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

NORTHEASTERN UNIVERSITY and JARG CORPORATION **Plaintiffs,** **v.** **GOOGLE INC.** **Defendant.**	Civil Action No. 2:07-CV-486 (CE) **Jury Trial Demand**

DEFENDANT GOOGLE INC.'S RESPONSIVE CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

The sole patent-in-suit, U.S. Patent No. 5,694,593 (the "'593 Patent") describes a specific database and information retrieval system that purportedly avoids the complexities and "considerable overhead associated with maintaining an index." 1:51-62.[1] To accomplish this objective, the patent employs a "fragment" and "hash" technique. Using this technique, queries (i.e., user requests for information) are "fragmented," two-part hash values from each query fragment are mathematically computed, each two-part hash value is routed to a single node identified by the first portion of the hash value, the second portion of the hash value is used to locate the responsive information on that node, and results from each accessed node are returned.

The patent's claims were allowed after three prior art rejections, and only after their scope was substantially narrowed by 21 pages of detailed argument explaining what the patent covers. In their Opening Brief, Plaintiffs ignore the prosecution history of the '593 Patent to propose much broader constructions than the intrinsic record supports. Plaintiffs repeatedly argue that Google is "improperly importing limitations" into the claims, but the inverse is true: Plaintiffs seek to unduly broaden the claims contrary to the narrowing amendments and arguments made during prosecution.

Plaintiffs purport to rely on "plain meaning" to argue that several terms require no construction, but the meanings they offer for these terms are anything but "plain and ordinary," particularly in light of the intrinsic record. The "plain" meanings Plaintiffs propose are far broader than the ordinary definitions those skilled in the art would ascribe to those terms, and are not applicable here given the express definitions and disclaimers in the specification and prosecution history. The parties disagree as to the meaning of these terms, giving rise to disputed legal issues that must be resolved by this Court and not improperly relegated to the jury.

[1] All citations herein in the format "xx:yy" refer to the '593 Patent.

Plaintiffs' overbroad and unsupported constructions, heavily reliant on disfavored extrinsic evidence, should be rejected.

II. TECHNOLOGY OF THE '593 PATENT

A. The '593 Specification

The '593 Patent claims a method and system for accessing information stored in a distributed, non-relational database. The purported purpose of the alleged invention is to eliminate the burden and overhead associated with a large index. The patent describes a technique that purports to replace the index with a hash function, such that the location of any object can be computed mathematically based upon the hash function as applied to each of multiple query fragments derived from the user's query. For example, if a query fragment is the word "Texas"[2] and the hashed query fragment is the number "123456," all objects related to the word "Texas" would be located at the node identified by the value "123" (the first portion of the hashed query fragment), and the particular objects would be found on that node using the value "456" (the second portion of the hashed query fragment). Since object locations in the database are mathematically computed both using a hash function, there is purportedly no need to maintain a large index. 1:51-62.

The patent discloses a search engine comprised of "nodes" connected by a network. 1:65-2:2. The node which first receives a user's query is defined as the so-called "home node" for that query. 2:3-8. The home node for that query "fragments" the query (i.e., breaks it into pieces), "hashes" each query fragment into a two-part hash value, and transmits each hashed query fragment to an appropriate node indicated by the first part of the hashed query fragment. 2:3-11. Each node receiving a hashed query fragment, termed a "query node" for that query,

[2] Google believes that the term "query fragment" has a more specific meaning in the '593 Patent than simply a phrase from a user's query (as Plaintiffs suggest), and uses it here only for illustration.

uses the second part of the hashed query fragment to access data on the query node using a "local hash table," and returns the corresponding results to the home node for that query. 2:12-17, 10:43-51. The computers in the claimed system are not dedicated "home nodes" or "query nodes;" instead, any node in the network can perform "home node" or "query node" functions, depending on whether it was the first node to receive a given query (the "home node") and whether it contains data relevant to that query (the "query nodes"). Fig. 1, 1:65-2:11, 3:25-36; Ex. A[3] ('593 Patent File History excerpts, June 7, 1996 Amendment and Remarks at 13, 16), Ex. O (complete produced '593 Patent File History).

B. The Asserted Claims

Plaintiffs assert three independent claims 1, 8, and 13, and three dependent claims 2, 3, and 9. Independent claims 1, 8, and 13 largely overlap. Claim 1 is representative, and appears below with disputed terms underlined:

> 1. A method for information retrieval using fuzzy queries in a non-relational, distributed database system having a plurality of home nodes and a plurality of query nodes connected by a network, said method comprising the steps of:
> randomly selecting a first one of said plurality of home nodes;
> fragmenting, by said selected home node, a query from a user into a plurality of query fragments;
> hashing, by said selected home node, each said query fragment of said plurality of query fragments, said hashed query fragment having a first portion and a second portion;
> transmitting, by said selected home node, each said hashed query fragment of said plurality of query fragments to a respective one of said plurality of query nodes indicated by said first portion of each said hashed query fragment;
> using, by said query node, said second portion of said respective hashed query fragment to access data according to a local hash table located on said query node; and
> returning, by each said query node accessing data according to said respective hashed query fragment, an object identifier corresponding to said accessed data to said selected home node.

[3] All references herein to exhibits are to the exhibits attached to this brief unless otherwise noted.

According to Claim 1, when a networked computer is designated a "home node" for a particular query, it performs the functions of (i) fragmenting the query, (ii) hashing each query fragment, and (iii) transmitting each hashed query fragment. Claim 1 also requires that when a computer is designated as a "query node" for a given query, it performs the functions of (i) using the second portion of the hashed query fragment to access data according to a local hash table, and (ii) returning to the home node an object identifier corresponding to the accessed data. Claim 1 also requires that the home node for each query be selected "randomly."

Dependent claims 3 and 9 add a further limitation to the method of Claim 1 and require that results returned to the user meet a predefined threshold of relevance. Claim 3 is exemplary and requires, *inter alia*, "returning, to said user, by said home node, accessed data having a predetermined degree of relevance." (emphasis added).

III. GOOGLE'S PROPOSED CONSTRUCTIONS SHOULD BE ADOPTED

A. "a plurality of home nodes and a plurality of query nodes connected by a network" (Claim 1)[4]

Google's Proposed Construction	Plaintiffs' Proposed Construction
a plurality of home nodes and query nodes connected by a network arranged with no central server and wherein, for any given query, any node may be defined as a home node or a query node	The claim language has its plain and ordinary meaning; no further construction necessary

The parties' dispute over this term focuses on *how* the claimed nodes in the network are connected. At issue is whether the scope of the claims is limited by the strong disclaimers applicant made during prosecution. The search engine consistently disclosed in the Abstract, in the Summary of the Invention, in the Detailed Description, and in the prosecution history has "no central server" and lacks "any kind of hierarchical structure," such that each node may act as a

[4] Also, "a plurality of home nodes; and a plurality of query nodes; said plurality of a plurality of home nodes and said plurality of query nodes connected by a network" (Claims 8, 13).

home node or a query node for any given query. Plaintiffs state the plain meaning requires a separation between home nodes and query nodes – but the intrinsic records shows Dr. Baclawski squarely disclaimed this alleged "plain meaning" during prosecution.

Plaintiffs are wrong to suggest this term requires no construction. Claim terms must be construed when the parties disagree as to their meaning. "It is critical for trial courts to set forth an express construction of the material claim terms in dispute, in part because the claim construction becomes the basis of the jury instructions, should the case go to trial. It is also the necessary foundation of meaningful appellate review." *AFG Industries, Inc. v. Cardinal IG Company, Inc.*, 239 F.3d 1239, 1247 (Fed. Cir. 2001). Claims must be construed by the court, not the jury, where, as here, a dispute exists as to their meaning. *O2 Micro Intern. Ltd. v. Beyond Innovation Technology Co.*, Ltd., 521 F.3d 1351, 1360-61 (Fed. Cir. 2008).[5]

1. Hierarchical Networks with a Central Server Were Clearly Disclaimed During Prosecution

To overcome three separate prior art rejections, Dr. Baclawski narrowly described the invention as a whole during prosecution and expressly disclaimed certain network arrangements. The "plain and ordinary" meaning of this term in the Abstract was disavowed by the inventor to obtain allowance, and the claims cannot now be given a broader scope. *North American Container, Inc. v. Plastipak Packaging, Inc.*, 415 F.3d 1335, 1345-46 (Fed. Cir. 2005).

To obtain allowance, Dr. Baclawski stated unequivocally that (1) the nodes of the network do not have "*any kind* of hierarchical structure," (2) the search engine includes no central server, and (3) the home node is one of the plurality nodes in the search engine chosen at random. To overcome rejection based on the prior art Chaturvedi reference, Dr. Baclawski

[5] Plaintiffs also invite the Court not to construe the "transmitting . . .," "using . . .," "returning . . .," and "a first portion and a second portion" limitations, Sections III. C, D, E, and G below. For similar reasons, the court should construe those terms as well.

amended the claim language relating to home nodes and argued that his invention differed from Chaturvedi in these three respects:

> … the architecture of Chaturvedi shown in those Figs. [2 & 3] is quite different from the architecture of the present invention. ***More particularly, there is no central server in the present invention, and neither the nodes of the network or the object fragments in the index have any kind of hierarchical structure. In the present invention the home node of a query is randomly chosen, and different queries will generally have different home nodes.***

Ex. A ('593 Patent File History, June 7, 1996 Amendment and Remarks at 13 (emphasis added)); Ex. O at JAR 2800-20. Characterizing the patent as a whole, Dr. Baclawski also stated that "[t]he 'home node' *in the present invention* is one of the nodes in the search engine, and it can be randomly chosen by one of the front end processors." Ex. A ('593 Patent File History, June 7, 1996 Amendment and Remarks at 16 (emphasis added)); Ex. O at JAR 2800-20. Because the search engine has no central server and lacks any kind of hierarchical structure, each node must be capable of performing home node tasks or query node tasks for any given query.[6] These unambiguous characterizations of the invention itself, made by the inventor to overcome a prior art rejection, necessarily limit the scope of the claims and elucidate the meaning of this term. *MBO Labs., Inc. v. Becton, Dickinson & Co.*, 474 F.3d 1323, 1330 (Fed. Cir. 2007); *Terlep v. Brinkman Corp.*, 418 F.3d 1379, 1384 (Fed. Cir. 2005) ("Where an applicant argues that a claim possesses a feature that the prior art does not possess in order to overcome a prior art rejection, the argument may serve to narrow the scope of otherwise broad claim language."); *Versata Software, Inc. v. Sun Microsystems, Inc.*, 2008 WL 3914098, *4-5 (E.D. Tex. Aug. 19, 2008) (statements regarding the "present invention" in the specification and prosecution limited claim scope).

[6] If only certain nodes in the network could act as "home nodes" and only certain other nodes could act as "query nodes," as Plaintiffs argue, the network would contain a hierarchy.

Plaintiffs argue that these statements are not limiting and were made only to distinguish particular features of the Chaturvedi reference. Yet the disclaimers were not limited to the specific type of central server or hierarchy described in Chaturvedi but rather were expressly argued as to the "the present invention" as a whole. Whether the applicant could have distinguished his invention more narrowly is irrelevant; he is bound by the arguments he made, not those he could have made. *Atofina v. Great Lakes Chemical Corp.*, 441 F.3d 991, 998 (Fed. Cir. 2006).[7]

2. The Specification Confirms Google's Construction Is Correct

The specification also confirms Google's construction is correct. In the Summary of the Invention, the "the invention" is described as a search engine consisting of a network of computer nodes in which each node can be a query node or a home node. 1:65-2:18. The nodes connected by the network are the claimed "search engine." 1:65-67. This description of the invention makes clear that the user's query is sent to "one of the computer nodes of the network," 2:3-5, and not to one of a subset of computer nodes always designated as home nodes. The node receiving the query is "termed the home node of the search engine" for that query. 2:5-8. Subsequently, each hashed query fragment is transmitted to "a node on the network," 2:8-11, not to one of a subset of nodes pre-designated as query nodes.

[7] Plaintiffs argue that a single statement in the prosecution history describes a network in which home nodes and query nodes are drawn from different sets of computers. Opening Brief at 22, Ex. A (May 14, 1997 Amendment and Remarks) at 2 ("Kuechler makes no distinction between a home node and a query node as recited in each of the independent claims of the present invention."). That statement, however, simply distinguished Kuechler on the grounds that it required every computer in the network to perform both home node tasks (i.e., processing the complete unfragmented query) ***and*** query node tasks (i.e., search its database) ***for all queries***. Ex. A (May 14, 1997 Amendment and Remarks at 2); Ex. N (U.S. Patent 4,811,199 to Kuechler at Fig. 2, 21:8-16). Dr. Baclawski's differentiation of the invention from search engine networks in which all nodes perform home node and query node tasks for all queries is not a statement that home nodes and query nodes are drawn from different dedicated sets of computers.

The Detailed Description confirms that the invention consists of a network of nodes that can act either as home nodes or query nodes for any given query – in other words, a network without a hierarchy. The Detailed Description describes the "search engine," element 16 of Fig. 1, as containing nodes 24, 26, 28, 30, 32 and 50. 2:66-3:9; Fig. 1 (highlighting added to search engine nodes 24, 26, 28, 30, 32 and 50).

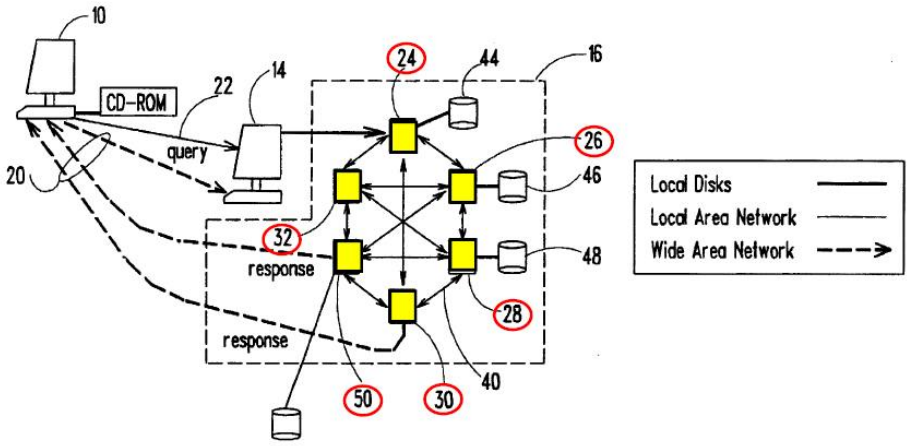

FIG. 1

As Figure 1 shows, the claimed search engine 16 consists of an interconnected group of computer nodes 24, 26, 28, 30, 32 and 50 – not a group of "home node" computers connected to a separate group of "query node" computers. The Detailed Description says the query is sent to any "one of" the nodes, subsequently "defined" as the home node "for that query." 3:18-24. Because the specification states clearly that any node may be selected and "defined" as the home node for a given query, and nodes are "defined" on a query-by-query basis, each node must be capable of being defined as either a home node or a query node for any given query.

The specification also states that data accessed during query processing is "distributed uniformly over the nodes of the search engine" using a hashing function. 3:25-36. In other words, the claimed search engine's data is not stored only on a subset of nodes in the network; instead, data is stored "uniformly over the nodes of the search engine" (nodes 24, 26, 28, 30, 32

and 50 in Fig. 1 above). *Id*. The hashed query fragments are distributed according to this same hashing function. *Id.* As a result, for any given query, any one of the nodes in the network could receive a hashed query fragment and act as a query node since every node in the network stores a portion of the search engine's data. All nodes in the network thus must be capable of being a query node for any given query. Any construction that requires the home nodes and query nodes to be drawn from separate groups of computers is incorrect given these descriptions of the invention throughout the specification and the clear disclaimers in the prosecution history.

3. Google's Construction Does Not Exclude a Preferred Embodiment

There is no embodiment disclosed in the '593 Patent that includes a central server. The preferred embodiment includes a "front end processor," element 14 in Fig. 1, that distributes queries *to* the nodes comprising the search engine. The front end processor 14, however, is not part of the search engine 16 (shown in Figure 1 as everything inside the dashed boundaries). 1:65-2:11. Indeed, the specification states that the front end processor 14 "may also be the user computer 10," which even Plaintiffs cannot argue is part of the search engine 16. 3:3-4. In other words, the preferred embodiment simply does not include a central server as part of the claimed search engine. Fig. 1; Ex. A ('593 Patent File History, June 7, 1996 Amendment and Remarks at 13). Google's construction, requiring the home nodes and query nodes to be interchangeable, actually mirrors the preferred embodiment, whereas Plaintiffs' interpretation of this limitation covers an embodiment that is not described and was expressly disavowed during prosecution.

B. "query fragment" (claims 1, 8, 13)

Google's Proposed Construction	Plaintiffs' Proposed Construction
a part of a query consisting of a limited number of attributes and attribute values joined by relationships, specified in the same formal, artificial language and ontology which describes the attribute values of objects of the database	a sub-part or piece of a query

The parties disagree as to whether "query fragment" should be given the express definition it has in the intrinsic record, or should instead have a broader "plain meaning" the inventor disavowed during prosecution to obtain the patent in suit.

1. Only Google's Construction Accords With the Express Definition in the Intrinsic Record

Google's construction of "query fragment" conforms precisely with the specification's express definition. The specification explicitly defines "query fragments":

> Queries to extract data from the database are written in the same formal language as the one used for content labels and hence must conform to the same ontology. A fragment of a content label or a query is a part of the content label or query consisting of a limited number of attributes and attribute values joined by relationships.

1:25-30; *see also* 1:12-13. According to the specification, queries are written in the same formal artificial (i.e., computer) language as content labels, which are written in an artificial language specified by the "ontology" (or language) used by the database. 1:12-13, 1:25-30.[8] A fragment of a query is a part of the query "consisting of a limited number of attributes and attribute values joined by relationships." *Id.* According to the specification, then, a query fragment is not just a part of a query, but something more specific – a part of a query consisting of a limited number of attributes and attribute values joined by relationships, specified in the same formal, artificial language as the attribute values of objects in the database. *Id.* Because the specification explicitly defines what query fragments are, and does so in the same language Google proposes, Google's construction does not improperly import limitations.[9]

To avoid this express definition, Plaintiffs argue the specification's Background section cannot be used to limit claim terms. Plaintiffs are wrong. *Nystrom v. TREX Co., Inc.*, 424 F.3d

[8] This is necessarily so, since the database cannot understand queries written in a different formal, artificial language than the one the database uses.

[9] Plaintiffs even agree that the embodiments disclose a "limited number" of attributes and attribute values as Google's construction requires. Opening Brief at 14.

1136, 1143 (Fed. Cir. 2005) (basing claim construction, in part, on description in the Background of the Invention). Plaintiffs' reliance on *Ventana Medical Sys., Inc. v. Biogenex Labs., Inc*. is misplaced, considering that *Ventana* found only that "general statements" about multiple prior art systems in the "Background Art" section "will not be interpreted to disclaim every feature of every prior art device" where such a construction excludes the preferred embodiment. 473 F.3d 1173, 1181 (Fed. Cir. 2006). Here, the definition of "query fragments" does not involve any distinguishing prior art, nor does not exclude a preferred embodiment.

2. Highly Relevant Extrinsic Evidence Confirms Google's Construction

During prosecution of a related patent also naming Dr. Baclawski as its sole inventor, he stated that *"[t]he '593 query fragments are defined* at '593 column 1, lines 27-31, *and consist of a part of the query with a limited number of attributes values joined by relationships*." Ex. B (U.S. Patent No. 6,505,191 Prosecution History, July 3, 2002 Amendment and Remarks at 5 (emphasis added)). Statements made during prosecution of a later patent can inform the understanding of terms in an earlier related patent. *Omega Engineering, Inc, v. Raytek Corp.*, 334 F.3d 1314, 1333 (Fed. Cir. 2003). But what is more, here, Dr. Baclawski and Plaintiff Jarg expressly said that the '593 Patent defines the term and pointed to the same definition.

Google's construction is wordy only because the express definition used by the specification is wordy. Regardless of the number of words it contains, the specification's definition is critical to understanding the fundamental nature of the claimed search engine. The invention's purported advantage – avoiding the need for a large, complex, and unwieldy index – is accomplished because the queries and "content labels" conform to the same "ontology," or language, as the database to allow hashed query fragments to be matched to the appropriate data. Furthermore, the claimed method determines the "degree of relevance" of a query result using

the attribute values and relationship information included in the query fragments. Ex. C (Baclawski Depo.) at 54:17-55:11, 134:10-135:10, 153:5-13.

C. "hashing" (claim 1, 13) / "hashes" (claim 8)

Google's Proposed Construction	Plaintiffs' Proposed Construction
performing a mathematical function on a key value to generate the address of the location of data associated with the key value	a computer technique whereby one or more functions are used to transform values into corresponding values

"Hashing" and "hashes" are terms of art in computer science that refer to performing a mathematical function on a key value[10] to generate the address of the location of data associated with that key value. The intrinsic record gives no indication that Dr. Baclawski intended to depart from this meaning. In an attempt expand that definition, Plaintiffs selectively refer to portions of the extrinsic definitions they cite so as to redefine "hashing" and "hashes" away from their ordinary meaning to those skilled in the art. Plaintiffs' construction defines "hashing" to include literally any type of "transformation" of values, as it claims the result of any computer process.[11] This construction is legally wrong and at odds not only with the ordinary meaning of these terms in the field, but also the intrinsic evidence. Plaintiffs' construction also ignores the fundamental differences between hashing and many of the other data access techniques, something which those skilled in the art would understand.

1. Plaintiffs' Misleading Excerpt the Relevant Extrinsic Evidence, Which Confirms Google's Construction

In an effort to lead the Court away from the ordinary meaning "hashing" and "hashes" have to those skilled in the art – a meaning the patent-in-suit never departs from – Plaintiffs' misleadingly cherry-pick less relevant portions of their own extrinsic evidence and omit other, more relevant portions supporting Google's construction. While the '593 Patent uses hashing

[10] Persons of ordinary skill in the art understand the term "key value" to refer to the value used to access data in a hash table.
[11] Including basic indexing techniques that use large indices the patent purports to avoid.

specifically for addressing, Plaintiffs ignore the Prentice-Hall definition directed to addressing and instead cite a definition for processing. The Prentice-Hall definition directed to addressing supports Google's construction and defines "hashing" as "[a]n addressing technique used to store and retrieve data in a file. Hashing uses keys in an index to determine the location of the data in the file." Ex. G (Prentice-Hall Standard Glossary of Computer Terminology, D.I. 71-7, at 191). This is precisely the way "hashing" is used in the intrinsic record. Plaintiffs also misleadingly refer to only a portion of their cited encyclopedia entry. Once again, the full entry supports Google's construction and discusses conversion of a key field into a hash address. Ex. H (Encyclopedia of Comp. Sci. and Eng'g, D.I. 71-6) at 681.

In addition to the evidence Plaintiffs cite, other contemporaneous extrinsic evidence confirms Google's construction is consistent with the understanding those skilled in the art would have of these terms.

- "hashing" . . . "(1) a key-to-address transformation in which the keys determine the location of the data. (2) The process of applying a formula to a record key to yield a number that represents a disk address." Ex. E (Webster's New World Dictionary of Computer Terms, Prentice Hall, 1992) at 187.

- "hashing algorithm" . . . "An algorithm used to derive an address within a specified range from a key value. A hashing algorithm is used with a random file to determine the address of the block in which a given record should be stored." Ex. F (Tony Gunton, A Dictionary of Information Technology and Computer Science, Second Edition, 1993) at 136.

- Ex. D (Donald Knuth, The Art of Computer Programming, vol. 3, Sorting and Searching, Addison-Wesley, 1973 ("6.4 Hashing . . . computing a function f(K) which is the location of K and the associated data on the table. . . . We compute a hash function h(K) and use this value as the address where the search begins.")) at 506-07.

2. Only Google's Construction Is Consistent with the Intrinsic Record

The intrinsic evidence shows that, in contrast to the terms already discussed, the inventor used the terms "hashing" and "hashes" in a way that is consistent with their plain and ordinary

meaning. As the specification repeatedly explains, including in the Summary of the Invention section, "hashing" is used specifically for addressing – not simply to "transform values" as Plaintiffs contend. 1:64-2:11 ("A portion of the hashed fragment is used by the home node as *an addressing index* by which the home node transmits the hashed query fragment to a node on the network."), 7:29-32 ("The home node 24 then sends a PROBE message (276) to the node 26 *whose address is indicated* by the first portion of the hashed fragment."). Throughout the specification, "hashing" is consistently described as using a mathematical function to generate a data index for purposes of addressing – not as a more general "transformation" of values into "corresponding values." 3:25-27 ("The home node 24 divides the query 60 into a number of (possibly overlapping) fragments or probes 62 which it then hashes using a predefined hashing function."), 3:36-41 ("In one embodiment, the hash value resulting from the use of the hashing function has a first portion which serves to identify the node to which the data is to be sent to be stored or to which query fragment is to be sent as a probe and a second portion which is the local index by which the data is stored at that node."), 2:25-50, 3:60-62, 7:24-29, 8:61-9:2. Plaintiffs' much broader definition of "hashing" and "hashes" ignores the content and context of these terms in the specification.

The prosecution history also shows that hashing uses a mathematical function to "compute" a hash value. To overcome a prior art rejection, Dr. Baclawski distinguished the claimed invention, in which hash values are computed, from methods in which codes are merely assigned – or even more broadly, "transformed," as Plaintiffs suggest:

> Kuechler assigns compact symbols or codes (Abstract, line 7 and column 8, lines 6-7) to ranges of attribute values. These codes are assigned unique codes. ***They are very different from hash values, which are computed, not assigned, and which are not unique.***

Ex. A (May 14, 1997 Amendment and Remarks at 4 (emphasis added)); Ex. N (Kuecler). Instead of using an index or lookup table in which relationships are pre-assigned, "hash values" are "computed" by the hash function of the invention, not simply "transformed."

D. "a first portion and a second portion" (claims 1, 8, and 13)

Google's Proposed Construction	Plaintiffs' Proposed Construction
a first part separate and distinct from a second part	The claim language has its plain and ordinary meaning; no further construction is necessary

The term "a first portion and a second portion" refers to the hashed query fragment resulting from hashing each query fragment. The parties dispute whether its plain and ordinary meaning requires two separate, distinct, parts, or also covers a single, unitary "part" Plaintiffs' infringement contentions identify the same value as both the "first portion" and the "second portion" of a hashed query fragment. Common sense dictates that this limitation requires two separate and distinct parts.

1. Google's Construction Comports with Plain Meaning and the Intrinsic Record

The plain and ordinary meaning of "a first portion ***and*** a second portion" requires that the hashed query fragment – a single value – be divided into two parts, a first part and a second part. *Engel Industries, Inc. v. Lockformer Co.*, 96 F.3d 1398, 1404-05 (Fed. Cir. 1996) (construing "return portion" and "second portion" of a duct wall to be "separate and distinct" where construing "second portion" to also include a "return portion" would contradict the plain language of the claims); *Anchor Wall Sys., Inc. v. Concrete Prods. of New London, Inc.*, 2003 WL 1589532 at *3 (D. Minn., Mar. 26, 2003) ("[t]he logical, plain meaning of 'first and second part' is that the item described must have two components: a first and a second."). The plain and

ordinary meaning of this term is "a first part separate and distinct from a second part," and must necessarily exclude a first portion that overlaps with the second portion.[12]

The intrinsic record also indicates that the first portion and second portion are two separate and distinct parts. The independent claims require "said hashed query fragment having a first portion and a second portion." If this limitation does not require a fragment with separate and distinct, non-overlapping first and second portions, then every hashed query fragment conceivably has a first portion and a second portion, even if it is only one bit long.[13] Such a construction renders the claim language "having a first portion and a second portion" meaningless and is disfavored. *Bicon, Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006). The specification shows the first portion and second portions are separate and distinct. 3:42-46 ("In one embodiment, the hashing function reduces a query fragment to a 37 bit value, in which the first 5 bits designate the node to which the data or query is sent and the low order 32 bits which provides the index into the local hash table of the node's database."); 4:64-5:2, 7:32-38. As in this example, where a 37-bit fragment is broken into a 32-bit first portion and a 5-bit second portion, the specification consistently describes the first and second portion as distinct from one another instead of overlapping. The patent easily could have described an embodiment in which the first and second portions overlap, yet it contains no such disclosure. The specification does not suggest, much less enable, a broader construction than Google proposes.

[12] Plaintiffs' cited case is inapposite and does not command a different result. *Linear Tech. Corp. v. ITC*, 566 F.3d 1049, 1055 (Fed. Cir. 2009) (construing a "second circuit" and a "third circuit" to allow circuits to overlap where both parties agreed that circuits can contain overlapping parts; the Federal Circuit had previously construed "circuit" in the parent application and acknowledged the term is generally understood to broadly include "the combination of a number of electrical devices;" and the specification disclosed an embodiment where the "second circuit" and "third circuit" shared components).

[13] Part of this dispute lies in the fundamentally different meanings the parties give the term "hashing," which Plaintiffs define vaguely to mean "transforming" in some fashion. The result of every computer process is some sort of transformation, making Plaintiffs' proposal overbroad.

E. "local hash table" (claims 1, 8, and 13)

Google's Proposed Construction	Plaintiffs' Proposed Construction
a table resident on and unique to a particular query node in which the unique location of the information in the table is determined by hashing a key value	a table that associates hash values with other data

1. Only Google's Construction Accords with the Intrinsic Evidence

The claims themselves, the specification, and the cited prior art all support Google's construction and show why Plaintiffs' is incorrect. First, the claims themselves require a local hash table to be "a table resident on and unique to a particular query node." The claims require a "*local* hash table," not just a "hash table," and this local hash table is "located on said query node." The specification does not describe any embodiment using a hash table that is not unique to a particular query node. "Local" cannot simply mean being located at a query node; otherwise the term "local" would be superfluous of "located on said query node," claim terms which immediately follow the limitations here. 10:45-47 (claim 1 reads "a local hash table located on said query node"). To give the term "local" independent meaning, "local hash table" must be a "hash table" resident on and unique to a particular query node.

Second, the specification makes clear that the hash value determines the location of data in a local hash table. 3:36-42 ("In one embodiment, the hash value resulting from the use of the hashing function has a first portion which serves to identify the node to which the data is to be sent to be stored or to which query fragment is to be sent as a probe and a second portion which is the local index by which the data is stored at that node."). The '593 Patent explains that a hash table does not require sequential scanning (a more involved process that requires examining each element of a table in order) when the hash value is known. 6:1-12. A hash table allows *direct access* to data (instead of requiring sequential scanning) only when the hash value is known, because the hash value points to the location of that data in the hash table. 3:26-42, 3:51-59.

Third, prior art cited during prosecution (also intrinsic evidence) supports Google's construction. *See V-Formation, Inc. v. Benetton Group SpA*, 401 F.3d 1307, 1311 (Fed. Cir. 2005). The cited Salton reference discloses tables in which the unique location of information is determined by hashing a key value:

- 7.7 ***Hash-Table Access*** . . .[F]aster file-access methods exist that ideally require only a single key transformation to find a stored record, or to add or delete a record. These methods are known as key-to-address transformations, or scatter storage, or hash-table accessing. . . ***To obtain file access with a hash-table system, the search key Ki is transformed into a hash-table address using a hashing or hash function h***; the table address h(Ki) stores either the record information corresponding to key Ki, or a pointer to an address in the main file where the corresponding record information is located. (Ex. I (Salton, *Automatic Text Processing*, 1988 at 192) (emphasis added)).

Contemporaneous extrinsic evidence confirms Google's construction:

- 6.4 ***Hashing***: So far we have considered search methods based on comparing the given argument K to the keys in the table, or using its digits to govern a branching process. A third possibility is to avoid all this rummaging around by doing some arithmetic calculation on K, ***computing the function f(K) which is the location of K and the associated data in the table***. (Ex. D (Knuth, The Art of Computer Programming, vol. 3. at 506) (emphasis added)).

Even Plaintiffs' own extrinsic evidence supports Google's construction and requires use of a "hash table" to access information by way of a "hash value." Ex. J (IBM Dictionary of Computing, D.I. 71-8 (George McDaniel ed., 10th ed. 1994)) at 309.

2. Plaintiffs' Overbroad Construction Conflicts with the Intrinsic Record and Basic Canons of Claim Construction

Plaintiffs improperly attempt to read the term "local" out of the phrase "local hash table," as discussed above. Plaintiffs' vague definition of "local hash table" also includes *any* data structure that "associates" data with a hash value, which they contend is simply one value "transformed" into another. Such a broad construction was expressly disclaimed during prosecution and is unsupported by the intrinsic evidence cited by Plaintiffs.

The prosecution history shows why a "local hash table" is not just *any* structure that associates data with other data that somehow has been "transformed." Dr. Baclawski distinguished prior art on the basis that it used data structures distinct from hash tables, yet Plaintiffs' proposed construction would cover these very same distinct and disclaimed structures. Ex. A (May 14, 1997 Amendment and Remarks, at 5) (distinguishing bit maps in the prior art, which associate values with other transformed values, from the local hash table of the claimed invention); Ex. N (U.S. Patent 4,811,199 to Kuechler). Plaintiffs' construction is also inconsistent with arguments about hashing made during prosecution. Ex. A (May 14, 1997 Amendment and Remarks at 4 ("…They are very different from hash values, which are computed, not assigned, and which are not unique.")), Ex. N (U.S. Patent 4,811,199 to Kuechler). Plaintiffs cannot reasonably maintain that a local hash table is any structure that transforms assignment of values when Dr. Baclawski clearly did not mean to have that understanding, as illustrated by the statements in the prosecution history and the general teachings of the prior art.

F. "transmitting, by said selected home node, each said hashed query fragment of said plurality of query fragments to a respective one of said plurality of query nodes indicated by said first portion of each said hashed query fragment" (claim 1)[14]

Google's Proposed Construction	Plaintiffs' Proposed Construction
the selected home node sends each hashed query fragment to exactly one node on the network, that node being identified by said first portion of the hashed query fragment	The claim language has its plain and ordinary meaning; no further construction is necessary

The parties disagree as to whether the "home node" for a particular query sends each hashed query fragment to nodes that are not indicated by the first portion of the hashed query

[14] Also, "transmits each said hashed query fragment to a respective one of said plurality of query nodes indicated by said first potion of said hashed query fragment" (claim 8) and "transmitting a query message containing every said hashed query fragment to a respective one of said plurality of query nodes indicated by said first portion of said hashed query fragment" (claim 13).

fragment, or only to "a respective one" node identified by the first portion of the hashed query fragment. Plaintiffs contend this term requires no construction, but apparently intend to argue the patent covers any way of distributing query fragments to query nodes – an interpretation that is counter to the claims, the specification, and the prosecution history. The grammatical structure of the claims themselves dictates that each hashed query fragment is transmitted only to the singular node ("a respective one") indicated by the first portion of the hashed query fragment.

1. The Prosecution History's Clear Disavowal of Scope Compels Google's Construction

The prosecution history clearly disclaims query processing systems in which hashed query fragments are sent to nodes other than the single "respective one" query node indicated by the first portion of the hashed query fragment. To overcome a prior art rejection, Dr. Baclawski distinguished the Kuechler reference as "broadcast[ing] the same query to every processing node," and unambiguously stated that "[i]n the present invention ***query fragments are processed only on the node for which the query fragment is relevant, query fragments are not broadcast to all the nodes,*** objects are fragmented, and the information content of an object fragment is used to determine on which node it is to be stored." Ex. A (May 14, 1997 Amendment and Remarks at 2-3 (emphasis added)); Ex. N (Kuechler). Because Dr. Baclawski unequivocally disavowed methods that send queries to multiple nodes, and restricted his claims to methods in which each query is processed only on the "respective one" query node identified by the first portion of the hashed query fragment, the claims cannot now be afforded a broader scope. *MBO*, 474 F.3d at 1330. Query fragments cannot be passed "through other nodes en route to its intended destination" as Plaintiffs suggest, because the claims expressly say they are transmitted to "a respective one" of the plurality of query nodes.

2. The Specification and Claims Support Google's Construction

The claims require sending the hashed query fragment to "**a respective one**" node – not all nodes, or multiple nodes, but rather the "one" node (referred to by the singular article "a") indicated by the first portion of the hashed query fragment. For example, Claim 1 requires "transmitting, by said selected home node, each said hashed query fragment of said plurality of query fragments ***to a respective one of said plurality of query nodes indicated by said first portion of each said hashed query fragment***." 10:38-43. (emphasis added). If Dr. Baclawski had intended to claim methods in which hashed query fragments are transmitted to multiple nodes, including nodes not indicated by the first portion of the hashed query fragment, claim 1 could have been drafted to allow transmitting a hashed query fragment to all or a subset of the plurality of query nodes. Instead, claim 1 requires something more specific.

The core invention described throughout the specification sends hashed query fragments only to the single node indicated by the first portion of the hashed query fragment. The Summary of the Invention states that "[a] portion of the hashed fragment is used by the home node as an addressing index by which the home node transmits the hashed query fragment to a node on the network." 2:8-11. The hashed fragment is transmitted to ***a*** node, not multiple nodes. The Detailed Description further describes sending the hashed query fragment to a single query node. Figs. 1-2; 2:66-3:8, 3:17-25, 3:36-50, 3:51-56, 7:50-65. There is no embodiment disclosed anywhere in the '593 Patent in which a hashed query fragment is sent to a query node other than the single query node indicated by the first portion of the hashed query fragment.

Google's proposed construction does not improperly narrow the claims to an embodiment. On the contrary, as discussed above, the entire intrinsic record indicates the limitation expressed in Google's construction is common to every embodiment. Nor does Plaintiffs' post office confusing analogy command a different result. *Id*. at 26. In that example,

the post office is always an intermediary — or a central server, which was disavowed during prosecution. In the claimed invention, by contrast, each node on the network may access data, and none of them serve exclusively as an intermediate node to pass the hashed query fragment through to another node. Finally, use of the term "comprising" in the preamble also does not eviscerate limitations in a claim. *Power Mosfet Technologies, L.L.C. v. Siemens AG*, 378 F.3d 1396, 1409 (Fed. Cir. 2004) ("'Comprising,' while permitting additional elements not required by a claim, does not remove the limitations that are present."). The inventor limited the "transmitting" step of the invention through the claim language itself, the specification's description of the core invention, and the arguments made during prosecution.

G. "using, by said query node, said second portion of said respective hashed query fragment to access data according to a local hash table located on said query node" (claim 1)[15]

Google's Proposed Construction	Plaintiffs' Proposed Construction
each query node receiving a hashed query fragment uses the second portion of the hashed query fragment as a key value to identify the address of data according to a local hash table stored on that query node	The claim language has its plain and ordinary meaning; no further construction is necessary

The parties disagree as to whether this term requires each query node receiving a hashed query fragment to use the second portion of that hashed query fragment to access data, or whether only some query nodes receiving a hashed query fragment must do so, leaving the other query nodes to pass the hashed query fragment to another node without performing any query node functions. Plaintiffs seek to ignore any plain meaning of this phrase and divorce it from the "transmitting" limitation that precedes it. This limitation requires construction because the parties disagree as to both its "plain and ordinary" meaning and its meaning in the content of the

[15] Also, "each said query node uses said second portion of said hashed query fragment to access data according to a local hash table located on said query node" (claim 8) and "said query node, upon receipt of said query message, using said second portion of said hashed query fragment to access data according to a local" (claim 13).

patent-in-suit. While lengthy, Google's proposed construction is dictated by the way in which this limitation is described in the claims and the specification.

1. The Intrinsic Evidence Supports Google's Construction

The language of the claims themselves compels Google's construction. Claim 1 requires "transmitting, by said selected home node . . . *to a respective one of said plurality of query nodes* indicated by said first portion of each said hashed query fragment; *using, by said query node*, said second portion of said respective hashed query fragment to access data according to a local hash table located on said query node." 10:38-46 (emphasis added). Put more simply, claim 1 requires that a query node that receives a hashed query fragment must access data according to a local hash table located on that query node.

The specification also supports Google's construction. The Summary of the Invention describes "the invention" as requiring that "**each** node on the network which receives a hashed query fragment" – not just some of those query nodes – "use[] the fragment of the query to perform a search on its respective database." 2:12-18 (emphasis added). This description of the invention as a whole limits the claims. *Genzyme Corp. v. Transkaryotic Therapties, Inc.*, 346 F.3d 1094, 1099 (Fed. Cir. 2003). The Abstract also requires that "[e]ach node on the network which receives a hashed query fragment uses the fragment of the query to perform a search on its respective database." The Detailed Description similarly shows, both in its text and the drawings, that each node receiving a hashed query fragment uses it to search its database. 3:37-50, Fig. 1, Fig. 2. There is no description in the '593 Patent of any embodiment in which a query node receives a hashed query fragment but does not use it to search its database.

Plaintiffs' focus on the term "key value" in Google's construction is misplaced. Plaintiffs misread Google's construction, which requires that the hashed query fragment be used as the "key value" in determining the location of data in a local hash table. There is no hashing of the

second portion of the hashed query fragment. As discussed with respect to Google's constructions of "local hash table" and "hashing," persons of ordinary skill in the art understand the term "key value" to refer to the value used to access data in a hash table.

H. "returning, by each said query node" (claim 1)[16]

Google's Proposed Construction	Plaintiffs Proposed Construction
each query node that accesses data returns an object identifier to the home node	The claim language has its plain and ordinary meaning; no further construction is necessary

The purported "plain meaning" Plaintiffs propose for this limitation reads the term "each" of the claims. The intrinsic evidence, however, shows that each query node that accesses data returns an object identifier to the home node, not just some query nodes.

1. Google's Construction Is Compelled by the Intrinsic Evidence

The specification shows that each node with matching data, not just some of those nodes, returns an object identifier to the home node. *See, e.g.,* 3:51-56 ("computer nodes 30, 32 whose probes 62 match the index terms or labels by which the data was initially stored on that node respond to the query 60 by transmitting (Step 5) the object identifiers (OIDs) 70 matching the index terms of the requested information to the home node 24"). Narrowing statements made during prosecution to overcome prior art rejections also affirm Google's construction and make clear that the invention requires each query node accessing data to return object identifier(s) to the home node. Ex. A (June 7, 1996 Amendment and Remarks at 11) ("The result of a query provided to the search engine of the present invention is a set of object identifiers (claim 1, line 17) with weights (claim 3, lines 2-3, claim 9) attached thereto."), (December 11, 1996 Amendment and Remarks at 8) ("Further, the result of a query provided to the search engine of the present invention is a set of object identifiers with weights attached thereto."); Ex. O at JAR 2800-20 (Chaturvedi); Ex. P (Neches). Plaintiffs seek to push this legal issue off to the jury, to

[16] Also, "each said query node …returns" (claim 8) and "said query node … returning" (claim 13).

divorce this step from those preceding it, and to remove it from its context in a step performed by the "respective one" of the plurality of query nodes.

I. "randomly selecting" (claim 1)

Google's Proposed Construction	Plaintiffs' Proposed Construction
selecting by chance, independently of preceding selections, where each term in the set has equal probability of being chosen	selecting without an apparent pattern

Just as they did with "hashing" and "hashes," Plaintiffs propose a deceptively succinct specific construction of "randomly selecting" that is at odds with the plain and ordinary meaning the term would have to one skilled in the art in light of the intrinsic record.

1. The Intrinsic Evidence Supports Google's Construction

The term "randomly selecting" describes how the home node is selected in claim 1. The core dispute here is whether "randomly selecting" can include non-random selection based on an algorithm that might "appear" random to some unknown observer. Had Dr. Baclawski intended to claim methods of selecting a home node that are not random but only appear to be, he could easily have written claim 1 to specify selection by a "seemingly" or "apparently" random method. Instead, claim 1 requires that the home node in fact be "randomly selected."

Google's construction accords with the sparse intrinsic evidence and is confirmed by the relevant extrinsic evidence. The "randomly selecting" limitation was added by amendment, and the term appears nowhere in the specification aside from the claims themselves. When the limitation was added, Dr. Baclawski argued that the invention's selection of a home node at random distinguished it from cited prior art. Ex. A (June 7, 1996 Amendment and Remarks at 13) ("In the present invention the home node of a query is randomly chosen, and different queries will generally have different home nodes."), *id*. at 16; Ex. O at JAR 2800 – 20 (Chaturvedi).

The extrinsic evidence shows how one of ordinary skill would understand the term:

- Random – "1. occurring or done without definite aim, reason, or pattern: random examples." "2. Statistics. of or characterizing a process of selection in which each item of a set has an equal probability of being chosen." "5. at random, without regard to rules, schedules, etc.; haphazardly." Ex. K (Random House Webster's College Dictionary, New York, NY: Random House Inc. 1991) at p. 1116.

- Random - "governed by or involving equal chances for each of the actual or hypothetical members of a population; also, produced or obtained by a random process, and therefore something completely unpredictable in detail . . . . the movement of something in successive steps … each step being governed by chance independently of preceding steps." Ex. L (Oxford English Dictionary, v. 13) at p. 168.

Both of these definitions explain that "random" means an equal probability of being chosen, a selection governed by chance, and a selection independent of preceding steps.

2. Plaintiffs' Construction of "Random" Is Contrary to Plain Meaning

Plaintiffs define "randomly selecting" to mean the exact opposite of "random." Plaintiffs admit they seek to read this limitation on systems that do not select a home node randomly (e.g., systems that use an algorithm or mathematical formula to select a home node), but that may appear to select a home node randomly from some user's perspective (what "user" and how this might be observed is not explained). Use of an algorithm to select a home node is, by definition, not random. Plaintiffs' construction is also completely subjective. What would be "apparent" from one perspective may not be "apparent" from another. There is nothing in the intrinsic record suggesting that "randomly selecting" is to be interpreted from any particular perspective, let alone from a user's perspective. With no basis for determining whose perspective is relevant, Plaintiffs' construction fails to give the public notice as to what is claimed and should be rejected. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005).

Plaintiffs rely on two logically flawed examples to argue that "randomly selecting" need not actually be random. Plaintiffs' card deck example is akin to having 52 home nodes and selecting each once and only once until all are selected – a method disclosed nowhere in the '593

Patent. The claimed method of selecting a home node is more like shuffling a deck, drawing and replacing a card, reshuffling the entire deck and then drawing another card. No matter how long the game is played, one still has the same chance of drawing an ace. Plaintiffs' "uniform" distribution argument is equally flawed. A random selection does not require uniform distribution; in fact, the opposite is true. If a coin is flipped two times, random selection does not require one heads and one tails. Instead, sometimes two heads result, sometimes two tails, and sometimes one heads and one tails. This is the very essence of truly random phenomena, the preceding flips have no impact on the outcome on the next flip.

Plaintiffs' misleading cite to the New IEEE Standard Dictionary of Electrical and Electronics Terms adds nothing to the analysis. Nowhere does that definition state that in a random simulation, the computer uses a process that only simulates chance. Ex. M (Christopher Booth, ed., The New IEEE Standard Dictionary of Electrical and Electronics Terms (5th Ed.: Inst. of Electrical & Electronics Engineers, Inc.), 1991) at p. 1064.

J. "non-relational, distributed database system" (claims 1, 8, 13)

Google's Proposed Construction	Plaintiffs' Proposed Construction
a database, stored across multiple computers on a network, wherein data objects exist independently of their attribute values, and wherein data is not extracted using relational algebra	a database not using a relational model that is distributed among a plurality of interconnected computer nodes

The parties agree that a distributed database is stored across multiple computers connected by a network. The real dispute is over what it means for a distributed database to be "non-relational."

The specification makes no reference to "non-relational databases," since the limitation was added by amendment n order to distinguish prior art. To obtain allowance, Dr. Baclawski categorically distinguished relational from non-relational databases based on two key features:

object identity and the use of relational algebra, distinctions Plaintiffs here try to ignore. Dr. Baclawski explained that in non-relational databases, "[d]ata objects exist independently of their attributes." Ex. A (June 7, 1996 Amendment and Remarks at 8) ("A *fundamental characteristic* of relational databases is that *records do not have object identity*. . . . data models other than the relational model generally assume that the basic objects do have object identity, i.e., an *object exists independently of any attribute values it might have*, and changing the attribute values will not change the object identity") (emphasis added). He further argued that in non-relational databases, "[d]ata is not extracted using relational algebra." *Id*. ("Another *fundamental characteristic* of relational databases is the use of a relational query language called the relational algebra. The relational algebra is roughly equivalent to what mathematicians call the "first order predicate calculus," and is primarily used for extracting information from a relational database system.") (emphasis added); *id*. at 10 ("*In contrast, relational database system queries are expressed in the relational algebra* ….") (emphasis added); Ex. O at JAR 2800-20 (Chaturvedi).[17] Even apart from the prosecution history, one of ordinary skill in the art would understand that a relational database is one that uses relational algebra operations. The extraction of data using relational algebra is a fundamental characteristic of all relational databases. Ex. F (Tony Gunton, *A Dictionary of Information Technology and Computer Science*, 2nd ed. Oxford, UK: NCC Blackwell Ltd. 1993) at p. 257 ("Relational database management system (RDBMS) . . . A database management system based on the relational model. This claim is often made (particularly for personal computer packages) principally on the grounds that the data is treated as a series of two-dimensional tables, known as relations. Stricter criteria would

[17] Because the prosecution history explicitly requires data objects to exist independently of their attributes in non-relational databases and to not use relational algebra, Google's construction does not improperly import limitations.

require also that algebraic operations . . . could be used to manipulate the data and to create new tables . . . .").

Plaintiffs' construction, on the other hand, does nothing to resolve the parties' dispute as to what non-relational means. Plaintiffs' construction simply rewords "non-relational . . . database" into a "database not using the relational model." It fails to define what a relational database is or what features of a relational database are distinct from a non-relational database.

K. "predetermined degree of relevance" (claims 3, 9)

Google's Proposed Construction	Plaintiffs' Proposed Construction
a predefined degree of similarity; only results meeting or exceeding a predetermined level are returned to the user after the object identifier has been returned	a degree of relevance that is determined before returning accessed data to the user

1. Google's Construction Accords with Plain Meaning and the Intrinsic Record

As Plaintiffs admit, the specification describes an embodiment where objects are returned to the user that contain a degree of similarity greater than a predetermined value. 4:2-7, Opening Brief at 19. Other claims in the '593 Patent demonstrate that "predetermined" means determined before a query is received from the user, not after the query is received and results are gathered. 12:15-16 (enqueing a predetermined task in response to said command); 12:33-36 (requesting "predetermined data" from a query node in response to a "query command" from the user). The term is presumed to have the same meaning across all claims. *Fin Control Systems Pty, Ltd. v. OAM, Inc.*, 265 F.3d 1311, 1318 (Fed. Cir. 2001).

2. Plaintiffs' Proposed Construction Does Not Make Sense

Plaintiffs confuse "predetermined degree of relevance" with "measure of relevance" and seek to read "predetermined" entirely out of the claims. Because the law presumes that different claim terms have different meanings, "measure of relevance" cannot be the same thing as

"predetermined degree of relevance." *Helmsderfer v. Bobrick Washroom Equipment, Inc.,* 527 F.3d 1379, 1382 (Fed. Cir. 2008). In the guise of preserving a preferred embodiment, Plaintiffs seek to erase the term "predetermined" out of the claims. Relevance cannot simply be determined before returning accessed data to the user; otherwise there would be no need for the word "predetermined." *Elekta Instrument S.A. v. O.U.R. Scientific Intern., Inc.*, 214 F.3d 1302, 1307 (Fed. Cir. 2000) (construing claims to avoid rendering other claim terms superfluous).

Plaintiffs argue that the claims must be construed to cover a second embodiment where objects are returned to the user based not on their degree of relevance, but on their degree of similarity relative to other objects. 4:2-7; Opening Brief at 19-20. Regarding this embodiment, the specification never describes the relative degree of similarity as "predetermined," nor could it since the relative degree of similarity of an object compared to other objects returned for a given query can only be determined after the query is received.

IV. CONCLUSION

For the foregoing reasons, Google respectfully requests that the Court adopt its proposed construction of each disputed claim term.

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Respectfully submitted,

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on December 11, 2009, a true and correct copy of the above and foregoing document was served on all counsel of record who are deemed to have consented to electronic service via the Court's CM/ECF system pursuant to Local Rule CV-5(a)(3). Any other counsel of record not deemed to have consented to electronic service were served by email and/or U.S. Mail on December 11, 2009.

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