sci. Corp.*, 955 F.3d 35, 42 (Fed. Cir. 2020). The Court concludes that it does not.

together with the processor or program code, generates the query or if the entity simply provides some information (like an input) for the processor or program code to generate the query. This is because, unlike the basic functionalities that can be done by any general-purpose computer or standard microprocessor as discussed in *In re Katz*, generating a query here requires more special programming to define the scope of the query, such as identifying the topics of interest and their sub-topics, specifying sources of the data, a specific timeframe, and other such parameters as disclosed in the patent specification. *See In re Katz Interactive Call Processing Patent Litigation*, 639 F.3d 1303, 1316 (Fed. Cir. 2011) (finding functions of “processing,” “receiving,” and “storing” can be achieved by any general-purpose computer without special programming). Plaintiff has submitted no evidence that the claimed functions are within the capabilities of a standard processor or general-purpose computer.

While the specification links the disclosed structure as identified above to the function (e.g., the query module is for generating the query), it does not disclose any substantive facts of what the query module or the query setup module is beyond the generic descriptive labels used for black box modules.

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. Under this provision, the recited structure must be disclosed in the specification in a way that one skilled in the art will understand what structure (or material or acts) will perform the recited function. *See Atmel Corp. v. Information Storage Devices, Inc.*, 198 F.3d 1374, 1381, 53 USPQ2d 1225, 1230 (Fed. Cir. 1999). “[W]hen the disclosed structure is a computer programmed to carry out an algorithm, ‘the disclosed structure is not the general purpose computer, but rather that special purpose computer programmed to perform the disclosed algorithm.’” *In re Aoyama*, 656 F.3d 1293, 1297 (Fed. Cir. 2011) (citations omitted). In cases involving a computer-implemented means-plus-function limitation, the Federal Circuit has consistently required that the structure be more than simply a general-purpose computer or microprocessor and that the specification must disclose an algorithm for performing the claimed function. *Noah Systems Inc. v. Intuit Inc.*, 675 F.3d 1302, 1312 (Fed. Cir. 2012). “For a patentee to claim a means for performing a particular function and then to disclose only a general purpose computer as the structure designed to perform that function amounts to pure functional claiming.” *Aristocrat Techs. Austl. PTY Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008). To limit the scope of the claim to “the corresponding structure, material, or acts” that perform the function, as required by § 112(f), the disclosed structure must

be the special purpose computer programmed to perform the disclosed algorithm, which is akin to a “new machine.” *Id.* (citations omitted). The proper inquiry to evaluate the adequacy of the disclosed algorithm is to look at the patent as a whole and determine if one of skill in the art would have understood the disclosures within to encompass software to perform the function and been able to implement such a program. *Id.* at 1337. An algorithm may be expressed “in any understandable terms including as a mathematical formula, in prose, or as a flow chart, or in any other manner that provides sufficient structure.” *Function Media, L.L.C. v. Google, Inc.*, 708 F.3d 1310, 1318 (Fed. Cir. 2013).

Here, no special purpose computer or algorithm is disclosed in any form. Plaintiff’s expert, Mr. Christopher Thompson, only identified (1) a “query setup module 402,” which is within (2) a “query module 400,” and (3) a “query generator” as the corresponding structure. (Dkt. 68-5, ¶15.) He explained that the generating function can be performed and implemented “as electronic hardware, computer software, or combinations of both,” (citing the ’977 Patent, 5:28-29), which is so generic as to be any device or software. Certainly, it is nothing more than the general-purpose devices on which the specifications’ disclosed structures for generating can be performed. (*Id.*, ¶18.) In essence, he identified nothing more than general purpose computers.

The specification offers little assistance because it simply reiterates the claim language to say what is generated (types of queries) and who is doing the generating (the user or the automated query generator). (*See, e.g.*, ’977 Patent, 5:40-41 (who is responsible for generating a query), 5:40-10 (providing examples of what a query is), 9:24-31 (additional abstraction without substantive structure)). Remarkably lacking is any disclosure about **how** the query is generated by the descriptive modules. Indeed, the closest disclosure to structure is one cursory statement in the specification that the query generator “may be based on artificial intelligence or a similar system.”

(*Id.*, 4:13-16.) But this statement is still so general as to be akin to claiming an undisclosed algorithm executed by a computer. See *WMS Gaming, Inc. v. International Game Technology*, 184 F.3d 1339 (Fed. Cir. 1999) (holding the computer-implemented means-plus-function claim must be limited to the algorithm disclosed in the specification).

The present situation is similar to *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371, 1384 (Fed. Cir. 2009) that found a means-plus-function claim indefinite because the specification only described the function without explaining how to perform it. In *Blackboard*, the asserted structure that performs the recited “means for assigning” function is an “access control manger” or “ACM.” Like here, the entirety of the description of the ACM is contained in a single paragraph of the specification that did nothing more than restate the ACM in circular functional language: “Access control manager 151 creates an access control list (ACL) for one or more subsystems in response to a request from a subsystem to have its resources protected through adherence to an ACL” where there are multiple levels of access restrictions. (*Id.* at 1382.) The Federal Circuit affirmed the district court finding this inadequate because it failed to describe “how the levels themselves are assigned to the data files in the first place.” (*Id.*) Like in *Blackboard*, the specification here fails to describe **how** the entity generates a query based on a topic of interest using a query generator, or query module having a query setup module, automatically or otherwise, once it receives an input of query elements. What happens within the query generator or module is completely unknown.

Nor does Plaintiff submit any evidence that a “query generator” or “query module” is the name for specific structure well known to those of skill in the art. In fact, Defendant’s expert, Dr. Jonathan Krein is unfamiliar with them and states his concern clearly that “query generator” and “query module” are generic abstractions for a general-purpose computer or processor that do not

provide a sufficiently definite meaning in the art. (Dkt. 70-6, ¶¶60.) Beyond these abstract revelations, there is no further guidance in the intrinsic or extrinsic evidence for how a query is generated. (*Id.* at ¶¶62-68.)

The Court finds Dr. Krein’s testimony to be persuasive in light of the evidence and agrees that these disputed claims in the ’679 Patent fail to inform, with reasonable certainty, a skilled artisan about the scope of the invention. Accordingly, the Court finds that Defendant has met its burden of proof to show by clear and convincing evidence that “[generating/to generate], by an entity, a query based at least in part on a topic of interest” is indefinite.

The Court therefore finds that the disputed term “[generating/generate], via a first user, a query based at least in part on a topic of interest” in the ’977 Patent **is not indefinite and should be given its plain and ordinary meaning**. In addition, the Court finds that “[generating/to generate], by an entity, a query based at least in part on a topic of interest” in the ’679 Patent **is indefinite**.

2. “[expanding/expand] search terms of the query”

Claim term	Plaintiff’s Construction	Defendant’s Construction
“[expanding/expand] search terms of the query” (’977 Patent, claims 1, 10, 19) (’712 Patent, claims 1, 10, 19) (’679 Patent, claims 6)	No construction necessary, plain and ordinary meaning. Not indefinite.	“applying a lexicon to add additional terms to the search query” Otherwise, Indefinite

The dispute as to this term can be distilled down to whether “expanding/expand search terms of the query” must be additive or whether it can mean any kind of modification of the search

terms of the query. And if it is additive, whether it must be limited to the disclosed lexicons from the specification.

Plaintiff offers a plain and ordinary meaning construction of this term, which its expert explains is “processing, by adding, modifying, or refining, the search terms of the query.” Plaintiff asserts that the specification uses “expanding” broadly in a generic sense to encompass refining and other forms of further modification without limiting it to using a lexicon or adding additional terms. The discussion of “lexicons,” argues Plaintiff, is as a non-limiting embodiment of how to “expand” search terms of the query.

Defendant disagrees that this term can be broadened to include any kind of computer processing activity and argues that the written description treats “further processing” or “refining” of the query as separate and distinct from “expansion of the search terms.” Instead, Defendant points to various parts of the specification that discuss expanding search terms of a query as based on search lexicons. In addition, Defendant submits that this term cannot mean “refining” because dependent claims in the patents actually claim “refining” a query as a separate and distinct step from “expanding” the query, such that “refining” should not be construed as an example of “expanding.” (*See, e.g.*, ’977 Patent, claim 5.)

The Court first looks at the claims to begin its analysis. Claim 1 of the ’977 Patent is representative and it reads as follows, with the disputed term in bold:

1. A method of analyzing data, comprising:

generating, via a first user, a query based at least in part on a topic of interest;

expanding search terms of the query;

executing the query on a plurality of data sources;

selecting at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds;

monitoring, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof; and

establishing a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source.

The process of expanding search terms, executing the query, and reviewing the results can be iterative, as described in the specification. (*See, e.g.*, '977 Patent, FIG. 1 and 4:17-67.) Claim 5 of the '977 Patent, reproduced below, builds on top of this iterative process by adding another step after executing the query:

5. The method of claim 1, further comprising:

refining the search terms based at least in part on the executed query, and in which the monitoring is performed to monitor for matches to a refined query.

Thus, “expanding search terms of the query” should be distinct from “refining the search terms” because different claim terms are presumed to have different meanings. *MicroStrategy*, 238 F. App'x at 609. As a result, the plain and ordinary meaning of this term is not as broad as Plaintiff suggests.

Turning to the written description, there are numerous descriptions of both expanding and refining the query phrased in an “and/or” conjunction, which indicates that the “and/or” is used to identify two separate and distinct processes. For example, “[i]f the results are not satisfactory, the query may be expanded and/or refined at block 104,” meaning multiple options are available to address the query if the results are not satisfactory: either expanding the query, refining the query, or doing both. ('977 Patent, 4:56-57.) Making “expanding” and “refining” synonymous would not make sense in this context. Accordingly, the Court rejects Plaintiff’s submission of what it proposes to be the plain and ordinary meaning of “expanding.”

However, Defendant’s proposal to narrow the meaning of “expanding” to “applying a lexicon to add additional terms” is likewise not persuasive. The citations to the specification of

searches applying lexicon are in reference to exemplary embodiments and shall not be imported into the claim for that reason. Moreover, “expanding” a query is described broadly beyond the use of a lexicon. In particular, the specification discloses “the query may be expanded based on lexical and rule-set based techniques to search structured and unstructured datasets for the keywords of the query.” (’977 Patent, 15:48-51.) Defendant does not argue that the patentee acted as his own lexicographer or disavowed the full scope of this claim term in this instance. Absent such a showing, the Court declines to import embodiments from the written description to limit the claims.

As to Defendant’s argument that this term is otherwise indefinite if its proposed construction is not adopted, the Court expressly disagrees. The intrinsic evidence reviewed as a whole alongside the claims provides more than sufficient information for one of skill in the art to reasonably ascertain the meaning of “expand” in this context. Defendant has not met its burden of persuasion to show this term is indefinite.

The Court therefore finds the claim term “[expanding/expand] search terms of the query” means “[broadening/broaden] search terms of the query.”

3. “extractors”

Claim term	Plaintiff’s Construction	Defendant’s Construction
“extractors” (’977 Patent, claims 9, 18) (’712 Patent, claims 9, 18) (’679 Patent, claim 8)	No construction necessary, plain and ordinary meaning.	“applications that monitor and extract data from user-specified locations or sources of interest (e.g., data source)”

The issue as to this term is whether the patentee acted as his own lexicographer in defining “extractors” in the specification.

Plaintiff submits the plain and ordinary meaning of this term should apply because an “extractor” is simply something that extracts data and there is no evidence of an express intent by the patentee to redefine or disavow the full scope of the term. Plaintiff cites to various parts of the patent that show use of “extractor” as broadly extracting data. In response, Defendant focuses on a sentence in the specification that it believes to constitute an express definition of this term by the patentee acting as his own lexicographer.

The relevant sentence in the specification appears in a paragraph that is reproduced below in full, along with the preceding paragraph, which is also relevant:

Once the specific data sources have been selected, data extractors are deployed to monitor the specific data sources. In one configuration, when the results of the query do not yield results that are satisfactory to the user, the query is further refined until the desired results are obtained.

The data mining system **200** may include a data extractor module **206** for deploying data extractors. The data extractors may be referred to as extractors. **Extractors refer to applications that monitor and extract data from user-specified locations or sources of interest (e.g., data source).** That is, upon deployment, the extractors extract the data from a given source for analysis. Moreover, until terminated, the extractors are maintained at the data source to monitor for any changes to the data. The data changes are analyzed for a match to the key words of the query and the data is transmitted to a data analysis module when there is a match.

(’977 Patent, 7:3-18.)

As shown, the definition of “data extractors” or “extractors” is plainly set forth in no uncertain terms. By explaining what extractors “refer to,” the patentee displayed an intent to define “extractors” as short form for “data extractors,” which are applications that monitor and extract data from data sources. *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (“To act as its own lexicographer, a patentee must clearly set forth a definition of the

disputed claim term other than its plain and ordinary meaning” and must “clearly express an intent to redefine the term.”).

Plaintiff argues that this statement cannot be the definition because it would improperly exclude disclosed embodiments. As evidence, the Plaintiff points to the sentence following the definition as showing an embodiment where an extractor is described as only having to extract without also having to monitor: “That is, upon deployment, the extractors extract the data from a given source for analysis.” (’977 Patent, 7:12-14). From this sentence, Plaintiff argues the embodiments show the monitoring function to be purely optional. And that any disclosure otherwise cannot be lexicography.

Plaintiff’s permissive reading of this paragraph is incorrect. Indeed, the very next sentence states that “the extractors are maintained at the data source to **monitor** for any changes to the data.” And the preceding paragraph discloses that “[o]nce the specific data sources have been selected, data extractors are deployed to **monitor** the specific data sources.” (*Id.*, 7:3-4.) These sentences must be read in context of the paragraphs of which they are a part. Not every sentence must mention the extractor being capable of both monitoring and extracting, and many sentences omit the extracting capability as well. But reading these paragraphs in their entirety and relevant portions of the specification as a whole reveals that the extractors consistently behave as the patentee defined: as applications that monitor and extract data. Plaintiff has not pointed to anything that contradicts this express definition.

The term “extractors” appears in dependent claims of the asserted patents. Taking claim 9 of the ’977 Patent as representative, it reads as follows, with the disputed term in bold:

9. The method of claim 1, in which the monitoring comprises deploying **extractors** to each of specific data source, a number of **extractors** being dynamic based at least in part on a traffic volume of each specific data source.

Claim 1, upon which claim 9 depends, reads in relevant part as follows:

1. A method of analyzing data, comprising:

monitoring, based on a set schedule, the at least one data source to extract data from the at least one data source when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof; and

. . .

As can be seen from the claims, Plaintiff's contention for the plain and ordinary meaning of "extractor" to exclude the monitoring activity is further inconsistent with the express claim language because "monitoring" is a limitation that is already present in the claims.

Claim 1 recites a limitation of "monitoring . . . the at least one data source to extract data from at least one data source. . . ." and claim 9 recites a further limitation "in which the monitoring comprises deploying extractors to each of specific data source" Thus, the deployment of the extractors is in service of monitoring the data source for a particular condition (when at least an update to stored data matches the query) in order to extract data. This interpretation aligns with the patentee's definition of extractors as being applications that monitor and extract data from data sources. So, even the plain and ordinary meaning within the claim language itself would include extractors involved in monitoring.

The Court therefore finds that the patentee acted as his own lexicographer in defining the term "extractors," **which means "applications that monitor and extract data from user-specified locations or sources of interest."**

4. “[establishing/establish] a . . . communication channel”

Claim term	Plaintiff’s Construction	Defendant’s Construction
“[establishing/establish] a . . . communication channel” (’977 Patent, claims 1, 10, 19) (’712 Patent, claims 1, 10, 19) (’679 Patent, claims 1, 11, 16)	No construction necessary, plain and ordinary meaning.	“Set up a communication channel for later communication with a user or user device”

The dispute as to this term is whether “[establishing/establish] a . . . communication channel” is commensurate with actually communicating, or if establishing is setting up for a later communication.

Plaintiff contends that the plain and ordinary meaning of “establishing a communication channel” includes the act of communicating with the user and does not require two separate steps of setting up a communication channel and then later communicating with a user or user device. Defendant disagrees, asserting that two steps are required by the claims because at least the independent claims of the ’679 Patent separately recite “establishing” a communication channel and then “transmitting” via the communication channel.

Upon review of claim 1 of the ’679 Patent, the Court finds that it separately recites the steps of “establishing a . . . communication channel” and “transmitting . . . via . . . the communication channel, a first message . . .” so they are two distinctly claimed actions. Additionally, “establishing” cannot be the same as “transmitting” or there would be no meaningful distinction between the claim terms. And from a logical standpoint, a communication channel must be established before a message can be transmitted via the communication channel, so these separate steps make good sense. Thus, as to the ’679 Patent, “establishing” is not commensurate

with “transmitting” and they do not have the same scope.

Although these separate steps are not recited in claims of the ’977 and ’712 Patents, the asserted patents are in the same patent family. Therefore, the “establishing a . . . communication channel” term must have the same meaning across all the relevant claims as the Federal Circuit and this district have held that identical terms within patents belonging to the same family should be given the same meaning. *SightSound Techs., LLC v. Apple Inc.*, 809 F.3d 1307, 1316 (Fed. Cir. 2015) (Common terms in a patent family should be interpreted consistently); *see also Alcatel USA, Inc. v. Tekelec, Inc.*, 2002 WL 34454104, at *15 (E.D. Tex. Mar. 5, 2002) (“identical terms in the ’098 Patent and the ’960 Patent will be construed to have the same meaning.”)

The two-part approach to establishing and transmitting also finds support in the written description. In particular, the specification teaches that “a communication channel may be established . . . based on the analyzed data. For example, . . . the data mining system [] may engage the customer to discuss cell phone data roaming plans and/or other services,” which discloses a communication channel must be established before a customer can be engaged. (’977 Patent, 5:1-16.) And “the data mining system notifies the appropriate personnel in real time, communicating . . . via a communication channel, such as email or SMS,” which is the transmitting a message step that occurs in real time once the communication channel is established. (’977 Patent, 15:26-29.) It is entirely logical that a message can be transmitted via a communication channel only once the communication channel is established and not the other way around.

A further point of disagreement between the parties is precisely when the set up and communication must take place. In other words, whether there must be a delay between establishing the communication channel and transmission. Defendant’s proposed construction of “set up a communication channel for later communication with a user or user device” requires

some time delay, which does not appear in the claim language as written. And Defendant has identified nothing in the intrinsic evidence that limits when the claimed element, “[establishing/establish] a . . . communication channel,” can take place in relation to the “transmitting” step. Indeed, the “transmitting” element is not part of several of the disputed claims and is not an issue before the Court. Thus, it is not addressed herein. To the extent the parties dispute the timing of when transmitting can occur in relation to when and how a channel is established, that is a question of fact not appropriate at this juncture.

The Court therefore finds the term “[establishing/establish] a . . . communication channel” means **“setting up a communication channel.”**

5. “entity”

Claim term	Plaintiff’s Construction	Defendant’s Construction
“entity” (’679 Patent, claims 1, 10–11, 16)	No construction necessary, plain and ordinary meaning. Not indefinite	“a separate organization such as businesses or police, not a user” Otherwise, Indefinite

The issue as to this term is whether the patentee made a clear and unmistakable disclaimer of claim scope to exclude “entity” from being a user. And if not, whether “entity” has a reasonably ascertainable meaning to a person of ordinary skill in the art or if it is indefinite. This term appears only in the ’679 Patent.

Plaintiff argues that the ’679 Patent claim language and specification explicitly include a “user” as a subset of an “entity” because the specification describes acts performed by “a user,” and then in the claim those same acts are performed by “an entity,” so one of skill in the art would understand that the patent disclosed users as an example of what entities may constitute. In

addition, Plaintiff points to dependent claim 10 as reciting an “entity user corresponding to the entity” to suggest that claim 1 must be broader in that “entity” must encompass “users” as well.

Defendant disagrees, arguing that prosecution history disclaimer applies to preclude an “entity” from being a user. Defendant submits that the applicant expressly amended its original claims to remove a “first user” and replace it with “entity” in response to a final rejection based on the Gonzalez prior art that disclosed this limitation. Defendant identifies a specific interview note by the Examiner as dispositive. It reads as follows: “Discussed potential claim amendments in regards to the communication channel described on paragraph 0080 of application as published and to clarify more that the first user is more like a third party that observes the second user.” (Dkt. 70 at 23.) Upon making the amendment, the applicant stated that “substantially real-time data extraction and analysis may assist *entities, such a police or intelligence agencies and/or businesses*, to monitor specific topics or groups.” The bolded clause therefore forms the basis of Defendant’s proposed construction.

After reviewing the complete prosecution history of the ’679 Patent, the Court finds no clear and unmistakable disclaimer exists as to the term “entity” to preclude users. The examiner conducted multiple interviews before the claimed “first user” was amended to “entity,” none of which addressed the distinction Defendant suggests. Rather, the interviews were directed to clarifying the roles of the “first user” and “second user” in terms of which one performs the monitoring action. In addition, the patentee's April 10, 2017, response summarizing the interviews expressly stated that its amendments to the claims differ from those discussed during the interviews. Moreover, the Gonzalez prior art was applied to many claim elements with no particular emphasis on the disclosure of “user” being an individual. The applicant’s statements referring to “entities, such as businesses or police” are obviously exemplary in nature rather than

definitive statements intended to limit scope. For these reasons, the record for such a disclaimer is far from clear and unmistakable. No disclaimer exists as to “entity” as Defendant contends.

Turning to the question of whether “entity” is an indefinite term, the Court first reviews the claims. Claim 1 of the ’679 Patent, which is representative, includes both the terms “entity” and “user” and further indicates that entities communicate with users through a user device. Though the two words are different and have different scope, there is nothing to suggest an entity cannot also include users. Additionally, dependent claim 10 identifies an “entity user” as follows:

10. The method of claim 1, further comprising

analyzing, by an entity user corresponding to the entity, the results of the query in view of the topic of interest and a sub-topic of interest; and

determining, by the entity user, the correlation between the data source and the topic of interest based on the analysis of the results of the query.

According to claim 10, the “entity user” must “correspond[] to the entity,” which can reasonably mean that it is a user that is part of the entity. Therefore, the “entity” in independent claim 1 must be broad enough to include users within the entity.

The specification is consistent with this interpretation and Defendant has pointed to nothing in the record that shows “entity” must exclude users. Indeed, Plaintiff’s expert, Mr. Thompson states that a person of ordinary skill in the art would not understand the claims to exclude users from being a part of the “entity.” (Dkt. 68-5, ¶41.) Rather, from context of the ’679 Patent claims and specification, along with basic dictionary definitions, he understands the word “entity” to be a known and easily understood term that informs one of ordinary skill of its scope with reasonable certainty to include a user. (*Id.*, ¶43.) The Court finds Mr. Thompson to be more reliable in this instance than the contrary opinion that “entity” does not have a sufficiently definite meaning “because neither the claims nor the specification ever describes an entity as a user.” (Dkt. 70-6,

¶93.) Accordingly, Defendant’s alternative argument of indefiniteness falls far short of the exacting clear and convincing standard and is rejected.

The Court therefore finds the claim term “entity” **is not indefinite and should be given its plain and ordinary meaning.**

6. “accuracy threshold[s]”

Claim term	Plaintiff’s Construction	Defendant’s Construction
“accuracy threshold[s]” (’977 Patent, claims 1, 10, 19) (’712 Patent, claims 1, 10, 19) (’679 Patent, claim 6)	No construction necessary, plain and ordinary meaning. Not indefinite	Indefinite

The issue as to this term is whether “accuracy threshold[s]” has a sufficiently definite meaning such that it can be understood with reasonable certainty by one of skill in the art or whether it is purely subjective claiming and, as a result, is indefinite.

Plaintiff contends that this term has a definite meaning because Defendant’s expert, Dr. Krein, agreed that it was “probably reasonable” to define “accuracy” in this context as “how well the search results line up with the desired results.” (Dkt. 68-8 at 106:16–107:3.) In addition, Plaintiff asserts that Dr. Krein defined “threshold” in line with its plain and ordinary meaning as “a condition or circumstance that may be defined in many different ways that represents a boundary, which may be a soft boundary, around which, in computer science, we would tend to make some type of decision.” (*Id.* at 107:18–108:5.) Therefore, according to Plaintiff, an “accuracy threshold” is a threshold measuring the accuracy of the search results and that is what one of ordinary skill in the art would understand.

Defendant responds that “accuracy threshold[s]” is a term of degree without objective boundaries around its scope, so it should be held indefinite for being a purely subjective term. Defendant argues that the patent contains no objective measurement of what constitutes “accuracy” and the only intrinsic evidence bearing on the meaning is in the file history, where the applicant distinguished the invention from prior art that disclosed a “relevance score.” There, the applicant argued that “the relevance of a site is different from the accuracy,” which Defendant submits only adds to the subjectivity of what “accuracy” means.

Although the scope of the claim must be discernable to a skilled artisan, the “patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement.” *Niazi Licensing Corp. v. St. Jude Med. S.C., Inc.*, 30 F.4th 1339, 1347 (Fed. Cir. 2022). The Court in *Niazi* surveyed cases in this space to delineate between the types of descriptive terms or terms of degree that have objective boundaries and are thus definite, and those that are purely subjective claiming and therefore indefinite. Ultimately, patent claims with descriptive words or terms of degree “must provide objective boundaries for those of skill in the art” in the context of the invention in order to be found definite. *Id.* at 1349 (citations omitted).

The Court in *Niazi* found “resilient” and “pliable” to be definite when examples in the intrinsic record provide objective boundaries by which a skilled artisan could determine the scope of the claims alongside dictionary definitions that support their conclusion. (*Id.* at 1347.) Other descriptive terms having definite terms of degree include “visually negligible,” where the claim language itself provided an objective baseline through which to interpret the claims, for example, whether it could be seen by the normal human eye. *Sonix Tech.*, 844 F.3d at 1372-73. Another example is “not interfering substantially” where the intrinsic evidence provided guideposts for a

skilled artisan to determine the scope of the claims. *Enzo Biochem, Inc. v. Applera Corp.*, 599 F.3d 1325, 1335 (Fed. Cir. 2010).

In contrast, a term that is purely subjective is the classic example of “aesthetically pleasing,” which rendered claims drawn to the “look and feel” of an interface screen invalid as indefinite because it depends entirely on a person’s subjective determination. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1351 (Fed. Cir. 2005). Also, “QoS requirements” as “defined by what network performance characteristic is most important to a particular user” is purely subjective because it depends “on the unpredictable vagaries of any one person’s opinion.” *Intellectual Ventures I, LLC v. T-Mobile USA, Inc.*, 902 F.3d 1372, 1375-76, 1381-82 (Fed. Cir. 2018) (citing *Datamize*, 417 F.3d at 1350-51). Lastly, “more convenient” is purely subjective and indefinite where intrinsic evidence did not provide any objective criterion for determining what is and is not “more convenient.” *Cypress Lake Software, Inc. v. Samsung Elecs. Am., Inc.*, 382 F. Supp. 3d 586, 610 (E.D. Tex. 2019).

Here, the asserted patents concern an improvement to traditional data analysis aimed towards getting more useful results from an initial query. The goal of the invention is to obtain smarter and more helpful results, or results within a certain degree of accuracy. This impetus is exhibited in claim elements about expanding search terms, monitoring the data for matches to the query, and refining the search to improve the accuracy of the result. A skilled artisan familiar with data mining with the goal of extracting useful information using such a query search process should be able to discern with reasonable certainty a gauge for what is and is not a result that falls within an acceptable threshold of accuracy. Even laypeople who regularly use internet search engines can tell whether a list of search results are sufficiently accurate to the query they submitted or are entirely off the mark. Thus, this is not a purely subjective inquiry where the accuracy of the results

depends on subjective determination and can vary wildly based on whose opinion is being asked. Whether results are greater or equal to an accuracy threshold can be determined objectively in a way that deciding whether something is “aesthetically pleasing” or “most important” cannot. Although it is not defined quantitatively or with mathematical precision, the Court is persuaded that a skilled artisan can form an objective measurement for what exceeds the threshold of being accurate results to a data mining query for purposes of selecting such a threshold in the claimed analysis.

This interpretation is supported by intrinsic evidence. The claims are directed to analyzing data by generating a query, executing the query on data sources, selecting a data source when the results “is greater than or equal to” an accuracy threshold, and monitoring the data source to extract more data when an update matches the query. A match indicates an accurate hit. The Abstract of the ‘977 Patent explains that monitoring is performed to monitor for matches to the query, or accurate hits related to the query, which is the desired goal. Furthermore, the ‘977 specification is replete with explanations of how to obtain more satisfactory (or more accurate) results through a process of expanding or refining the search. (*See e.g.*, ‘977 Patent, 4:54-57, FIG. 1.)

Plaintiff’s expert, Mr. Thompson, agrees that one of skill in the art would understand the plain and ordinary meaning of an accuracy threshold in the context of the patent as a threshold related to the accuracy of the search results. (Dkt. 68-5, ¶31.) He cites many examples in the patent specification that correspond to this understanding. (¶¶32-34.) Dictionaries further define “threshold” as “[a] limit against which other values can be compared,” which a skilled artisan would understand in this case to be an accuracy baseline. (¶35.) In contrast, Defendant’s expert, Dr. Krein, seems unable to discern the meaning of “accuracy threshold” simply because it is not defined in the intrinsic evidence, there is no disclosure of how the threshold is calculated, or how

the accuracy of a data source is then measured and compared. Dr. Krein is seeking mathematical precision to meet the objective standard, which is not required here. Yet when questioned during deposition, he understood the term “accuracy” to mean “how well the search results line up with the desired results.” (Dkt. 68-8, 106:16–107:3.) His answer is more indicative of what a person of ordinary skill would understand. How the accuracy threshold is established is not the issue. The method and system simply require that there be a threshold or limit against which the accuracy of the results can be compared, as claimed.

Defendant’s argument about the prosecution history is irrelevant to this dispute as whether a result is accurate or relevant constitutes entirely different scope. When the applicant distinguished relevance from accuracy, he clearly explained that false positive search results may be relevant based on the number of words that match the query but “these results are not accurate as they are not related to the topic of interest.” (Dkt. 68-19 at 13.) From this, it easily follows that accurate results must be much more than simply being relevant. Rather, accurate results are results related to the topic of interest.

To conclude, the patent is not required to identify a quantifiable or numerical accuracy threshold to be definite. The claims may simply require the results of the query to be “greater than or equal to an accuracy threshold” that exists in the method or system. The accuracy of the results is a measurement of how much the results relate to the queried topic of interest, as informed by the prosecution history.

The Court finds this claim term to be similar to the “based on a set schedule” recitation in the subsequent “monitoring” claim limitation, which is not disputed here. As a skilled artisan would know how to monitor data on a set schedule, despite that schedule not being expressly outlined, so too would one know how to select an accuracy threshold against which results of a

query can be measured. For these reasons, the Court finds that Defendant has not met its burden of proof to show this term is indefinite by clear and convincing evidence.

The Court therefore finds the term “accuracy threshold[s]” **is not indefinite and should be given its plain and ordinary meaning.**

7. The “extraction rate,” “processing rate,” and “dynamically adjust” terms

Claim term	Plaintiff’s Construction	Defendant’s Construction
“determine[e/ing] an extraction rate for extracting the data, the extraction rate indicating an amount of the data that is extracted over a first time period” ('679 Patent, claims 1, 11, 16)	No construction necessary, plain and ordinary meaning. Not indefinite	Indefinite
“determine[e/ing] a first processing rate for processing the extracted data with a number of parallel processors, the first processing rate indicating an amount of extracted data that is processed over a second time period” ('679 Patent, claims 1, 11, 16)	No construction necessary, plain and ordinary meaning. Not indefinite	Indefinite
“dynamically adjust[ing] the number of parallel processors for analyzing the extracted data based on the extraction rate to obtain a second processing rate that is greater than the first processing rate” ('679 Patent, claims 1, 11, 16)	No construction necessary, plain and ordinary meaning. Not indefinite	Indefinite

The dispute as to these terms is whether they should be found indefinite because there are multiple ways in which these measurements (extraction rate, processing rate, and how to

dynamically adjust the number of parallel processors) can be calculated such that a skilled artisan would not know which method, among the many, to select and use.

Plaintiff contends there is no issue of indefiniteness because the claim language itself defines the scope of these claim elements. Defendant disagrees, arguing the patent does not provide enough information for one of skill in the art to determine these various measurements. In particular, Defendant submits that the specification does not specify the time period over which the extraction rate should be calculated and the rate can vary greatly depending on the time period upon which it is measured.

Again, “a patentee need not define his invention with mathematical precision in order to comply with the definiteness requirement” and “express calculation[s]” are not required for a rate term to be definite. *Niazi*, 30 F.4th at 1347. *Nabors Drilling Techs. USA, Inc. v. Helmerich & Payne Int’l Drilling Co.*, 2022 WL 3448648, at *10 (N.D. Tex. Aug. 17, 2022). The standard is whether a person of ordinary skill in the art would understand these terms with reasonable certainty.

Turning first to claim 1 of the ’679 Patent, which is representative, the Court notes that the claim language clearly provides that “extraction rate” is a “rate indicating an amount of the data that is extracted over a first time period.” The claim also provides that the “first processing rate” is a “rate indicating an amount of extracted data that is processed over a second time period.” And the claim further provides that “dynamically adjusting the number of parallel processors for analyzing the extracted data” is “based on the extraction rate to obtain a second processing rate that is greater than the first processing rate.” In other words, “the number of parallel processors for analyzing the extracted data” is “dynamically adjust[ed]” until “a second processing rate that is greater than the first processing rate” has been obtained. The purpose of dynamically adjusting is

in line with the goal of the invention, which is to improve real-time data extraction technologies and the digital systems that employ these technologies. ('677 Patent, 1:50-52.)

The written description provides further details in the form of an exemplary application of the claimed invention: "In one example, based on the present configuration, if the extraction speed is four times the sentiment analysis processing speed, 4 sub-sentries may be deployed to perform the sentiment analysis in parallel. Additional sub-sentries may be deployed for buffering needs. In another configuration, if the sentiment analysis processing speed is limited by a large lexicon, sub-sentries may be deployed to process a portion of the lexicon, in parallel. The data mining system of the aspects of the present disclosure monitors the speed of each sub-process, which is input into a controller that dynamically allocates parallel processing instances on-demand." ('679 Patent, 14:54-65.) From this example, it can logically be discerned that the extraction speed and processing speed should be measured over the same time period in order to perform an apples-to-apples comparison. One of skill in the art with a basic understanding of mathematics would know that rates, calculated as speed over time, can be easily reconciled by selecting a common denominator to make an appropriate comparison. By comparing the extraction speed and processing speeds, the parallel processors can be properly allocated according to the relative processing speeds to alleviate the slowest bottleneck and increase efficiency.

The submitted expert declarations are in line with this rational understanding. The Plaintiff's expert, Mr. Thompson, states that a skilled artisan would readily understand these terms and would understand their scope with reasonable certainty based on the claims and specification. (Dkt. 68-5, ¶¶45-52.) The Court agrees. In contrast, Dr. Krein requires a clear definition of the rate, a clear definition of the speed being averaged, a method for measuring and averaging such speed, and a clearly defined time period over which the speed is averaged in order to discern a

clear meaning of the terms. (Dkt. 70-6, ¶101). Such a level of mathematical precision is not required and the Court finds Mr. Thompson to be more persuasive on this point. Accordingly, Defendant has failed to meet its burden of proof to show these terms are indefinite by clear and convincing evidence.

The Court finds the terms “determine[e/ing] an extraction rate for extracting the data, the extraction rate indicating an amount of the data that is extracted over a first time period,” “determine[e/ing] a first processing rate for processing the extracted data with a number of parallel processors, the first processing rate indicating an amount of extracted data that is processed over a second time period,” and “dynamically adjust[ing] the number of parallel processors for analyzing the extracted data based on the extraction rate to obtain a second processing rate that is greater than the first processing rate” **are not indefinite and should be given their plain and ordinary meanings.**

8. “that matches the query”

Claim term	Plaintiff’s Construction	Defendant’s Construction
“that matches the query” (’977 Patent, claims 1, 10, 19)	"matches the query" Not indefinite	Indefinite

The dispute as to this term is whether it contains an error that renders the term indefinite. The parties are in agreement that an extraneous “that” exists in the claims as written and seek guidance on whether it should be corrected.

Plaintiff argues the extraneous “that” is an obvious grammatical error and removing it corrects the error. Plaintiff points out that this error is corrected in analogous claims of subsequent related patents such as the ’712 and ’679 Patents. In addition, Plaintiff submits this is the correct

interpretation because, during prosecution, the amendment adding this language is accompanied by remarks describing the addition as “monitoring the data source to extract data from the data source when new data or updated data matches the query” without the extraneous “that.”

Defendant urges for this term to be found indefinite because the error is not amenable to correction. According to Defendant, there exist three substantively different possible corrections to this term that each reads on a different embodiment:

Option 1 (Plaintiff’s position)	Option 2	Option 3
Monitoring... the at least one data source to extract data ... when at least an update to stored data [that] matches the query, newly added data [that] matches the query, or a combination thereof;	Monitoring... the at least one data source to extract data ... when at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof <u>occurs</u> ;	Monitoring...the at least one data source to extract data ...when <u>there is</u> at least an update to stored data that matches the query, newly added data that matches the query, or a combination thereof;
Embodiments		
Stored data that previously matched the query is updated regardless of whether the update matches the query. (977 Patent, 4:62-64) (“[w]hen information at the data sources is updated or located to match the query terms, a data extractor extracts the data to be analyzed...”)(emphasis added);	When the data source is updated, and the update itself matches the query. (977 Patent, 7:16-18) (“[t]he data changes are analyzed for a match to the key words of the query and the data is transmitted to a data analysis module when there is a match.”);	When there is new data at a data source that matches the query. (977 Patent, 4:62-64) (“[w]hen information at the data sources is updated or located to match the query terms, a data extractor extracts the data to be analyzed...”)

After considering the parties’ briefing and oral arguments, the Court is not persuaded that three different yet reasonable corrections exist with respect to this term. Defendant’s addition of “occurs” or “there is” do not meaningfully change when the extraction takes place as both options (2) and (3) recite extracting when an update and/or newly added data matches the query. Indeed, even option (1) reads the same. “[M]onitoring . . . to extract data . . . when at least an update to

stored data matches the query, newly added data matches the query, or a combination thereof” is extracting data when either one of those events matching the query occurs. Not, as Defendant proposes, when stored data that *previously matched* the query is updated *regardless of whether the update matches the query*. Defendant’s proposed option (1) makes little sense in the context of the invention, which is about monitoring for new data matches to the query in order to further iterate the search for more accurate results. (*See e.g.*, ‘977 Patent, 7:14-18.) There would be no reason to continue monitoring for the exact same data set that previously matched the query. A logical fallacy exists with Defendant’s multiple interpretations that would be obvious to one of skill in the art reading this patent. As Mr. Thompson noted, “UiPath’s understanding makes no sense in the context of the invention, because the point of the invention is to monitor for new data that matches the query, not just to monitor the exact same data that previously matched the query.” (Dkt. 68-5, ¶56.)

Accordingly, the Court finds that the meaning of the term as written is not subject to reasonable debate. This interpretation is supported by the specification, which repeatedly describes that “[t]he monitoring is performed to monitor for matches to the query.” (*See e.g.*, ‘977 Patent, Abstract, 2:13-15, 2:25-26, 2:38-40, 4:61-64, 7:16-18.) And the related ’679 and ’712 Patents contain similar claim language. Even reading the claim as it is written, Mr. Thompson submits that, although cumbersome, the term is understandable to a person of ordinary skill in the art. (Dkt. 68-5, ¶64.) Accordingly, Defendant has not met its burden of proof to show this term is indefinite by clear and convincing evidence.

The Court therefore finds the term “that matches the query” **is not indefinite and means “matches the query.”**

V. CONCLUSION

The Court adopts the constructions as set forth in this opinion for the disputed terms of the asserted patents.

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 19th day of April, 2025.


ROY S. PAYNE
UNITED STATES MAGISTRATE JUDGE