UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF TEXAS
SHERMAN DIVISION

R2 SOLUTIONS LLC *Plaintiff*	§ § §	CIVIL ACTION NO. 4:22-CV-353
v.	§ §	(Judge Mazzant)
AMERICAN AIRLINES, INC. *Defendant*	§ § §	

CLAIM CONSTRUCTION MEMORANDUM OPINION AND ORDER

Before the Court is Plaintiff R2 Solutions LLC's ("Plaintiff's" or "R2's") Opening Claim Construction Brief (Dkt. #42). Also before the Court is the Responsive Claim Construction Brief (Dkt. #49) filed by Defendant American Airlines, Inc. ("Defendant" or "American Airlines" or "American" or "AA"), as well as Plaintiff's reply (Dkt. #52). Further before the Court are the parties' January 13, 2023 P.R. 4-3 Joint Claim Construction and Prehearing Statement (Dkt. #32) and the parties' March 17, 2023 P.R. 4-5(d) Joint Claim Construction Chart (Dkt. #54).

The Court held a claim construction hearing on March 27, 2023, to determine the proper construction of the disputed claim terms in United States Patents No. 7,698,329, 8,190,610, 8,209,317, and 8,341,157 (collectively, the "patents-in-suit").

The Court issues this Claim Construction Memorandum Opinion and Order and hereby incorporates-by-reference the claim construction hearing and transcript.

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BACKGROUND

Plaintiff alleges infringement of United States Patents No. 8,190,610 (Dkt. #42, Ex. 1, "the '610 Patent"), 8,341,157 (*id.*, Ex. 2, "the '157 Patent"), 7,698,329 (*id.*, Ex. 3, "the '329 Patent"), and 8,209,317 (*id.*, Ex. 4, "the '317 Patent"). The parties refer to these patents collectively as the "R2 Patents."

The '610 Patent, titled "MapReduce for Distributed Data Processing," issued on May 29, 2021, and bears a filing date of October 5, 2006. Plaintiff submits that "[t]he '610 Patent generally relates to the processing of large sets of data (often known today as 'big data')." (Dkt. #36, at p. 1). The Abstract of the '610 Patent states:

> An input data set is treated as a plurality of grouped sets of key/value pairs, which enhances the utility of the MapReduce programming methodology. By utilizing such a grouping, map processing can be carried out independently on two or more related but possibly heterogeneous datasets (e.g., related by being characterized by a common primary key). The intermediate results of the map processing (key/value pairs) for a particular key can be processed together in a single reduce function by applying a different iterator to intermediate values for each group. Different iterators can be arranged inside reduce functions in ways however desired.

The '157 Patent, titled "System and Method for Intent-Driven Search Result Presentation," issued on December 25, 2012, and bears a filing date of July 31, 2009. Plaintiff submits that "by ranking documents based on intent, rather than using 'a traditional {query,document} score,' the probability is greater that a relevant result will be in the final result set presented to the user." (Dkt. #36, at p. 4) (citation omitted). The Abstract of the '157 Patent states:

> A system and method for intent driven search presentation. A query is received, over a network, from a user, wherein the query comprises at least one query token. The query is analyzed wherein at least one query keyword is identified in the query. The query is classified wherein the query is classified into at least one intent using query keywords. A plurality of data objects that match query keywords is identified. The data objects are ranked, wherein at least one intent is

> assigned to at least some of the data objects. A result is built using the ranked plurality of data objects, wherein the result comprises display entries wherein if a data object has been assigned at least one intent, such intent is used to construct the display entry for the respective data object. The result is transmitted over the network to the user.

The '329 Patent, titled "Method for Improving Quality of Search Results by Avoiding Indexing Sections of Pages," issued on April 13, 2010, and bears a filing date of January 10, 2007. Plaintiff submits: "The inventions disclosed in the '329 patent are directed to a novel approach of ranking documents in response to a search query, which improves the relevance of search results and thwarts third party efforts to game search systems to improve query rankings." (Dkt. #36, at p. 7) (citation omitted). The Abstract of the '329 Patent states:

> A method and apparatus for improving search results is provided. The method works by delineating sections of a document that are not relevant to the main content. The document content is subjected to ranking analysis in entirety. In response to a query[,] results are recalled omitting terms included in the no-recall sections. Terms in the no-recall sections are not used in titles and abstracts of the results. The results are ordered at least in part by the rankings attributed to the identified no-recall sections.

The '317 Patent, titled "Method and Apparatus for Reconstructing a Search Query," issued on June 26, 2012, and bears an earliest priority date of August 10, 2006. Plaintiff submits that the claimed invention relates to reconstructing a full search query based on a partial query. (Dkt. #36, at pp. 9–10). The Abstract of the '317 Patent states:

> Methods and systems for reconstructing a full query based on a partial query are disclosed. Existing interfaces for search engines may be rigid and require users to submit full queries to perform searched [*sic*, searches]. The methods and systems described herein may solve these problems by allowing a flexible way for users to submit a partial query and reconstruct a full query based on the partial query. A search may then be performed using the reconstructed query.

The Court previously construed disputed terms in the patents-in-suit in *R2 Solutions LLC v. Deezer S.A., et al.*, No. 4:21-CV-90 (Lead Case), Dkt. #54 (E.D. Tex. Jan. 4, 2022) ("*Deezer*").

LEGAL STANDARDS

Claim construction is a matter of law. *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995). The purpose of claim construction is to resolve the meanings and technical scope of claim terms. *U.S. Surgical Corp. v. Ethicon, Inc.*, 103 F.3d 1554, 1568 (Fed. Cir. 1997). When the parties dispute the scope of a claim term, "it is the court's duty to resolve it." *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1362 (Fed. Cir. 2008).

"It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent's intrinsic evidence to define the patented invention's scope. *Id.* at 1313–14; *Bell Atl. Network Servs., Inc. v. Covad Commc'ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification, and the prosecution history. *Phillips*, 415 F.3d at 1312–13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int'l Trade Comm'n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

Claim language guides the Court's construction of claim terms. *Phillips*, 415 F.3d at 1314. "[T]he context in which a term is used in the asserted claim can be highly instructive." *Id.* Other claims, asserted and unasserted, can provide additional instruction because "terms are normally used consistently throughout the patent." *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

"[C]laims 'must be read in view of the specification, of which they are a part.'" *Id.* at 1315 (quoting *Markman*, 52 F.3d at 979). "[T]he specification 'is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.'" *Id.* (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex. Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning than it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

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

The prosecution history is another tool to supply the proper context for claim construction because a patentee may define a term during prosecution of the patent. *Home Diagnostics Inc. v. LifeScan, Inc.*, 381 F.3d 1352, 1356 (Fed. Cir. 2004) ("As in the case of the specification, a patent applicant may define a term in prosecuting a patent."). The well-established doctrine of prosecution disclaimer "preclud[es] patentees from recapturing through claim interpretation specific meanings disclaimed during prosecution." *Omega Eng'g Inc. v. Raytek Corp.*, 334 F.3d 1314, 1323 (Fed. Cir. 2003). "Indeed, by distinguishing the claimed invention over the prior art, an applicant is indicating what the claims do not cover." *Spectrum Int'l v. Sterilite Corp.*, 164 F.3d 1372, 1378–79 (Fed. Cir. 1988) (quotation omitted). "As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution." *Omega Eng'g*, 334 F.3d at 1324. However, the prosecution history must show that the patentee clearly and unambiguously disclaimed or disavowed the proposed interpretation during prosecution to obtain claim allowance. *Middleton Inc. v. 3M Co.*, 311 F.3d 1384, 1388 (Fed. Cir. 2002). Statements will constitute disclaimer of scope only if they are "clear and unmistakable statements of disavowal." *See Cordis Corp. v. Medtronic AVE, Inc.*, 339 F.3d 1352, 1358 (Fed. Cir. 2003). An "ambiguous disavowal" will not suffice. *Schindler Elevator Corp. v. Otis Elevator Co.*, 593 F.3d 1275, 1285 (Fed. Cir. 2010) (citation omitted).

Although "less significant than the intrinsic record in determining the legally operative meaning of claim language," the Court may rely on extrinsic evidence to "shed useful light on the relevant art." *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad

definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but "conclusory, unsupported assertions by experts as to the definition of a claim term are not useful." *Id.* Generally, extrinsic evidence is "less reliable than the patent and its prosecution history in determining how to read claim terms." *Id.*

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.*, 134 S. Ct. 2120, 2129 (2014). "A determination of claim indefiniteness is a legal conclusion that is drawn from the court's performance of its duty as the construer of patent claims." *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005) (citations and internal quotation marks omitted), *abrogated on other grounds by Nautilus,* 134 S. Ct. 2120. "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).

ANALYSIS

Agreed Claim Terms

In their January 13, 2023 P.R. 4-3 Joint Claim Construction and Prehearing Statement, the parties submitted the following agreed-upon constructions (Dkt. #32, at pp. 1–3):

United States Patent No. 8,190,610	
Term	Agreed Construction
"a plurality of mapping functions that are each user-configurable"	"two or more mapping functions that are each configurable by a user"
"data group"	"a group of data and a mechanism for identifying data from that group"

"a method of processing data of a data set over a distributed system, wherein the data set comprises a plurality of data groups, the method comprising"	Limiting preamble in Claim 1
United States Patent No. 8,341,157	
"determining, at least the one computing device, a plurality of intents from the at least one keyword, each of the plurality of intents indicates a type of information regarding the query keyword that is likely to be desired by a user submitting the query"	"determining, using the at least one computing device, a plurality of intents from the at least one keyword, wherein each of the plurality of intents indicates a type of information regarding the query keyword that is likely to be desired by a user submitting the query"
United States Patent No. 7,698,329	
"document"	"any unit of information that may be indexed by search engine indexes"
"recall"	"generating results for a search engine query"
"section"	"defined portion within the structure of a document"
United States Patent No. 8,209,317	
"partial query"	"an abbreviated or incomplete search query such that the submitted query is not fully representative of the entire search query desired by the user"

Also, the following terms in the '157 Patent appear in the parties' January 13, 2023 P.R. 4-3 Joint Claim Construction and Prehearing Statement but do not appear in the claim construction briefing: "token," "data object," "display entry," and "at least some." (Dkt. #32, Ex. A at pp. 3–4; *id.*, Ex. B, at pp. 7 & 9–11). Because these terms are evidently no longer at issue, the Court does not address these terms.

1. "identifiable to [that/the] data group"

"identifiable to [that/the] data group" ('610 Patent, Claims 1, 3, 4, 17, 19, 20)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning. See also the agreed construction for "data group."	Indefinite

(Dkt. #32, Ex. A, at p. 1; *id.*, Ex. B, at p. 1; Dkt. #42, at p. 10; Dkt. #49, at p. 2; Dkt. #54, Ex. A, at p. 1).

a. The Parties' Positions

Plaintiff argues that the claims themselves provide reasonable certainty for this term and, moreover, "the specification is replete with references to data that is 'identifiable' to a particular data group." (Dkt. #42, at p. 10). Plaintiff also argues that "all that matters is that data is able to be identified—such is the plain meaning of 'identifiable,'" and "[t]he mechanism, whether by an identifier or something else, is irrelevant." (*Id.*, at p. 11).

Defendant responds that this term was coined by the patentee and therefore does not have any known meaning in the art, and "[t]he specification of the '610 patent is devoid, however, of any explanation of when 'corresponding intermediate data,' 'metadata' or 'data' qualify as 'identifiable to the data group.' The term is never addressed in the specification at all," and "[l]ikewise, the prosecution history of the '610 patent does not discuss the term." (Dkt. #49, at p. 3).

Plaintiff replies that this term is not a term of degree and is readily understandable. (Dkt. #52, at p. 1). Plaintiff argues that "'identifiable to [that/the] data group' simply means 'able to

be identified to [that/the] data group.'" (*Id.*). Plaintiff also argues: "That the claims are not limited to the examples discussed in the specification does not make the claim term indefinite where the claim language, as written, is clear." (*Id.*, at p. 2).

b. Analysis

As a threshold matter, Defendant cites *Iridescent Networks*, arguing that "identifiable to [that/the] data group" is "a coined term, meaning it has no ordinary and customary meaning." *Iridescent Networks, Inc. v. AT&T Mobility, LLC*, 933 F.3d 1345, 1353 (Fed. Cir. 2019) ("because the disputed term is a coined term, . . . the question is whether the intrinsic evidence provides objective boundaries to the scope of the term") (citing *Interval Licensing LLC v. AOL, Inc.*, 766 F.3d 1364, 1371 (Fed. Cir. 2014)). The phrase "identifiable to [that/the] data group," however, on its face is not technical or specialized or lacking in ordinary meaning and bears no resemblance to the pedagogical examples of coined terms suggested by the Federal Circuit such as "widget" or "ram-a-fram." *Personalized Media Commc'ns, LLC v. Int'l Trade Comm'n*, 161 F.3d 696, 704 (Fed. Cir. 1998).

Turning to the claim language, Claim 1 of the '610 Patent, for example, recites (emphasis added):

> 1. A method of processing data of a data set over a distributed system, wherein the data set comprises a plurality of data groups, the method comprising:
>
> partitioning the data of each one of the data groups into a plurality of data partitions that each have a plurality of key-value pairs and providing each data partition to a selected one of a plurality of mapping functions that are each user-configurable to independently output a plurality of lists of values for each of a set of keys found in such map function's corresponding data partition to form *corresponding intermediate data for that data group and identifiable to that data group*, wherein the data of a first data group has a different schema than the data of a second data group and the data of the first data group is mapped differently than the data of the second data group so that different lists of values are output for the corresponding different intermediate data, wherein the different schema and corresponding different intermediate data have a key in common; and

> reducing the intermediate data for *the data groups* to at least one output data group, including *processing the intermediate data for each data group in a manner that is defined to correspond to that data group*, so as to result in a merging of the corresponding different intermediate data based on the key in common,
>
> wherein the mapping and reducing operations are performed by a distributed system.

The limitation of "processing the intermediate data for each data group in a manner that is defined to correspond to that data group" provides context for understanding that "identifiable" does not refer to a mere capability but rather refers to an actual identification, or actual manner of identification, so that the phrases "that data group," "the data groups," and "each data group" all refer back to the same "data groups" introduced in the preamble ("the data set comprises a plurality of data groups").

The specification further supports this understanding by disclosing that an "identification" can be "retain[ed]" (emphasis added):

> In general, partitioning the data sets into data groups enables a mechanism to associate (group) identifiers with data sets, map functions and iterators (useable within reduce functions to access intermediate data) and, also, to produce output data sets with (group) identifiers. It is noted that the output group identifiers may differ from the input/intermediate group identifiers.
>
> * * *
>
> Referring still to FIG. 4, the records of the intermediate data E′ and D′ *retain an identification* with the groups to which the original input data, resulting in particular intermediate data, belong. Thus, the intermediate data E′ retains an identification with group E, and the intermediate data D′ retains an identification with group D. That is, the intermediate data E′ of the map task 502 retains an identification with the employee table 302, and the intermediate data D′ of the map task 504 retains an identification with the department table 304.
>
> * * *
>
> Map(group_id, in_key, in_value)
> --> (group_id, list(out_key, intermediate_ value))

'610 Patent at 3:58–64, 4:4–13 & 4:45–46 (formatting modified); *see id.* at Figs. 3–5; *see also id.* at 7:18–23 ("the output group identifiers may be different from the input/intermediate group identifiers").

These disclosures in the specification thus reinforce that "identifiable" does not refer to a mere capability but rather refers to an actual identification or actual manner of identification. The opinion of Defendant's expert, that a person of ordinary skill in the art cannot determine whether the term requires an actual identifier or instead merely a capability to be associated with an identifier, is therefore unpersuasive. (*See* Dkt. #49, Ex. 1, Jan. 13, 2023 Goodrich Decl. at ¶ 47) (opining that the term is not used by persons of ordinary skill in the art to denote any 'structure or relationship between data, data groups, or any combination thereof'" and that the specification "does not set out how to achieve or detect data that is 'identifiable to [a] data group'").

Finally, the *Interval Licensing* case cited by Defendant is unpersuasive. 766 F.3d 1364. There, the Federal Circuit found that a term reciting an "unobtrusive manner" was indefinite because the term was "highly subjective" and because of the lack of any objective boundaries in the claims or the specification. *See id.* at 1371–73. Here, the above-discussed context provided by surrounding claim language and disclosures in the specification demonstrate that "identifiable to [that/the] data group" is not merely subjective.

The Court therefore hereby expressly rejects Defendant's indefiniteness argument. Defendant does not present any alternative proposed construction, and no further construction is necessary.

The Court accordingly hereby construes **"identifiable to [that/the] data group"** to have its **plain meaning**.

2. "independently output a plurality of lists of values"

"independently output a plurality of lists of values" ('610 Patent, Claims 1, 17)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning	"each map function outputs more than one list of values without coordination with other map functions"

(Dkt. #32, Ex. A, at p. 2; *id.*, Ex. B, at p. 2; Dkt. #42, at p. 11; Dkt. #49, at p. 4; Dkt. #54, Ex. A, at p. 2).

a. The Parties' Positions

Plaintiff argues that Defendant's proposed construction should be rejected because "[t]he phrase 'without coordination' appears nowhere in the '610 patent," "[n]or is there any embodiment or example in the specification in which a map function cannot coordinate with other map functions." (Dkt. #42, at p. 11). Plaintiff also argues that "[t]he plain and ordinary meaning of the disputed phrase in the context of the patent is simple and clear: each map function independently outputs its own lists as opposed to each map function contributing to the same lists, regardless of the level of coordination between the map functions." (*Id.*, at p. 12).

Defendant responds that its proposed construction is supported by unrebutted expert opinion, and "[i]ndependent operation of the mapping functions is also shown in '610 patent, notably in figures 4 and 5, . . . which indicate data flowing in separate arrows in and out of the mapping functions denoted by 'M' and 'Map.'" (Dkt. #49, at p. 5). Defendant also argues that "R2 provides no explanation of what limitation 'independently' would impose under its interpretation of the term." (*Id.*)

Plaintiff replies that "nothing in the intrinsic record teaches that map functions cannot coordinate with one another." (Dkt. #52, at p. 2). Plaintiff also argues that "independently" means that each map function independently outputs its own lists as opposed to each map function contributing to the same lists. (*Id.*).

At the March 27, 2023 hearing, Plaintiff argued that "independently" simply means that each map function outputs its own lists (rather than multiple map functions contributing to a particular list). Defendant responded that "independently" means without help from others.

b. Analysis

Claim 1 of the '610 Patent, for example, recites (emphasis added):

> 1. A method of processing data of a data set over a *distributed system*, wherein the data set comprises a plurality of data groups, the method comprising:
>
> partitioning the data of each one of the data groups into a plurality of data partitions that each have a plurality of key-value pairs and providing each data partition to a selected one of a plurality of mapping functions that are each user-configurable to independently *output a plurality of lists of values* for each of a set of keys found in such map function's corresponding data partition to form corresponding intermediate data for that data group and identifiable to that data group, wherein the data of a first data group has a different schema than the data of a second data group and the data of the first data group is mapped differently than the data of the second data group so that different lists of values are output for the corresponding different intermediate data, wherein the different schema and corresponding different intermediate data have a key in common; and
>
> reducing the intermediate data for the data groups to at least one output data group, including processing the intermediate data for each data group in a manner that is defined to correspond to that data group, so as to result in a merging of the corresponding different intermediate data based on the key in common,
>
> wherein the mapping and reducing operations are performed by a distributed system.

Plaintiff argues that for a "distributed system" to operate, the components must coordinate with each other. Plaintiff also argues that computer code is often written to be modular such that functions interact with other functions to achieve a result. These general

principles, however, even if accepted as true, do not demonstrate that the claims here at issue necessarily encompass coordination between mapping functions.

Nonetheless, nothing in the claim language suggests the "without coordination" limitation proposed by Defendant. The specification, likewise, does not compel such a limitation. For example, Figure 5 of the '610 Patent shows that each map function 504 independently outputs its own lists 506, but this does not address whether or not the map functions coordinate with each other. Defendant's expert opines that "the term includes the word 'independently' to denote that each mapping function performs on its own, [and] thus does not coordinate with any other mapping functions to provide the desired output." (Dkt. #49, Ex. 1, Jan. 13, 2023 Goodrich Decl. at ¶ 50). Defendant's expert submits, for example, that "this independence is illustrated in the '610 Patent in Figs. 1, 2, 3, and 5 . . . as a lack of coordination between map functions, since these figures do not show any data flow (e.g., as arrows) between any map functions . . . ." (*Id.*; *see id.* at ¶ 51). But Defendant does not persuasively demonstrate that "independently" necessarily connotes an absence of coordination. To whatever extent such a feature is disclosed, it is a specific feature of particular embodiments that should not be imported into the claims. *See Phillips*, 415 F.3d at 1323.

The Court therefore hereby expressly rejects Defendant's proposed construction, and no further construction is necessary. *See O2 Micro*, 521 F.3d at 1362 ("[D]istrict courts are not (and should not be) required to construe every limitation present in a patent's asserted claims."); *see also Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1207 (Fed. Cir. 2010) ("Unlike *O2 Micro*, where the court failed to resolve the parties' quarrel, the district court rejected Defendants' construction."); *Bayer Healthcare LLC v. Baxalta Inc.*, 989 F.3d 964, 977–79 (Fed. Cir. 2021).

The Court accordingly hereby construes **"independently output a plurality of lists of values"** to have its **plain meaning**.

3. "the data of the first data group is mapped differently than the data of the second data group"

"the data of the first data group is mapped differently than the data of the second data group" ('610 Patent, Claims 1, 17)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning. See also the agreed construction for "data group."	"the data of the first data group is mapped by a different map function than the data of the second data group"

(Dkt. #32, Ex. A, at p. 1; *id.*, Ex. B, at p. 3; Dkt. #42, at p. 13; Dkt. #49, at p. 6; Dkt. #54, Ex. A, at p. 3).

a. The Parties' Positions

Plaintiff argues that "AA's proposal is essentially identical to that which the Court expressly rejected in prior litigation." (Dkt. #42, at p. 13) (citing *Deezer* at 16–18). Plaintiff also argues that "AA's argument that the prosecution history supports its construction misrepresents the intrinsic record by manipulating a quote in the file history." (Dkt. #42, at p. 13).

Defendant responds that its proposal is supported by surrounding claim language and by the specification, and "[t]he prosecution history of the '610 patent shows that [the patentee] considered that the use of different map functions is a certainty, not a likelihood." (Dkt. #49, at p. 6). Defendant also argues that "R2's proposal fails to provide any indication of how data is required to be 'mapped differently.'" (*Id.*, at p. 7).

Plaintiff replies that "[t]he Court has already considered and rejected the precise argument AA is making," and "[t]he arguments made during prosecution were not made with respect to Claim 1 or the disputed phrase." (Dkt. #52, at p. 3).

b. Analysis

In *Deezer*, the Court construed the same term ("the data of the first data group is mapped differently than the data of the second data group") in these same claims (Claims 1 and 17 of the '610 Patent) to have its plain meaning. *Deezer* at 16–18. The Court found that "use of different map functions for different groups is a specific feature of particular disclosed embodiments that should not be imported into the claims." *Id.* at 18 (discussing '610 Patent at 3:48–56).

Defendant argues for a different result in the present case based on prosecution history in which the patentee argued as follows regarding the "Datar" reference (United States Patent Application Publication No. 2007/0038659):

> Additionally, Datar fails to teach or suggest apparatus or methods for reducing by iterating at least one key of a first and second intermediate data set to an output set that has different schema than the first and second data sets, which were input to different mapping functions, in the manner claimed in claims 47 and 54.

(Dkt. #42, Ex. 7, Mar. 9, 2010 Amendment, at p. 14) (p. 16 of 17 of Ex. 7). The defendants in *Deezer* did not present this evidence.

In this portion of the prosecution history, the patentee addressed application claims 47 and 54, which issued as Claims 33 and 40, respectively. Defendant points out that those claims, like the claims here at issue (Claims 1 and 17), recite "providing each data partition to a selected one of a plurality of mapping functions." Nonetheless, the above-reproduced statement relied upon by Defendant expressly refers to application claims 47 and 54, neither of which recited "mapped differently," and the patentee made *no* clear and unmistakable statement that all claims are limited to using different mapping functions. *See Omega Eng'g*, 334 F.3d at 1324 ("As a

basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on *definitive* statements made during prosecution.") (emphasis added); *see also id.* at 1325–26 ("for prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both *clear and unmistakable*") (emphasis added); *Cordis*, 339 F.3d at 1358 (similar). Defendant's reliance on this prosecution history is therefore unpersuasive.

Finally, Defendant's expert merely cites the above-cited disclosure that was considered in *Deezer* and cites the above-discussed prosecution history. (Dkt. #49, Ex. 1, Jan. 13, 2023 Goodrich Decl. at ¶¶ 52–54). The opinions of Defendant's expert are therefore unpersuasive.

The Court therefore hereby expressly rejects Defendant's proposed construction, and no further construction is necessary. *See O2 Micro*, 521 F.3d at 1362; *see also Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes **"the data of the first data group is mapped differently than the data of the second data group"** to have its **plain meaning**.

Disputed Claim Terms in United States Patent No. 8,341,157

4. "intent(s)"

"intent(s)" ('157 Patent, Claims 1, 2, 11, 12, 22)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning.	"a mapping from many combinations of keywords to a set of common goals that users pursue in a search query or session of multiple queries"

(Dkt. #32, Ex. A, at p. 5; *id.*, Ex. B, at p. 4; Dkt. #42, at p. 14; Dkt. #49, at p. 8; Dkt. #54, Ex. A, at p. 4).

a. The Parties' Positions

Plaintiff argues that "AA's proposed construction is similar to a construction that the Court already considered and rejected," and "[a]s the Court previously found, the claim language itself explains 'intents.'" (Dkt. #42, at p. 14) (citing *Deezer* at 31–34).

Defendant responds that the specification expressly defines this term, and Defendant argues that "R2's statements [in opposing a motion to dismiss] that 'intents' are 'programmed items,' 'mapped to [and] from query keywords,' 'determined according to query keywords' and are 'inventive concepts' in the claims further demonstrates that the express definition of 'intent' provided in the specification should apply." (Dkt. #49, at p. 9). As to Plaintiff's reliance on the Court's claim construction ruling in *Deezer*, Defendant responds that the parties there presented a different dispute, and "the Court did not have the full benefit of . . . R2's subsequent statements and evidence from a POSITA that is proffered here." (*Id.*).

Plaintiff replies that "AA argues that 'intents' is defined in the specification, but this Court already decided that it is not." (Dkt. #52, at p. 3). Plaintiff also argues: "R2 has recognized that, in the context of the '157 patent, 'intents' must be 'pre-programmed.' But this is inherent in the claims themselves, which make clear that subjective considerations (such as a user's mindset) have nothing to do with the claims." (*Id.*).

b. Analysis

In *Deezer*, the Court found that the claim language itself explains "intents" by reciting that "each of the plurality of intents indicates a type of information regarding the query keyword that is likely to be desired by a user submitting the query." *Deezer* at 33. Also, the Court

rejected an argument by the defendants in *Deezer* that the specification sets forth a definition for "intents." *Id.* at 33–34 (discussing '157 Patent at 9:44–47) ("An intent is a mapping from many combinations of keywords to a relatively small set of common goals that users pursue in a search query or session of multiple queries."). Defendant in the present case urges that this portion of the specification sets forth a lexicography, and Defendant submits the opinion of its expert in support. (*See* Dkt. #49, Ex. 1, Jan. 13, 2023 Goodrich Decl. at ¶ 72). Here as in *Deezer*, the Court finds that this disclosure in the specification "does not rise to the level of a lexicography, particularly given that the above-discussed claim language already addresses this aspect of the recited 'intent.'" *Deezer* at 33–34 (citing '610 Patent, Cl. 1 ("each of the plurality of intents indicates a type of information regarding the query keyword that is likely to be desired by a user submitting the query").)

The *Sinorgchem* case, which Defendant cites for the general proposition that "is" can "signify that a patentee is serving as its own lexicographer," *Sinorgchem Co. v. Int'l Trade Comm'n*, 511 F.3d 1132, 1136 (Fed. Cir. 2007), is unpersuasive based on the same analysis set forth in *Deezer*. *See Deezer* at 33–34. Likewise, Defendant cites examples in the specification of "intents" from the "intent taxonomy" identified when the query "Nikon D60" is analyzed, including "purchase" and "reviews." '157 Patent at 3:58–67, 9:47–53 & 13:10–14:39. Here, too, Defendant does not persuasively justify limiting the claims to these specific aspects of particular disclosed embodiments. *See Phillips*, 415 F.3d at 1323.

Defendant also cites Plaintiff's statements in the present litigation. In the Complaint, Plaintiff states that "pre-programmed 'intents' can be mapped to from [*sic*] query keywords" and "'intents' determination can be fine-tuned via particular parameters . . . ." (Dkt. #1, Complaint at ¶¶ 25–26). Also, in opposing a motion to dismiss, Plaintiff stated: "'Intents' are programmed

items (determined according to query keywords) that drive query classification and how display entries for particular data objects with assigned intents are constructed in the results." (Dkt. #13, at p. 20) (citing Dkt. #1 at ¶ 26). Plaintiff referred to these features of "intents" as being "inventive concepts." (Dkt. #14, at p. 20).

Having considered these additional statements by Plaintiff in the present case, the Court reaches the same conclusion that the Court reached in *Deezer*, namely that surrounding claim language sufficiently explains "intents" by reciting that "each of the plurality of intents indicates a type of information regarding the query keyword that is likely to be desired by a user submitting the query." *Deezer* at 33.

The Court therefore hereby expressly rejects Defendant's proposed construction, and no further construction is necessary. *See O2 Micro*, 521 F.3d at 1362; *see also Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes **"intent(s)"** to have its **plain meaning**.

5. "ranking"

"ranking" ('157 Patent, Claims 1, 2)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning	"assigning a rank"

(Dkt. #32, Ex. A, at p. 5; *id.*, Ex. B, at p. 5; Dkt. #42, at p. 15; Dkt. #49, at p. 9; Dkt. #54, Ex. A, at p. 5).

a. The Parties' Positions

Plaintiff argues that "[t]o the extent AA intends to exclude all steps involved in ranking data objects other than the single step of 'assigning a rank,' AA's proposal is inconsistent with

the specification," and "it could also include determining the attributes used for ranking." (Dkt. #42, at p. 15.)

Defendant responds that the plain and ordinary meaning of "ranking" is "assigning a rank," "[a]s the claims make clear by referring to 'ranked data objects.'" (Dkt. #49, at p. 10). Defendant also argues that "[t]he specification demonstrates that regardless of the algorithm or function used for ranking, a ranking score is assigned to the data objects identified by the query." (*Id.*) Further, Defendant argues that "[r]egarding R2's contention that ranking does not require 'assigning anything at all,' R2 provides no explanation as to how the claimed data objects can be ranked without assigning a score or rank." (*Id.*, at p. 11).

Plaintiff replies that "no definition is needed because 'ranking' is readily understandable." (Dkt. #52, at p. 4). Plaintiff also argues that, in the examples cited by Defendant, "it is incorrect to say that a data object is 'assigned' a rank—it is 'assigned' a score and ranked based on the score," so "[i]f the patentee meant to limit 'ranking' to 'assigning a rank,' it would have said so." (*Id.*).

At the March 27, 2023 hearing, Plaintiff also argued that "ranking" is not necessarily based on scores but rather could be based on, for example, term counts. Plaintiff also argued that Defendant's proposal should be rejected because there is no support for requiring "assigning" anything. The Court proposed construing "ranking" to mean "arranging in an order." Plaintiff had no substantive objection to the Court's proposed construction but maintained that no construction is necessary. Defendant argued that "ranking" is not just sorting or arranging but rather is sorting *by rank*.

b. Analysis

Claims 1 and 2 of the '157 Patent recite (emphasis added):

1. A method comprising the steps of:

receiving, over a network, a query from a user, the query comprising at least one query token;

analyzing the query, using at least one computing device, to identify at least one query keyword;

determining, at least the one computing device [*sic*], a plurality of intents from the at least one keyword, each of the plurality of intents indicates a type of information regarding the query keyword that is likely to be desired by a user submitting the query;

classifying the query, using the at least one computing device, into at least one of the plurality of intents;

identifying, using the at least one computing device, a plurality of data objects available over the network that match the at least one query keyword;

assigning, using the at least one computing device, at least one of the plurality of intents to at least some of the plurality of data objects;

ranking, using the at least one computing device, the plurality of data objects;

building a result, using the at least one computing device, using the *ranked plurality of data objects*, the result comprises a plurality of display entries, at least one display entry customized to a respective assigned intent is constructed for each of the *ranked plurality of data objects*; and

transmitting the result, over the network, to the user.

2. A computer-readable medium having computer-executable instructions for a method comprising the steps of:

receiving, over a network, a query from a user, wherein the query comprising at least one query token;

analyzing the query, using at least one computing device, to identify at least one query keyword;

determining a plurality of intents, by the computing device, from the at least one keyword, each of the plurality of intents indicates a type of information regarding the query keyword that is likely to be desired by a user submitting the query;

classifying the query, using the at least one computing device, into at least a subset of the plurality of intents;

identifying, using the at least one computing device, a plurality of data objects available over the network that match the at least one query keyword;

assigning, using the at least one computing device, at least one of the plurality of intents to at least some of the plurality of data objects;

ranking, using the at least one computing device, the plurality of data objects;

building a result, using the at least one computing device, using the *ranked plurality of data objects*, the result comprises a plurality of display entries, wherein at least one display entry customized to a respective assigned intent is constructed for each of the *ranked plurality of data objects*; and

transmitting the result, over the network, to the user.

The specification discloses:

> The identified documents are then ranked 2500 by the computing device. In one embodiment, the data objects are *ranked* using any ranking algorithm known in the art, such as, for example, term counts, frequency within the corpus of documents, and quality of the site/page based on link analysis. In one embodiment, intent may be used to *rank* a document in a specialized ranking function rather than a traditional {query,document} score. In order to increase the probability of meeting the user's goal, one or more documents may be included that matches highly against the 2nd or 3rd most likely intent, not just the most likely intent, based on a variety of features. While this approach lowers the probability that the result matched against the less likely intent is the best one on average, it increases the marginal probability that the user gets at least one relevant result in the result set. In another embodiment, a score is *assigned* for each candidate result against multiple intents. In either case, *once the final result set is computed, each result has a corresponding relevance score for each possible intent*.

'157 Patent at 10:4–22 (emphasis added); *see id.* at 12:6–22 (similar).

Nothing in the claim language requires "ranking" to include any assigning, let alone assigning a score, and the disclosure in the specification regarding scores relates to specific embodiments rather than the claimed invention as a whole or any purported definition of "assigning." *See Phillips*, 415 F.3d at 1323.

Defendant also submits a technical treatise that states "[Google's] PageRank is a family of algorithms that assigns a numerical value to pages on the Web in an effort to determine the relevance or importance of that page." (Dkt. #49, Ex. 8, *Search Engine Optimization Bible* 194 (2008)). Defendant argues that this extrinsic evidence is relevant because the '157 Patent does not disclose any ranking algorithm but rather relies on "any ranking algorithm known in the art." '157 Patent at 10:5–6 & 12:8–9. This extrinsic evidence regarding use of a "numerical value" in a particular company's algorithms, however, does not warrant confining the '157 Patent to a particular manner of "ranking." *See Phillips*, 415 F.3d at 1318 (noting that "there is a virtually unbounded universe of potential extrinsic evidence of some marginal relevance that could be

brought to bear on any claim construction question," and summarizing that "[w]e have viewed extrinsic evidence in general as less reliable than the patent and its prosecution history in determining how to read claim terms").

Rather, "ranking" the data objects refers generically to arranging the data objects in an order. Because the specification refers to using "any ranking algorithm known in the art" ('157 Patent at 10:5–6 & 12:8–9), this "ranking" is evidently not a point of novelty. The patentee thus used "ranking" simply to refer to taking a collection of data objects and arranging them in an order.

The Court therefore hereby construes **"ranking"** to mean **"arranging in an order."**

6. "keyword"

"keyword" ('157 Patent, Claims 1, 2)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning.	"a characteristic word, phrase or code in a query used to perform searching operations"

(Dkt. #32, Ex. A, at p. 3; *id.*, Ex. B, at p. 6; Dkt. #42, at p. 16; Dkt. #49, at p. 12; Dkt. #54, Ex. A, at p. 7).

a. The Parties' Positions

Plaintiff argues that "[t]he claims themselves illustrate the meaning," and "as the claims explain, a 'keyword' is derived from a query, provides a basis for determining a 'plurality of intents,' is used to identify 'a plurality of data objects,' and can be determined via parsing of tokens." (Dkt. #42, at p. 16). Plaintiff also argues: "AA's proposal would render meaningless other claim language. The claims require determining intents from the 'keyword' and

identifying data objects via the 'keyword.' *See id.* at Claim 1. The claim language thus describes the 'search operations' for which a keyword is used, and accepting AA's construction would impermissibly render this claim language superfluous." (*Id.*, at pp. 16–17) (citation omitted).

Defendant responds that "[t]he claims make clear that a 'keyword' refers to a 'key' or 'characteristic' word, phrase, or code identified in a query that is used to perform searching," and "[t]he term 'keyword' is used consistently in the specification" and in a technical dictionary. (Dkt. #49, at pp. 12–13) (citations omitted). Defendant also argues that "as the specification and plain meaning of 'keyword' make clear, a 'keyword' is not just any word or words in the query, but rather, a 'key' or 'characteristic' word, phrase, or code identified in a query that is used to perform searching." (*Id.*, at p. 13).

Plaintiff replies that "a 'keyword' is derived from a query, provides a basis for determining a 'plurality of intents,' is used to identify 'a plurality of data objects,' and can be determined via parsing of tokens." (Dkt. #52, at p. 4). Plaintiff also argues that "the scope of AA's construction is much more difficult to understand than the term itself." (*Id.*, at p. 5).

b. Analysis

Claim 1 of the '157 Patent, for example, recites (emphasis added):

> 1. A method comprising the steps of:
>
> receiving, over a network, a query from a user, the query comprising at least one query token;
>
> analyzing the query, using at least one computing device, to identify at least one query *keyword*;
>
> determining, at least the one computing device [*sic*], a plurality of intents from the at least one *keyword*, each of the plurality of intents indicates a type of information regarding the query *keyword* that is likely to be desired by a user submitting the query;
>
> classifying the query, using the at least one computing device, into at least one of the plurality of intents;

> identifying, using the at least one computing device, a plurality of data objects available over the network that match the at least one query *keyword*;
>
> assigning, using the at least one computing device, at least one of the plurality of intents to at least some of the plurality of data objects;
>
> ranking, using the at least one computing device, the plurality of data objects;
>
> building a result, using the at least one computing device, using the ranked plurality of data objects, the result comprises a plurality of display entries, at least one display entry customized to a respective assigned intent is constructed for each of the ranked plurality of data objects; and
>
> transmitting the result, over the network, to the user.

The claim thus expressly recites identifying at least one keyword, determining intents from the at least one keyword, and identifying data objects that match the at least one keyword. Also of note, Claim 4 depends from Claim 1 and adds a requirement that "the analysis step identifies query keywords by parsing the tokens and identifying common entities, phrases, spelling errors, synonyms, variants of stems, and noisewords."

Defendant's proposal of explicitly construing "keyword" as being "used to perform searching operations" is therefore redundant and potentially inconsistent with language already recited in the claim regarding how a "keyword" is used.

Moreover, the specification likewise discloses:

> The query is then analyzed 2200 using at least one computing device and *keywords* within the query are identified. The query is parsed into tokens, and the tokens can be analyzed to identify common entities, phrases, spelling errors, synonyms, variants of stems, and noisewords (e.g. "the", "a", "in").
>
> The query is then classified into one or more likely intents, which can include an unclassified intent when no defined intents match the query 2300. An intent is a mapping from many combinations of *keywords* to a relatively small set of common goals that users pursue in a search query or session of multiple queries.

'157 Patent at 9:36–47 (emphasis added); *see id.* at 11:47–56 (similar); *see also id.* at 11:56–57 ("In one embodiment, query intent may be determined by linguistic analysis of query keywords.") The specification thus provides additional context for the claim language regarding

how a "keyword" is used, which thus reinforces that a person of ordinary skill in the art can understand the context provided by surrounding claim language without Defendant's proposal of explicitly construing "keyword" as being "used to perform searching operations."

Defendant also cites a technical dictionary definition of "keyword" as meaning "[a] characteristic word, phrase, or code that is stored in a key field and is used to conduct sorting or searching operations on records in a database." (Dkt. #49, Ex. 9, *Microsoft Internet and Networking Dictionary* 144 (2003)). This technical dictionary perhaps provides some insight into how persons of ordinary skill in the art use the term "keyword." *See Phillips*, 415 F.3d at 1318 ("We have especially noted the help that technical dictionaries may provide to a court to better understand the underlying technology and the way in which one of skill in the art might use the claim terms.") (citation and internal quotation marks omitted).

Nonetheless, "heavy reliance on the dictionary divorced from the intrinsic evidence risks transforming the meaning of the claim term to the artisan into the meaning of the term in the abstract, out of its particular context, which is the specification." *Id.* at 1321. Also, the definition relied upon by Defendant includes that a "keyword" is "used to conduct sorting or searching operations," and as discussed above this is unnecessary and potentially confusing in light of other claim language already addressing how a "keyword" is used. The opinions of Defendant's expert do not compel otherwise. (*See* Dkt. #49, Ex. 1, Jan. 13, 2023 Goodrich Decl. at ¶¶ 78–83).

Thus, rather than adopting this particular dictionary definition proposed by Defendant, the generic term "keyword" should be afforded the full scope of its plain and ordinary meaning. *Thorner v. Sony Computer Ent. Am. LLC*, 669 F.3d 1362, 1367 (Fed. Cir. 2012). The Court hereby expressly rejects Defendant's proposed construction for this reason and for the other

reasons set forth above. This does not read the word "keyword" out of the claim (or convert "keyword" into merely any "word") as Defendant suggests it might. Rather, any disputes regarding whether a particular accused instrumentality includes a "keyword," and regarding whether a "keyword" is used in an infringing manner, relate to factual issues regarding infringement and do not present any further legal question for the present claim construction proceedings. *See PPG Indus. v. Guardian Indus. Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998) ("after the court has defined the claim with whatever specificity and precision is warranted by the language of the claim and the evidence bearing on the proper construction, the task of determining whether the construed claim reads on the accused product is for the finder of fact"); *see also Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007) ("[t]he resolution of some line-drawing problems . . . is properly left to the trier of fact") (citing *PPG*, 156 F.3d at 1355); *Eon Corp. IP Holdings LLC v. Silver Spring Networks, Inc.*, 815 F.3d 1314, 1318–19 (Fed. Cir. 2016) (citing *PPG*, 156 F.3d at 1355; citing *Acumed*, 483 F.3d at 806).

The Court accordingly hereby construes **"keyword"** to have its **plain meaning**.

7. "classifying the query . . . into at least one of the plurality of intents" and "classifying the query . . . into at least a subset of the plurality of intents"

"classifying the query . . . into at least one of the plurality of intents" ('157 Patent, Claim 1) **"classifying the query . . . into at least a subset of the plurality of intents"** ('157 Patent, Claim 2)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning.	"assigning the query to one or more of the plurality of intents determined from the at least one query keywords" Alternatively: "*arranging or assigning* the query to one or more of the plurality of intents determined from the at least one query keyword"

(Dkt. #32, Ex. A, at p. 3; *id.*, Ex. B, at p. 8; Dkt. #42, at p. 17; Dkt. #49, at pp. 14 & 16; Dkt. #54, Ex. A, at p. 8) (emphasis added).

a. The Parties' Positions

Plaintiff argues: "AA proposes changing the word 'classifying' to 'assigning,' despite the fact that the claims use the word 'assigning' elsewhere. If the patentee intended 'classifying the query' to mean 'assigning the query,' it would have simply used that language." (Dkt. #42, at p. 17).

Defendant responds that "'the plurality of intents' into which . . . the query is classified in the classifying step refers back to 'a plurality of intents' determined from the query keyword(s)." (Dkt. #49, at p. 15) (citation omitted). Defendant also argues that its proposed construction is consistent with dependent claims as well as with disclosures in the specification. (*Id.*, at pp. 15–

16). Defendant also cites an extrinsic dictionary definition of "classify." (*Id.*, at p. 16) (citing *id.*, Ex. 10, *Merriam-Webster's Collegiate Dictionary* 228 (11th ed. 2004)).

Plaintiff replies that "R2 agrees that the claims make clear that the plurality of intents determined from the keyword are the same as those into which the query is classified," and "[b]ecause the claims make this clear, the Court does not need to incorporate this understanding into a construction." (Dkt. #52, at p. 5). Further, Plaintiff argues that "[t]here is no basis to change the word 'classifying' at all, as it is a commonly-used and readily-understandable term." (*Id.*).

At the March 27, 2023 hearing, the Court proposed construing this term to mean "arranging or assigning the query to one or more of the plurality of intents determined from the at least one keyword identified from a query." Defendant agreed with the Court's proposed construction. Plaintiff objected to "arranging or assigning," arguing that "classifying" is clear on its face and therefore requires no construction, but Plaintiff otherwise agreed with the Court's proposed construction.

b. Analysis

Claim 1 of the '157 Patent, for example, recites (emphasis added):

> 1. A method comprising the steps of:
>
> receiving, over a network, a query from a user, the query comprising at least one query token;
>
> analyzing the query, using at least one computing device, to identify at least one query keyword;
>
> *determining*, at least the one computing device [*sic*], *a plurality of intents from the at least one keyword*, each of the plurality of intents indicates a type of information regarding the query keyword that is likely to be desired by a user submitting the query;
>
> *classifying the query,* using the at least one computing device, *into at least one of the plurality of intents*;
>
> identifying, using the at least one computing device, a plurality of data objects available over the network that match the at least one query keyword;

> assigning, using the at least one computing device, at least one of the plurality of intents to at least some of the plurality of data objects; . . . .

The disputed term refers to "the plurality of intents," which has antecedent basis in the recital of "determining . . . a plurality of intents from the at least one keyword." Defendant's proposed construction will assist the finder of fact by setting forth this antecedent basis relationship. To avoid confusion, though, Defendant's proposal of a "query keyword" should be modified so as to more closely hew to the antecedent basis for "the at least one keyword," which is set forth in the step of "analyzing the query . . . to identify at least one query keyword." The construction should therefore refer to the plurality of intents determined from the at least one keyword identified from a query.

This understanding also aligns with disclosure in the specification regarding identifying keywords from a query, using the keywords to determine a plurality of intents, and classifying the query into one of the plurality of intents. *See, e.g.,* '157 Patent at 11:47–56 ("The query analysis module 3200 is configured to analyze queries received by the query receiving module 3100 to identify keywords within the queries. . . . The query intent classification module 3300 is configured to classify queries parsed by the query analysis module 3300 into one or more likely intents (which could include an unclassified intent).").

Finally, Defendant's proposal of "arranging or assigning" adequately addresses Plaintiff's concern that referring to only "assigning" might be limiting, particularly in light of the recital of a separate "assigning" step in these claims. Although Plaintiff maintains that the word "classifying" requires no construction, the above-discussed evidence demonstrates that the "classifying" here at issue is a particular type of assigning or arranging, and "some construction of the disputed claim language will assist the jury to understand the claims." *TQP Dev., LLC v.*

Merrill Lynch & Co., No. 2:08-CV-471-WCB, 2012 WL 1940849, at *2 (E.D. Tex. May 29, 2012) (Bryson, J., sitting by designation).

The Court accordingly hereby construes **"classifying the query . . . into at least one of the plurality of intents"** and **"classifying the query . . . into at least a subset of the plurality of intents"** to mean **"arranging or assigning the query to one or more of the plurality of intents determined from the at least one keyword identified from a query."**

Disputed Claim Terms in United States Patent No. 7,698,329

8. "each document of said certain documents containing at least one section that is not used by said search engine for recall"

"each document of said certain documents containing at least one section that is not used by said search engine for recall" ('329 Patent, Claims 1, 8)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning. See also the agreed constructions for "document" "recall," and "section."	"each document of said certain documents containing a <noindex> tag"

(Dkt. #32, Ex. A, at p. 6; *id.*, Ex. B, at p. 12; Dkt. #42, at p. 18; Dkt. #49, at p. 16; Dkt. #54, Ex. A, at p. 9).

a. The Parties' Positions

Plaintiff argues that "[t]he disputed phrase is merely an excerpt from a larger phrase that the Court construed in prior litigation, and the Court's analysis there is just as applicable here." (Dkt. #42, at p. 18) (citing *Deezer* at 45–49). Plaintiff also argues that "AA's proposed construction attempts to limit the phrase to a preferred embodiment and renders dependent claims superfluous." (Dkt. #42, at p. 18). Further, Plaintiff argues that Defendant mischaracterizes the prosecution history. (*Id.*).

Defendant responds that the patentee disavowed claim scope during prosecution, and as to Plaintiff's argument that finding a disavowal would be inconsistent with dependent Claim 2 necessarily being narrower than Claim 1, Defendant argues that, in fact, the disavowal does not make dependent Claim 2 any broader than independent Claim 1. (Dkt. #49, at p. 16–19).

Plaintiff replies that "AA's construction improperly limits the disputed phrase to a preferred embodiment," and "[t]he Examiner indicated that the discussion surrounding 'noindex' tags and sections was in the context of distinguishing prior art via an exemplary embodiment encompassed by the claims . . . ." (Dkt. #52, at p. 6). Plaintiff also reiterates that Defendant's proposed construction would render the independent claims narrower than dependent Claims 2 and 7, arguing that "AA's construction is narrower than this emphasized limitation for two reasons: (1) it requires an explicit type of 'a tag of an element' (a '<noindex> tag'), and (2) it suggests that the tag (and, thus, the document in which it resides) is of a specific coding language, e.g., HTML." (*Id.*).

b. Analysis

Claim 1 of the '329 Patent, for example, recites (emphasis added):

> 1. A method, comprising:
>
> ranking a plurality of documents recalled by a search engine for a query;
>
> wherein the plurality of documents contain certain documents, *each document of said certain documents containing at least one section that is not used by said search engine for recall* and one or more sections that are used by said search engine for recall;
>
> wherein ranking a plurality of documents includes ranking said plurality of documents based, at least in part, on the at least one section of said certain documents not used by said search engine to recall documents; and
>
> wherein the method is performed by one or more computing devices.

The specification discloses:

> The terms inside no-recall sections do not contribute to the document term frequency counts and are not used for recalling the documents in response to search engine queries. However the no-recall sections are included as input to

> forms of analysis of the document that affect, for example, the document's ranking.

'329 Patent at 3:17–23.

In *Deezer*, the Court construed "each document of said certain documents containing at least one section that is not used by said search engine for recall and one or more sections that are used by said search engine for recall" to have its "plain meaning except that the Court . . . construe[d] 'recall' to mean 'generating results for a search engine query' and . . . construe[d] 'section' to mean 'defined portion within the structure of a document.'" *Deezer* at 45–49.

Defendant cites prosecution history in which the patentee distinguished the "Cutts" reference:

> Examiner is thanked for the opportunity to discuss the present application in the interview of December 9, 2009. Participants in the interview included Page Ponsford, Marcel Bingham and Examiner Gofman. Mr. Ponsford and Mr. Bingham pointed out several distinctions between the cited references and Claim 1 of the present application. Examiner Gofman responded by indicating that the use of data within noindex metatags for recall or ranking is contrary to industry standards and is generally frowned upon.
>
> * * *
>
> Cutts describes an experiment to determine how various search engines handle noindex meta tags. In summary, Cutts describes that search engines either 1) use the data contained within a noindex meta tag for the purposes of *both* recall and ranking, or 2) do not use the data contained within a noindex meta tag for the purposes of *both* recall and ranking. In this way, the search engines discussed in Cutts make no distinction between the use of noindex data for recall and ranking.
>
> By contrast, Claim 1 recites "ranking a plurality of documents includes ranking said plurality of documents based, at least in part, on the one or more sections of said certain documents *not used by said search engine* to recall documents." Thus, Claim 1 teaches ignoring the data contained within a noindex metatag for the purposes of recall but using the data contained within a noindex metatag for the purposes of ranking. Examiner expressly indicated in the interview of December 9, 2009, that the approach described in Claim 1 is *contrary* to industry standards and generally *frowned* upon by the industry. Thus, Claim 1 recites a *counterintuitive* method for ranking documents recalled by a search engine[.]

> Moreover, Cutts fails to describe treating data in the noindex section *differently* for recall purposes than ranking purposes, as recited in Claim 1. Instead, Cutts describes treating data in the noindex section the *same* for both recall and ranking purposes. The table below illustrates the differences in the treatment of the data within a noindex tag for the search engines tested by Cutts and the treatment of the noindex sections recited by Claim 1.

Search Engine	Use noindex data for **recall**?	Use noindex data for **ranking**?	Difference Comparison
Google	No	No	No/No
Ask	No	No	No/No
MSN	Yes	Yes	Yes/Yes
Yahoo!	Yes	Yes	Yes/Yes
Claim 1	**No**	**Yes**	**No/Yes**

> As illustrated by the table above, none of the search engines tested by Cutts ignore (do not use) the noindex data for recall and use the noindex data for ranking, as taught by Claim 1.

(Dkt. #49, Ex. 12, Jan. 4, 2010 Response to Final Office Action, at pp. 6–8) (pp. 85–87 of 163 of Ex. 12).

But by distinguishing how Cutts used "noindex" tags, and by arguing regarding how "noindex" tags would be used in the method of Claim 1, the patentee did *not* thereby concede that Claim 1 is limited to "noindex" tags.

This understanding is confirmed in the patent examiner's subsequent statement of reasons for allowance, in which the patent examiner referred to an "ignored" section:

> The Examiner's cited prior art as well as the prior art available prior to the filing date deals with meta tags, such as a "noindex" tag, which tell a search engine crawler to ignore a certain section of a web page. Once the crawler ignores a section, it does not take the ignored section into consideration for ranking purposes.
>
> However, *the Claims of the instant application claim reading the ignored (or the "noindex") section and using that section for purposes of ranking the web page.* But, the Claims do not index the section containing the command to ignore the specified section. It only uses that section for ranking purposes. This is demonstrated in Applicant Remarks in at least the table on Page 8. *The reason for allowance lies specifically in the concept of using an ignored section only for purposes of ranking and not indexing.*

> As such, the cited prior art of record, Edlund et al (US Patent Application Publication 2003/0120654), Cutts (Handling noindex meta tags), and Kamholz et al (US Patent Application Publication 2005/0091580) in view of Applicant presented arguments in at least page 7–8 of Remarks filed 1-4-10 does not disclose, teach or suggest the claimed invention (in combination with all other features in the claims) with respect to Independent Claims 1 and 15.

(*Id.*, Ex. 12, Notice of Allowability, at pp. 2–3 (pp. 105–06 of 163 of Ex. 12) (emphasis added). The parenthetical "(or the 'noindex')" can be fairly read as expressing the examiner's understanding that the patentee was distinguishing the particular disclosures in the Cutts reference regarding "noindex" tags.

The prosecution history cited by Defendant thus sets forth no clear and unmistakable disclaimer that would warrant limiting the disputed term so as to require "a <noindex> tag." *See Omega Eng'g*, 334 F.3d at 1324 ("As a basic principle of claim interpretation, prosecution disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on *definitive* statements made during prosecution.") (emphasis added); *see also id.* at 1325–26 ("for prosecution disclaimer to attach, our precedent requires that the alleged disavowing actions or statements made during prosecution be both *clear and unmistakable*") (emphasis added); *Cordis*, 339 F.3d at 1358 (similar).

This understanding is reinforced by dependent Claims 2 and 9, which depend from Claims 1 and 8, respectively, and recite that "said at least one section of said certain documents not used by said search engine to recall documents are demarcated by a tag of an element." Defendant's proposed construction would require a "tag" (and would even go so far as to imply the language of the tag, namely Hypertext Markup Language (HTML), and specify a particular tag within that language). This would make the independent claims narrower than the dependent claims and is therefore disfavored. Defendant argues that the dependent claims would still be

narrower because the dependent claims recite a "tag *of an element*," but Defendant's argument is unpersuasive.

The disclosures in the specification regarding "<noindex>" tags do not compel otherwise because such tags are a specific feature of particular disclosed embodiments that should not be imported into the claims. *See Phillips*, 415 F.3d at 1323; *see also* '329 Patent at 3:51–67, 4:9–13 & 4:50–53; *id.* at Figs. 2 & 3.

The Court therefore hereby expressly rejects Defendant's proposed construction, and no further construction is necessary. *See O2 Micro*, 521 F.3d at 1362; *see also Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes **"each document of said certain documents containing at least one section that is not used by said search engine for recall"** to have its **plain meaning**.

9. "ranking"

"ranking" ('329 Patent, Claims 1, 8)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning.	"assigning a rank"

(Dkt. #32, Ex. A, at p. 6; *id.*, Ex. B, at p. 12; Dkt. #42, at p. 19; Dkt. #49, at p. 19; Dkt. #54, Ex. A, at p. 10).

a. The Parties' Positions

Plaintiff argues that "[o]nce again, to the extent AA intends to exclude all steps involved in ranking data objects other than the single step of 'assigning a rank,' AA's proposal is inconsistent with the claims and the specification." (Dkt. #42, at p. 19–20).

Defendant responds that it is *not* proposing excluding all other steps involved in assigning a rank, and Defendant argues that Plaintiff advocates for *excluding* assigning a rank and does so without any justification. (Dkt. #49, at p. 20).

Plaintiff replies that "'ranking' may include 'assigning a rank,' but it could include other forms of ranking, as well as other steps in the ranking process." (Dkt. #52, at p. 7). Plaintiff also argues that "'[r]anking' is an oft-used, readily understandable term that can include more than just 'assigning a rank.'" (*Id.*).

At the March 27, 2023 hearing, the Court proposed construing "ranking" to mean "arranging in an order." Plaintiff had no objection to the Court's proposed construction. Defendant argued that "ranking" is not just sorting or arranging but rather is sorting *by rank*.

b. Analysis

Claim 1 of the '329 Patent, for example, recites (emphasis added):

> 1. A method, comprising:
>
> *ranking* a plurality of documents recalled by a search engine for a query;
>
> wherein the plurality of documents contain certain documents, each document of said certain documents containing at least one section that is not used by said search engine for recall and one or more sections that are used by said search engine for recall;
>
> wherein *ranking* a plurality of documents includes *ranking* said plurality of documents based, at least in part, on the at least one section of said certain documents not used by said search engine to recall documents; and
>
> wherein the method is performed by one or more computing devices.

Nothing in the claim language requires "ranking" to include any assigning, let alone assigning a score. The Background of the Invention refers to "relatively higher rank" and "relatively lower rank" but does not refer to assigning a score or other value, referring instead to the documents being "ordered":

> The search result generated by a search engine comprises a list of documents and may contain summary information about the document. The list of documents may be ordered. To order a list of documents, a search engine may *assign a rank*

> to each document in the list. When the list is sorted by rank, a document with a relatively higher rank may be placed closer to the head of the list than a document with a relatively lower rank.

'329 Patent at 1:60–67 (emphasis added). Also, the specification discloses:

> The terms inside no-recall sections do not contribute to the document term frequency counts and are not used for recalling the documents in response to search engine queries. However the no-recall sections are included as input to forms of analysis of the document that affect, for example, the document's ranking.
>
> * * *
>
> While ignoring no-recall sections prevents recall of documents under appropriate circumstances, completely ignoring them could create exploitable loopholes. For example, a document may be designed so that content that increases recall and/or ranking potential is placed in the recall section and content that diminishes high ranking potential is hidden in a no-recall section. To prevent such exploitation, no-recall sections are not ignored when ranking documents recalled by a search engine for a search engine query. For example, a element of a document is not indexed by a search engine index, but when the document is recalled by a search engine for a search engine query, the element is considered for spam and relevancy analysis. All the attributes in all of the sections of a document such as "links", frequency of terms, coloring, font, etc. are therefore considered for spam and relevancy analysis.

'329 Patent at 3:17–23 & 4:1–16. The specification thus refers to "ranking" and "ranking potential" and also refers to "section rating scores" but does not refer to "ranking" in terms of assigning a score or other value. Also, to whatever extent the disclosure in the specification regarding scores is deemed relevant to "ranking," these disclosures relate to specific embodiments rather than the claimed invention as a whole or any purported definition of "assigning." *See Phillips*, 415 F.3d at 1323; *see also* '329 Patent at 4:29–32, 4:40–43 & 4:50–53. The opinions of Defendant's expert do not compel otherwise. (*See* Dkt. #49, Ex. 1, Jan. 13, 2023 Goodrich Decl. at ¶¶ 131–34).

Rather, "ranking" the data objects refers generically to taking a collection of data objects and arranging them in an order.

The Court therefore hereby construes **"ranking"** to mean **"arranging in an order."**

10. "abstract"

"abstract" ('329 Patent, Claims 4, 11)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning.	"a concise description of a document"

(Dkt. #32, Ex. A, at p. 6; *id.*, Ex. B, at p. 13; Dkt. #42, at p. 20; Dkt. #49, at p. 20; Dkt. #54, Ex. A, at p. 11).

a. The Parties' Positions

Plaintiff argues that "AA's proposed construction is essentially a short version of a proposed construction already considered and rejected by the Court in prior litigation." (Dkt. #42, at pp. 20–21) (citing *Deezer* at 42–44). Plaintiff argues that the portion of the specification cited by Defendant "simply states what an abstract *provides*—it does not define 'abstract.'" (Dkt. #42, at p. 21) (citation omitted).

Defendant responds that whereas "R2 wishes to read 'abstract' so broadly that any piece of data within a document could be considered an 'abstract' of the document," "American's construction is consistent with the use of 'abstract' as it relates to documents, and consistent with the definition in the intrinsic record." (Dkt. #49, at p. 20–21).

Plaintiff replies that the meaning of "abstract" is apparent from claim language reciting "that an 'abstract' is something that 'describe[s] each document of said plurality of documents,'" and "AA's construction is simply a broader, shortened version of a construction the Court already rejected." (Dkt. #52, at pp. 7–8).

At the March 27, 2023 hearing, the Court proposed construing this term to mean "a concise description." Defendant was amenable to the Court's proposed construction. Plaintiff opposed the Court's proposed construction and maintained its position that no construction is necessary.

b. Analysis

Claim 4 of the '329 Patent, for example, recites (emphasis added):

> 4. The method of claim 1, further including said search engine generating data representing results of said query, wherein:
> said data includes an *abstract* describing each document of said plurality of documents; and
> for each respective *abstract* of each document of said certain documents, said *abstract* excludes terms from the respective at least one section not used by said search engine to recall said each document.

The specification discloses:

> Search results returned by a search engine for a query contain short descriptive paragraphs or abstracts for a recalled document. Abstracts provide a concise description of the respective document. According to an embodiment, the contents of no-recall sections are excluded from the abstract. This meets the expectations of users in that if a term is not used to recall a document, the term should not show up in an abstract.

'329 Patent at 4:54–60 (emphasis added).

In *Deezer*, the Court considered a proposal by the defendants in that case to construe "abstract" to mean "a short paragraph providing a concise description for a recalled document." The Court rejected that proposal, finding that the above-reproduced disclosure, rather than providing a definition of "abstract," instead "could just as well be read as distinguishing between these two concepts [('short descriptive paragraphs' and 'abstracts')] rather than equating them." *Deezer* at 44; *see id.* at 42–44.

In the present case, Defendant proposes focusing not on the first sentence of the above-reproduced disclosure but rather on the second sentence, which states: "Abstracts provide a

concise description of the respective document." '329 Patent at 4:56–57. Like the first sentence, however, this second sentence does not rise to the level of a lexicography because the patentee did not clearly signal an intent to define the term "abstract." *See Irdeto*, 383 F.3d at 1301 ("It is well-established that the patentee can act as his own lexicographer, so long as he clearly states any special definitions of the claim terms in the patent specification or file history.") (citing *Vitronics*, 90 F.3d at 1582). In other words, this disclosure regarding what an "abstract" *provides* does not amount to a definition of what an "abstract" *is*. *See id.*

Nonetheless, because these patent claims use the word "abstract" to have a specialized meaning that is different from its meaning in common parlance, because the word "abstract" has various technical meanings in scientific arts, and because the patentee expressly described "abstracts" in the above-reproduced disclosure (albeit without expressly defining the term), "some construction of the disputed claim language will assist the jury to understand the claims." *TQP*, 2012 WL 1940849, at *2. Because surrounding claim language already recites that an "abstract" "*describ*[*es*] each document of said plurality of documents," the construction of "abstract" need only explain that an "abstract" is a concise description. Further, this construction is appropriate to reinforce that an "abstract" is not simply an excerpt, not only because of the plain meaning of "abstract" but also because of the surrounding claim language reciting that the abstract is "*describing* each document of said plurality of documents." Thus, construing "abstract" as being a concise description is appropriate to give meaning to the word "abstract." *See Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP*, 616 F.3d 1249, 1257 (Fed. Cir. 2010) ("Claims must be 'interpreted with an eye toward giving effect to all terms in the claim.'") (quoting *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006)).

The Court therefore hereby construes **"abstract"** to mean **"a concise description."**

11. "search engine index"

"search engine index" ('329 Patent, Claims 5, 12)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning.	"an ordered list of information accompanied with the location of the information"

(Dkt. #32, Ex. A, at p. 7; *id.*, Ex. B, at p. 13; Dkt. #42, at p. 21; Dkt. #49, at p. 21; Dkt. #54, Ex. A, at p. 11).

a. The Parties' Positions

Plaintiff argues: "The fact that 'search engine indexes' are addressed in the specification background section is reason enough to leave the term alone because it is clearly already within the purview of a POSA's knowledge. Indeed, a POSA reading the specification would understand that a 'search engine index' is exactly what it sounds like (i.e., an index used by a search engine)." (Dkt. #42, at 21.) Plaintiff argues that Defendant's proposed construction should be rejected because "[r]equiring a 'search engine index' to be limited to an 'ordered list' is not supported by the specification, and what AA means by 'location' in this context is ambiguous." (*Id.*)

Defendant responds that although the '329 Patent does not define the term "search engine index," a contemporaneous patent filed by the same patentee supports Defendant's proposal and is also consistent with a technical dictionary definition. (Dkt. #49, at 21–22).

Plaintiff replies that a "search engine index" is simply "an index used by a search engine," and Plaintiff argues that this term "is clear on its face and in view of '329 patent specification." (Dkt. #52, at p. 8).

b. Analysis

This disputed term appears in dependent Claims 5 and 12, which depend from independent Claims 1 and 8, respectively. Claim 5, for example, recites (emphasis added):

> 5. The method of claim 1, said search engine using a *search engine index* to recall said plurality of documents; and wherein said *search engine index* does not index any term in said certain documents that is found only in one or more sections of said certain documents established as a no-recall section.

The Background of the Invention states:

> Search engines use a search engine index (or more than one index), also referred to herein simply as an index, to search for documents. Search engine indexes can be directories, in which content is indexed more or less manually, to reflect human observation. More typically, search engine indexes are created and maintained automatically by processes referred to herein as crawlers. Crawlers explore information over the Internet, essentially continuously, looking for as many documents as they may find at locations to which the crawlers are configured to search. Crawlers may follow links from one document to another, index their content (e.g., semantically, conceptually, etc.) in a search index and summarize them in databases, typically of significant size. It is these indexes and databases that are actually searched in response to a search query.

'329 Patent at 1:45–59.

Whereas this disclosure refers to content being "indexed" in a search engine index and summarized in databases, Defendant does not adequately support its proposal that a "search engine index" must be an "ordered list" of information. At the March 27, 2023 hearing, Defendant stated that it is willing to forego its proposal of "ordered."

As to the remainder of Defendant's proposed construction, Defendant also cites a contemporaneous patent filed by the same patentee that discloses:

> [A] mechanism known as a "search engine" has been developed to index a large number of Web pages and to provide an interface that can be used to search the indexed information by entering certain words or phases [*sic*] to be queried. Indexes are conceptually similar to the normal indexes that are typically found at the end of a book, in that both kinds of indexes comprise an ordered list of information accompanied with the location of the information. Values in one or

> more columns of a table are stored in an index, which is maintained separately from the actual database table.

(Dkt. #49, Ex. 13, United States Patent No. 7,398,271 at 1:47–56). Defendant's expert likewise opines that the significance of using an "index" is that a user does not search the content directly but rather searches within the index, much like how a reader would search an index of a book. (Dkt. #49, Ex. 1, Jan. 13, 2023 Goodrich Decl. at ¶ 140).

Further, Defendant cites a technical dictionary that defines "index" as "a listing of keywords and associated data that point to the location of more comprehensive information, such as files and records on a disk or record keys in a database." (Dkt. #49, Ex. 14, *Microsoft Computer Dictionary* 232 (4th ed. 1999)).

Adopting the specific definition proposed by Defendant, however, would give undue import to a particular extrinsic dictionary definition, which is not warranted in light of the ample context provided by the specification, such as in the disclosure reproduced above. That disclosure does not purport to define the term, however, and does not contain any disavowal or otherwise show any intent by the patentee to narrow the otherwise broad meaning of the term "search engine index." Rather, the above-reproduced disclosure, as well as the above-cited opinion of Defendant's own expert, demonstrate that "search engine index" is a well-known term of art that should be afforded the full scope of its plain and ordinary meaning in the relevant art. *See Thorner*, 669 F.3d at 1367. This is also consistent with the patentee having discussed "search engine indexes" in the above-reproduced portion of the Background of the Invention, thus implying that search engine indexes were already known in the art.

The Court therefore hereby expressly rejects Defendant's proposed construction, and no further construction is necessary. *See O2 Micro*, 521 F.3d at 1362; *see also Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes **"search engine index"** to have its **plain meaning**.

Disputed Claim Terms in United States Patent No. 8,209,317

After claim construction briefing, Plaintiff filed its March 15, 2023 Notice of Withdrawal of Claim for Infringement of U.S. Patent Number 8,209,317 (Count IV) (Dkt. #53). The Notice states that the parties have *not* reached agreement regarding dismissal of all claims and counterclaims regarding the '317 Patent. At the March 27, 2023 hearing, Defendant confirmed that it is still pursuing its counterclaims as to the '317 Patent, and Plaintiff stated that construction is therefore still necessary as to the disputed terms of the '317 Patent.

12. "submitted"

"submitted" ('317 Patent, Claims 1, 2, 4, 5, 8, 11–14)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
"submitted by a conscious and deliberate act, and not just by entering text"[1]	"submitted by entering a carriage return or by otherwise committing a conscious and deliberate act of submission"[2]

(Dkt. #42, at p. 22; Dkt. #49, at p. 22; Dkt. #54, Ex. A, at p. 12).

a. The Parties' Positions

Plaintiff argues that, based on the prosecution history, "[t]he Court should construe 'submitted' as 'submitted by a conscious and deliberate act, and not just by entering text.'" (Dkt. #42, at p. 22). Plaintiff also argues that Defendant's proposed construction "goes beyond the

[1] Plaintiff previously proposed: "R2 Solutions contends that this term needs no construction and should be afforded its plain and ordinary meaning." (Dkt. #32, Ex. A, at p. 8).

[2] Defendant previously proposed: "entered and transmitted by entering a carriage return or by otherwise committing a deliberate act of submission." (Dkt. #32, Ex. B, at p. 14).

applicant's description of 'submitting' and would replace the word 'submitted' with 'transmitted and entered.'" (*Id.*) Further, Plaintiff argues that "[w]hile the applicant indicated that a 'carriage return' is one way of submitting a partial query, it made clear that a carriage return was just an example and there are other ways of submitting a partial query." (*Id.*, at p. 23) (citation omitted).

Defendant responds that "[w]hile R2[] finally admits that [the patentee] disclaimed claim scope, R2's updated proposal . . . excises an integral part of [the patentee's] disclaimer." (Dkt. #49, at p. 22). Defendant argues that "American's construction correctly recognizes that there must be a deliberate (and conscious) act of submission, for which entering a carriage return is the prominent (but not exclusive) option." (*Id.*, at p. 23).

Plaintiff replies that "during prosecution, a 'carriage return' was offered as an example of what constitutes a 'conscious and deliberate act,' not as a limitation on the scope of the term." (Dkt. #52, at p. 9).

At the March 27, 2023 hearing, the Court proposed construing this term to mean "submitted by a conscious and deliberate act of submission (for example by entering a carriage return or by pressing an 'enter' or 'send' button) rather than just by entering text." Defendant agreed with the Court's proposed construction. Plaintiff opposed the parenthetical in the Court's proposed construction, arguing that the examples might cause the jury to infer that this claim term requires something very similar to pressing a button.

b. Analysis

Claim 1 of the '317 Patent recites (emphasis added):

> 1. A computer database system for providing search results to a user in response to user submissions over a data network, the computer database system comprising:
>
> a database configured to store information about events in the computer database system; and

> a query reconstruction server in data communication with the database and operative to receive a partial query *submitted* at a remote user client system by a user seeking search results matching the *submitted* partial query and, in response to the received partial query, determine a full query based on
>
> (i) the received partial query, and
>
> (ii) information stored in the database about queries previously-*submitted* by users,
>
> wherein the *submitted* partial query comprises an abbreviated or incomplete search query which is not fully representative of an entire search query desired by the user and the full query is better representative of the entire search query desired by the user.

During prosecution, in response to an office action, the patentee distinguished the "Gibbs" reference (United States Patent Application Publication No. 2006/0106769):

> The Office Action alleges that Gibbs teaches "receiving a first set of information indicative of a partial query" in para. [0035]–[0040] and [0066]. However, a careful reading of the paragraphs and the corresponding FIG. 3 of Gibbs reveals Gibbs does not teach "receiving . . . a partial query submitted . . . by a user". Gibbs, in contrast, relates to a search assistant (204) of a user client (202) to identify and transmit the partial input prior to a user signaling a final input (para. [0035]-[0039]). Gibbs states that FIG.[]3 illustrates an embodiment of the invention implemented in the search assistant (204) of a client system (202) (para. [0032]). The search assistant (204) transmits a "partial input" to search engine (208) (para. [0039]). Gibbs discloses receiving a partial input transmitted by a search assistant (204). Gibbs fails to disclose *receiving* at a server *a partial query submitted* at a remote user client system *by a user*. Claims 1, 9 and 15 are allowable for at least this reason.
>
> Further, Gibbs' described a final query is identified by the user entering a carriage return or selecting a search button in a user interface (para [0033] - [0034]). In such a case, the claimed "partial query submitted" in claims 1, 9 and 15 are final queries. Gibbs' processing of a final query is shown on the left side of FIG. 4. Search results are obtained from a cache or elsewhere and returned to the user client.
>
> Thus, Gibbs fails to show determining a full query based on a received partial query, as the term partial query is used in this application. Since a partial query is intended to mean a shorthand way of expressing a typical search query, the partial query is not a guess at what the user is entering but it is, in fact, what the user entered and submitted by entering a carriage return or hitting "send" etc. The user's act of *submitting* the search query is a conscious and deliberate act and is different from the Gibbs situation of a user entering text and a software routine guessing at the search terms the user is entering. Claims 1, 9 and 15 are allowable for at least this reason.

(Dkt. #49, Ex. 11, Apr. 15, 2009 Amendment, at pp. 6–7) (pp. 97–98 of 212 of Ex. 11) (original italics omitted; original bolded emphasis retained here as italics).

In a later filing, the patentee referred back to the above-reproduced remarks and further argued:

> As noted in the response filed April 15, 2009, in the presently claimed invention, a partial query is not a guess at what the user is entering, as in Gibbs. Rather, a partial query is, in fact, what the user entered and submitted—for example by entering an abbreviated text string an[d] then entering a carriage return or "send" etc. The user's act of submitting the search query is a conscious and deliberate act by the user—an abbreviated query is entered, for example on a mobile device such as a cell phone. Users of such devices may not be able to take full advantage of a search engine when using the mobile device because the user is unable to enter a search query without substantial effort (paragraph [0006] of the present application]. The user's submission is of a partial query—an abbreviation of the full query intended by the user—and the submission is a complete act—entering a text string and indicating completion by hitting ENTER or SEND, for example. This is different from the Gibbs situation of a user entering text and a software routine guessing at the search terms the user is entering then interrupting the user by presenting a set of predicted queries which the user may select.
>
> Accordingly, Gibbs fails to disclose all the features of the present invention. Kamvar fails to provide the missing teaching. Kamvar relates to a similar system which guesses at the user's search query before the user has completed entry of the search query. As in Gibbs, this is done for "speeding up this process" of submitting a query to the query processor (para. [0004]). Kamvar thus discloses monitoring a user's entry of a search query to identify a partial query (para. [0031]–[0034]). The partial query is submitted to a search engine to obtain a set of predicted search queries for presentation to the user. One may be selected by the user and the selected predicted search query is submitted to a search engine to obtain search results.
>
> This Kamvar process matches the Gibbs process described above, without adding more that's relevant to the invention defined by claim 1. For the same reasons discussed in connection with Gibbs above, then, Kamvar fails to disclose all the features of claim 1.
>
> . . .
>
> Claim 9 recites features which are not shown by Gibbs and Kamvar, taken alone or together. For example, claim 9 recites in part "receiving at a server a partial query submitted at a remote user client system by a user seeking search results

> matching the submitted partial query." In Gibbs and Kamvar, as discussed above, the disclosed system detects a query as it is being entered by the user, guesses at a set of predicted queries and interrupts the user by presenting the predicted queries to the user. The user may then select one of the predicted queries.
>
> In Gibbs and Kamvar, first, the user does not submit a partial query, as in claim 9. Rather, the user submits a query, stops upon being interrupted by the presentation of the predicted queries, then selects one of the predicted queries. No "submission" of a partial query occurs in this case—rather, the detection of the partial query occurs when certain conditions are met, such as a detected delimiter or detecting entry of a predetermined number of characters or a timeout condition. The user does not get to "submit" a partial query. Rather, the disclosed system decides when it is a "partial query" and acts accordingly to identify predicted queries.
>
> Second, in the Gibbs and Kamvar system, the "partial query" cannot be described as one for which a user is seeking search results *matching the submitted partial query*. The partial query in Gibbs and Kamvar is something that the system decides on, for example, after entry of a delimiter or predetermined characters or a timeout. In effect, the user of the Gibbs and Kamvar system is typing his search query and is interrupted by the system responding with predicted queries. The partial query decided on by the system may or may not match the query for which the user seeks search results. As one example, the user my type in "ball" and the system responds with predicted queries like "ballplayer" and "ballgames," when actually the user wanted search results about "ballet." The claim 1 act of receiving a partial query is not shown by Gibbs and Kamvar.
>
> Accordingly, claim 9 includes limitations missing from Gibbs and Kamvar and is submitted to be allowable over these references. Claims 12–14 are dependent from claim 9 and are submitted to be allowable for the same reasons.

(*Id.*, Ex. 11, Aug. 10, 2009 Response, at pp. 7–8 (pp. 68–69 of 212 of Ex. 11).

These two above-reproduced submissions by the patentee set forth multiple definitive statements explaining that "submitting" a query requires "a conscious and deliberate act" such as by "entering a carriage return," "hitting 'send,'" or "hitting ENTER or SEND." (*See id.*; *see also* Dkt. #49, Ex. 11, Apr. 15, 2009 Amendment, at pp. 6–7 (pp. 97–98 of 212 of Ex. 11)). These definitive statements by the patentee should be given effect in the Court's construction. *See Omega Eng'g*, 334 F.3d at 1324 ("As a basic principle of claim interpretation, prosecution

disclaimer promotes the public notice function of the intrinsic evidence and protects the public's reliance on definitive statements made during prosecution.").

Finally, at the March 27, 2023 hearing Plaintiff objected to including examples in the construction, arguing that the jury might infer that this term requires something very similar to the examples. Any risk of such confusion, however, is outweighed by the patentee having expressly relied upon these examples in the above-reproduced prosecution history. *Id.* Nonetheless, to minimize any risk of confusion as much as possible, the Court's proposed construction should be modified by replacing "pressing an 'enter' or 'send' button" with "pressing 'enter' or 'send,'" so as to avoid any potential confusion about whether a "button" is required.

The Court therefore hereby construes **"submitted"** to mean **"submitted by a conscious and deliberate act of submission (for example by entering a carriage return or by pressing 'enter' or 'send') rather than just by entering text."**

13. "query data management server"

"query data management server" ('317 Patent, Claims 4, 5)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning.	"a server that analyzes historic query data"

(Dkt. #32, Ex. A, at p. 9; *id.*, Ex. B, at p. 15; Dkt. #42, at p. 23; Dkt. #49, at p. 24; Dkt. #54, Ex. A, at p. 13).

a. The Parties' Positions

Plaintiff argues that "[t]he claims themselves explain what a 'query data management server' is." (Dkt. #42, at p. 23). Plaintiff also argues that the disclosure in the specification cited

by Defendant "does not rise to the level of lexicography" and "it only says that the query data management server '*may* analyze historic query data'—not that it is *required* to do so." (*Id.*, at p. 24).

Defendant responds that because the patentee coined this term, it has no established meaning in the art, must be interpreted based on the specification, and must be distinguished from the "query reconstruction server" that is also recited in the claims. (Dkt. #49, at p. 24).

Plaintiff replies that "AA construes the term by reference to what the claims say the 'query data management server' does," and "[i]f the claims describe what the 'query data management server' does, there is no need to construe the term." (Dkt. #52, at p. 9).

b. Analysis

Claims 4 and 5 of the '317 Patent recite (emphasis added):

> 4. The computer database system of claim 1 further comprising:
> a *query data management server* in data communication with the query reconstruction server and the database, the *query data management server* being operative to provide to the query reconstruction server the information stored in the database about *queries previously submitted by users*.
>
> 5. The computer database system of claim 4 wherein the *query data management server* is further configured to:
> retrieve from the database *historical query data relating to a plurality of previously submitted search queries*;
> build a query index based on the historical query data;
> store the query index in the database; and
> provide the query index to the query reconstruction server.

The claims thus already recite, in relation to the "query data management server," explicit limitations regarding "queries previously submitted by users" and "historical query data relating to a plurality of previously submitted search queries."

Defendant argues that construction is appropriate, citing authority that "terms coined by the inventor are best understood by reference to the specification." *Intervet Inc. v. Merial Ltd.*,

617 F.3d 1282, 1287 (Fed. Cir. 2010) (citing *Phillips*, 415 F.3d at 1315). The specification does not set forth any clear lexicography but rather discloses:

> Another exemplary architecture for providing search results is shown in FIG. 3. The architecture 300 may include a user client system 110, a search engine server 120, and a database 130, similar to those described above in reference to FIG. 1. The search engine server 120 may include a query reconstruction server 310, a *query data management server 320*, and a search engine 330. The query reconstruction server 310 may reconstruct a full query from a partial query submitted via the client system 110. The reconstructed query may then be provided to the search engine 330. The query reconstruction server 310 may also determine alternative queries and cause the alternative queries to be provided to the user client system 110.
>
> *Query data management server 320* may analyze historic query data. For example, the *query data management server 320* may retrieve historic query data, analyze or filter the data, and generate data structures for later use in reconstructing the query. In one implementation, the *query management server 320* may create query indexes that are provided to the query reconstruction server 310 for use in reconstructing the query. Other data structures may also be used.

'317 Patent at 3:60–4:14 (emphasis added).

The disclosure in the specification regarding "query data management server 320" is thus consistent with the above-noted surrounding claim language that refers to "queries previously submitted by users" and "historical query data relating to a plurality of previously submitted search queries," so Defendant's proposal of construing the term to mean "a server that analyzes historic query data" would merely tend to introduce unnecessary redundancy and potential confusion, such as regarding whether a query data management server is limited to *only* analyzing historical query data (no such limitation is apparent). Defendant's proposed construction is therefore disfavored. *See, e.g., Apple, Inc. v. Ameranth, Inc.*, 842 F.3d 1229, 1237 (Fed. Cir. 2016) ("Construing a claim term to include features of that term already recited in the claims would make those expressly recited features redundant.").

The opinion of Defendant's expert—that construction is necessary to distinguish the "query data management server" from the "query reconstruction server" —is also unpersuasive because, as noted above, surrounding claim language already sets forth limitations regarding the "query data management server." (*See* Dkt. #49, Ex. 1, Jan. 13, 2023 Goodrich Decl. at ¶ 160).

The Court therefore hereby expressly rejects Defendant's proposed construction, and no further construction is necessary. *See O2 Micro*, 521 F.3d at 1362; *see also Finjan*, 626 F.3d at 1207; *Bayer*, 989 F.3d at 977–79.

The Court accordingly hereby construes **"query data management server"** to have its **plain meaning**.

14. "storing in memory data about previously received queries at the computer database system"

"storing in memory data about previously received queries at the computer database system" ('317 Patent, Claim 8)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning.	"storing data in the computer database system about previous queries submitted by users"[3]

(Dkt. #32, Ex. A, at p. 8; Dkt. #42, at p. 24; Dkt. #49, at p. 25; Dkt. #54, Ex. A, at p. 14).

a. The Parties' Positions

Plaintiff argues that this disputed term "is well within a POSA's and a jury's ability to understand it," and "[i]t recites a method step with conventional terminology that reflects actions and entities common to computer database systems and search technologies." (Dkt. #42, at p. 24) (citing '317 Patent, Cl. 8). Plaintiff also argues that Defendant's proposal is non-sensical

[3] Defendant previously proposed: "data stored in the memory of a server of the computer database system about previous queries submitted by users." (Dkt. #32, Ex. B, at p. 16).

and "improperly imports several terms that clarify nothing about the phrase, but instead grossly limit its scope, such as by requiring the 'memory' to be on a 'server'" and "improperly limit[ing] 'previously received queries' to 'previous queries submitted by users.'" (*Id.*, at pp. 24–25).

Defendant responds by modifying its proposed construction (as noted above) and by arguing that, during prosecution, the patentee distinguished queries that were "submitted," and Defendant argues that Plaintiff's arguments attempt to "muddy what would [be] otherwise a clear data storage and retrieval relationship between the ['storing . . .' and 'retrieving . . .'] claim limitations." (Dkt. #49, at p. 25–26).

Plaintiff objects to Defendant changing its proposed construction and also replies that "AA's new construction is still wrong, as it conflates 'received' queries with 'submitted' queries." (Dkt. #52, at p. 9–10). Plaintiff argues: "For example, a user could 'submit' a query that would never be 'received,' such as due to a network error. And as R2 explained, the claims treat 'submitted' queries and 'received' queries differently." (*Id.*, at p. 10) (citing Dkt. #42, at p. 25).

At the March 27, 2023 hearing, the Court proposed construing this term to mean "storing, in memory, data about previously submitted queries that have been received at the computer database system." Defendant agreed with the Court's proposed construction. Plaintiff opposed referring to "submitted" queries because the claim recites "previously *received* queries" as well as "previously *submitted* queries." Plaintiff argued that it is possible that a query could be submitted but not received.

b. Analysis

As a threshold matter, Plaintiff objects to Defendant's modification of its proposed construction, but Plaintiff has not shown any unfair prejudice, particularly given that Plaintiff

had an opportunity to address Defendant's current proposed construction at the March 27, 2023 claim construction hearing. Plaintiff's objection is therefore hereby overruled.

Turning to the claim language, Claim 8 of the '317 Patent recites (emphasis added):

> 8. A computer implemented method for a computer database system, the method comprising:
>
> *storing in memory data about previously received queries at the computer database system;*
>
> at a server, *retrieving selected data from the memory including query data representative of previously submitted queries and information based on frequency counts for the respective previously submitted queries*;
>
> at the server, constructing indexes using the retrieved selected data;
>
> receiving at the server a partial query submitted by a user at a remote user client system, the submitted partial query including an abbreviated or incomplete search query which is not fully representative of an entire search query desired by the user; and
>
> at the server, using the indexes to determine a full query corresponding to the submitted partial query, the full query being better representative of the entire search query desired by the user.

Defendant proposes that the "memory" in the "storing . . ." step must be "in the computer database system," but "[m]odifiers of a term are usually in proximity to such term," *DeGeorge v. Bernier*, 768 F.2d 1318, 1323 (Fed. Cir. 1985), and a fair reading is that "at the computer database system" refers to where the "previously received queries" were received. Plaintiff appears to agree, arguing that the claim does not require the "memory" to be "at the computer database system." (Dkt. #42, at p. 25). Defendant does not identify any intrinsic evidence that would warrant interpreting the "storing . . ." step as limiting where the "memory" must be located.

As to Defendant's proposal of "previous queries submitted by users," at first blush the claim's use of the different terms "previously *received* queries" and "previously *submitted* queries" might imply that there is a distinction between "received" and "submitted." Yet, the antecedent basis relationship (between "the memory" used for retrieval and "memory" where

data is stored) weighs in favor of finding that the recital of "previously received queries" in the "storing . . ." step refers to previously "submitted" queries. This is also consistent with prosecution history discussed above as to the term "submitted," wherein the patentee distinguished the Gibbs reference, such as by arguing as follows:

> Gibbs fails to show determining a full query based on a received partial query, as the term partial query is used in this application. Since a partial query is intended to mean a shorthand way of expressing a typical search query, the partial query is not a guess at what the user is entering but it is, in fact, what the user entered and submitted by entering a carriage return or hitting 'send' etc. The user's act of *submitting* the search query is a conscious and deliberate act.

(Dkt. #49, Ex. 11, Apr. 15, 2009 Amendment, at p. 7 (p. 98 of 212 of Ex. 11); *see id.*, Ex. 11, Aug. 10, 2009 Response, at pp. 7–8 (pp. 68–69 of 212 of Ex. 11)).

The specification reinforces this understanding, disclosing a method in which a query index is based on previously submitted queries:

> A flow chart of an exemplary method for building query indexes is shown in FIG. 4. Initially, query data may be retrieved from a database of query data. The query data may include previously submitted queries. For example, query data representative of previously submitted queries to the Yahoo! Search Engine may be retrieved. The query data may also include frequency counts representative of the number of times the query has been submitted.

'317 Patent at 4:15–22.

Also of note, the specification refers to a "received partial query." *Id.* at 1:16–18, 3:48–49 & 3:55–57. This further supports finding that the phrase "previously received queries" can refer to "previously submitted queries" because: the specification thus uses "received" in the context of a "partial query"; and the above-cited prosecution history, in turn, explains that a "partial query" has been submitted by a conscious and deliberate act of submission.

In sum, the claim language supports interpreting "previously received queries" as referring to "previously submitted queries," and such a reading is not inconsistent with the specification when read in the context of the prosecution history.

Thus, a fair reading of the disputed term in the context of surrounding claim language, the specification, and the prosecution history is that in Claim 8 of the '317 Patent the patentee used the phrase "previously received queries" to refer to "previously submitted queries."

The Court therefore hereby construes **"storing in memory data about previously received queries at the computer database system"** to mean **"storing, in memory, data about previously submitted queries that have been received at the computer database system."**

15. "better representative of the entire search query desired by the user" and "not fully representative of an entire search query desired by the user"

"better representative of the entire search query desired by the user" **"not fully representative of an entire search query desired by the user"** ('317 Patent, Claims 1, 8)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning	Indefinite

(Dkt. #32, Ex. A, at pp. 9–10; *id.*, Ex. B, at p. 17; Dkt. #42, at p. 25; Dkt. #49, at pp. 27 & 28; Dkt. #54, Ex. A, at pp. 14 & 15).

a. The Parties' Positions

Plaintiff argues that "[i]n arguing indefiniteness, AA repeats the same arguments already rejected by this Court." (Dkt. #42, at p. 25).

Defendant responds that these terms are subjective, and "[t]here is no guidance in the '317 patent as to how a POSITA should derive subjective thoughts from the users' partial queries." (Dkt. #49, at p. 27; *see id.* at 29).

Plaintiff replies: "AA presents the exact same arguments that were already considered and rejected by this Court. AA also fails to address how the Court erred in its previous order." (Dkt. #52, at p. 10).

At the March 27, 2023 hearing, Defendant reiterated that these are terms of degree, that there are no objective boundaries for what degree is "fully representative," and that what is "desired" is inherently subjective.

b. Analysis

Claim 1 of the '317 Patent, for example, recites (emphasis added):

> 1. A computer database system for providing search results to a user in response to user submissions over a data network, the computer database system comprising:
>
> a database configured to store information about events in the computer database system; and
>
> a query reconstruction server in data communication with the database and operative to receive a partial query submitted at a remote user client system by a user seeking search results matching the submitted partial query and, in response to the received partial query, determine a full query based on
>
> (i) the received partial query, and
>
> (ii) information stored in the database about queries previously-submitted by users,
>
> wherein the submitted partial query comprises an abbreviated or incomplete search query which is *not fully representative of an entire search query desired by the user* and the full query is *better representative of the entire search query desired by the user*.

The opinions of Defendant's expert do not compel finding indefiniteness. (*See* Dkt. #49, Ex. 1, Jan. 13, 2023 Goodrich Decl. at ¶ 164 ("The '317 Patent does not provide a POSA with any guidance regarding how to assess users' subjective thoughts to identify full queries in a manner consistent with this term."); *see also id.* at ¶¶ 163–65). At most, the opinion of

Defendant's expert perhaps might present concerns regarding subjectivity *if* each disputed term were read in isolation, apart from the surrounding claim language. But these terms are used together in the same limitations, so the Court need not resolve whether each term, in isolation, might present any question of indefiniteness. These two terms, as used together in these claim limitations, are directed to objective measures for improving a search query, and these objective measures are the subject of the entire disclosure of the '317 Patent.

Further of note, the Court reached the same conclusion in *Deezer*, finding:

> The field of the claimed invention relates to search engines, which is an entire field of technology that attempts to divine the 'desire' of a user so as to provide the most relevant search results for a particular search (or, in more sophisticated cases, for a particular search by a particular user at a particular time in a particular place). In this context, the terms "*fully* representative" and "*better* representative" are readily understandable even with reference to the "entire search query *desired* by the user." *See also* '317 Patent at 3:9–40.
>
> Also, the claims do not use these terms in isolation but rather in relation to each other and with regard to a "partial query," such as in the recital in above-reproduced Claim 1 of the '317 Patent of "wherein the submitted partial query comprises an abbreviated or incomplete search query which is not fully representative of an entire search query desired by the user and the full query is better representative of the entire search query desired by the user."
>
> Thus, Defendants do not meet their burden to show that the claims fail to "inform those skilled in the art about the scope of the invention with reasonable certainty." *Nautilus*, 134 S. Ct. at 2129; *see Sonix*, 844 F.3d at 1377.

Deezer at 61–62.

Defendant here also cites *Interval Licensing* and *Berkheimer*. *Interval Licensing*, 766 F.3d at 1369 ("the patents fail to provide an objective standard by which to define the scope of [the 'unobtrusive manner' phrase]"); *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1364 (Fed. Cir. 2018) (noting that "the objective boundaries requirement applies to terms of degree," and affirming a district court finding that "minimal redundancy" was indefinite because of lack of any objective boundaries as to "how much is minimal").

The *Interval Licensing* and *Berkheimer* cases cited by Defendant relate to general principles of indefiniteness and do not demonstrate any lack of reasonable clarity as to the particular terms here at issue for the reasons set forth above.

The Court therefore hereby expressly rejects Defendant's indefiniteness arguments. Defendant does not present any alternative proposed construction, and no further construction is necessary.

The Court accordingly hereby construes **"better representative of the entire search query desired by the user"** and **"not fully representative of an entire search query desired by the user"** to have their **plain meaning**.

16. "a database configured to store information about events in the computer database system"

"a database configured to store information about events in the computer database system" ('317 Patent, Claim 1)	
Plaintiff's Proposed Construction	**Defendant's Proposed Construction**
Plain and ordinary meaning.	Indefinite

(Dkt. #32, Ex. A, at p. 8; *id.*, Ex. B, at p. 17; Dkt. #42, at p. 26; Dkt. #49, at p. 29).

At the March 27, 2023 hearing, the parties submitted that this term is no longer in dispute. The Court therefore does not construe this term.

CONCLUSION

The Court adopts the constructions set forth in this opinion for the disputed terms of the patents-in-suit. 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 3rd day of April, 2023.

AMOS L. MAZZANT
UNITED STATES DISTRICT JUDGE