IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

COLLARITY, INC.,	:	
Plaintiff,	:	
v.	:	C. A. No. 11-1103-MPT
GOOGLE INC.,	:	
Defendant.	:	

MEMORANDUM ORDER

I. INTRODUCTION

This is a patent case. On November 7, 2011, Collarity, Inc. ("Collarity") filed suit against Google Inc. ("Google") alleging infringement of U.S. Patent No. 7,756,855 ("the '855 patent").[1]

On February 5, 2013, the parties submitted a Joint Claim Construction Chart ("JCCC"),[2] claim construction briefing commenced March 6, 2013,[3] was completed March 20, 2013,[4] and the court conducted a *Markman* hearing April 18, 2013. This order sets forth the court's constructions of disputed claim terms discussed in briefing and at the *Markman* hearing.

II. CLAIMS-AT-ISSUE

Collarity asserts four Google products (Google Suggest, Google's Related Searches, Google+, and Google's Knowledge Graph) infringe claims 1-16 of the '855

[1] D.I. 1.
[2] D.I. 57.
[3] D.I. 65 (Collarity's Opening Claim Construction Brief); D.I. 63 (Google's Opening Claim Construction Brief).
[4] D.I. 68 (Collarity's Responsive Claim Construction Brief); D.I. 67 (Google's Answering Claim Construction Brief).

patent.[5]

Claim 1 of the '855 patent recites:

> 1. A computer-implemented method comprising:
>
> receiving, by a search system, from a user a search query comprising keywords;
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> using at least one association graph comprising keywords, identifying, by the search system, one or more suggested replacement keywords for one or more of the keywords of the search query;
>
> presenting the suggested replacement keywords to the user;
>
> responsively to a selection of one of the suggested replacement keywords by the user, substituting, by the search system, the selected suggested replacement keyword for the corresponding one of the keywords of the search query, to generate a refined search query; and
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> presenting search results to the user responsively to the refined search query,
>
> wherein identifying the one or more suggested replacement keywords comprises:
>
> > designating, by the search system, one or more of the keywords of the search query as anchor keywords, and the remaining keywords of the search query as non-anchor keywords; and
> >
> > identifying, by the search system, the one or more suggested replacement keywords for one or more of the non-anchor keywords and not for any of the anchor keywords.[6]

III. CLAIM CONSTRUCTION

Collarity does not propose constructions for any of the disputed claim terms based on its position that "[t]he claims of the '855 patent are straightforward and easily

[5] D.I. 64 (Maikish Decl.), Ex. 1 (Collarity's Fifth Supplemental Disclosure of Asserted Claims and Preliminary Infringement Contentions) at 3; D.I. 63 at 4. Claims 1 and 16 are independent claims. Claims 2-15 are dependent, or multi-dependent, from claim 1.

[6] '855 patent, claim 1.

understood as written."[7] Google disagrees, stating the "terms are technical terms that will be unfamiliar to a lay jury."[8] Google contends that although Collarity insists "the 'plain and ordinary' meaning of claim terms control the constructions[,it] refuses to state what the ordinary meanings of these claim terms are."[9]

"The words of a claim are generally given their ordinary and customary meaning as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history."[10] The Federal Circuit has stated "[t]here are only two exceptions to this general rule: 1) when a patentee sets out a definition and acts as his own lexicographer, or 2) when the patentee disavows the full scope of a claim term either in the specification or during prosecution."[11]

"To act as its own lexicographer, a patentee must 'clearly set forth a definition of the disputed claim term' other than its plain and ordinary meaning."[12] "It is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments, the patentee must 'clearly express an intent' to redefine the term."[13]

The standard for disavowal of claim scope is similarly exacting. "Where

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[7] D.I. 65 at 8.
[8] D.I. 63 at 1.
[9] D.I. 67 at 1.
[10] *Thorner v. Sony Computer Entm't Am. LLC*, 669 F.3d 1362, 1365 (Fed. Cir. 2012) (citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (*en banc*)); *see also Phillips*, 415 F.3d at 1313 ("We have made clear . . . that the ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, i.e., as of the effective filing date of the patent application." (citing *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004)).
[11] *Thorner*, 669 F.3d at 1365 (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1580 (Fed. Cir. 1996)).
[12] *Id.* (quoting *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1366 (Fed. Cir. 2002)).
[13] *Id.* (quoting *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2008)).

> the specification makes clear that the invention does not include a particular feature, that feature is deemed to be outside the reach of the claims of the patent, even though the language of the claims, read without reference to the specification, might be considered broad enough to encompass the feature in question." *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1341 (Fed. Cir. 2001). "The patentee may demonstrate intent to deviate from the ordinary and accustomed meaning of a claim term by including in the specification expressions of manifest exclusion or restriction, representing a clear disavowal of claim scope." *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002).[14]

As with its explanation of a patentee acting as its own lexicographer, the Federal Circuit stated "[i]t is likewise not enough that the only embodiments, or all of the embodiments contain a particular limitation."[15] The court concluded: "[w]e do not read limitations from the specification into claims; we do not redefine words. Only the patentee can do that. To constitute disclaimer, there must be a clear and unmistakable disclaimer."[16]

For each of the disputed terms, Collarity argues the terms do not require additional construction based on its contention the patentee neither expressed a clear intent to define the term, nor disavowed any claim scope.

1. *keyword* (claims 1-16)

Collarity's proposed construction is: "keyword."

Google's proposed construction is: "a single word in a search query."

Google contends the specification supports its construction and that, during prosecution, the applicant also limited the meaning of "keyword" to a single word.[17] Collarity argues the specification does not set forth a unique definition for keyword nor

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[14] *Id.* at 1366.
[15] *Id.*
[16] *Id.* at 1366-67.
[17] D.I. 63 at 6-7.

express an intent to alter the ordinary and accustomed meaning of that word.[18] It also maintains Google's construction violates the doctrine of claim differentiation and would render portions of the claims superfluous.[19] Finally, Collarity insists no surrender of subject matter during prosecution occurred as there was no clear and unmistakable disavowal of claim scope.[20] As a result, Collarity contends no construction of keyword is necessary and that its ordinary and customary meaning is, simply, keyword.

"The words of a claim are generally given their ordinary and customary meaning *as understood by a person of ordinary skill in the art when read in the context of the specification and prosecution history*."[21] As the Federal Circuit explained in *Phillips*, "[t]he inquiry into how a person of ordinary skill in the art understands a claim term provides an objective baseline from which to begin claim interpretation."[22] "Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification."[23] "[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.'"[24]

Collarity contends "keyword" is a well-understood term that does not require further construction.[25] Because the patentee did not set forth his own definition or

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[18] D.I. 65 at 10.
[19] *Id.* at 10-11.
[20] D.I. 68 at 5-7.
[21] *Thorner*, 669 F.3d at 1365 (emphasis added).
[22] *Phillips*, 415 F.3d at 1313 (citing *Innova*, 381 F.3d at 1116).
[23] *Id.*
[24] *Id.* at 1315 (quoting *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)).
[25] D.I. 65 at 10.

disclaim or disavow the full claim scope, Collarity maintains "keyword" should be given its plain and ordinary meaning, i.e., "keyword." Collarity does not explain, however, why a person of ordinary skill in the art, reading the term in the context of the specification and prosecution history, would conclude the proper construction of "keyword" is "keyword."

Collarity argues construing "keyword" as a "single word" violates the prohibitions of reading limitations from the specification into the claims and/or limiting the claims preferred embodiments.[26] The court disagrees and determines, when read in context of the of the claims and specification, "keyword" is a single word in a search query.

The specification states "[a] term comprises one or more keywords in a particular order"[27] and that "[t]he *search query* typically includes one or more terms that are initially organized linearly in search field 52 (*each of the terms includes one or more keywords*)."[28] Therefore, a keyword is a word in a search query. This conclusion is supported by the language of claim 1 which recites: "receiving . . . from a user *a search query comprising keywords*"; "identifying . . . one or more suggested replacement keywords for one or more of *the keywords of the search query*"; and "substituting . . . the selected suggested replacement keyword for the corresponding one of *the keywords of the search query*."[29]

Collarity argues Google's construction violates the doctrine of claim

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[26] D.I. 68 at 5.

[27] '855 patent, 18:26-27.

[28] *Id.*, 29:24-27 (emphasis added); *id.*, 18:21-23 ("*A search query comprises one or more keywords*, and, optionally, operators, such as Boolean operators and quotation marks.") (emphasis added).

[29] *Id.*, claim 1 (emphasis added).

differentiation because claim 12 uses the phrase "keyword of the search query." Under the doctrine of claim differentiation, a limitation from a dependent claim should not be read into an independent claim, especially "when the limitation in dispute is the only meaningful difference between an independent and dependent claim."[30] Collarity maintains Google's construction thus impermissibly attempts to import a limitation from claim 12 into claim 1 and would also make the words "of the search query" superfluous. The court again disagrees.

Claim 1 states the receiving a query "comprising keywords" and then refers to actions taken associated with "the keywords of the search query."[31] Therefore, claim 12 does not add "the keywords of the search query" as a new limitation. Moreover, even if it were a new limitation, "the keywords of the search query" is not the only meaningful difference between claims 1 and 12. Initially, the court notes claim 12 depends from claim 9, which itself contains the phrase "the keywords of the search query." Claim 9 depends from claim 1 and further defines the "identifying the one or more suggested replacement keywords for the one or more of the keywords of the search query" step as "identifying synonyms of the one or more of the keywords of the search query as the one or more suggested replacement keywords."[32] Claim 12 further defines the method by which synonyms are identified. Therefore, the court rejects Collarity's claim differentiation argument.

Finally, the specification makes clear that a keyword is a single word. A term is

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[30] *See SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298, 1302-03 (Fed. Cir. 2003) (citing *Ecolab, Inc. v. Paraclipse, Inc.*, 285 F.3d 1362, 1375-76 (Fed. Cir. 2002)).

[31] '855 patent, claim 1.

[32] *Id.*, claim 9.

comprised of "one or more keywords"[33] When a term includes more than one keyword, it is described as a "multi-keyword term." For instance, "[i]f the identified category term includes a *plurality of keywords (e.g., 'nobel prize')*, a new vertex is added to the [association graph] which includes the entire *multi-keyword term* as a single unit."[34] The specification thus teaches each single word in "nobel prize" is a keyword and, therefore, a keyword is a single word.

Consequently, the court adopts Google's proposed construction and defines "keyword" as "a single word in a search query."[35]

2. *association graph* (claims 1-16)

Collarity's proposed construction is: "association graph."

Google's proposed construction is: "a graph or matrix that associates a first keyword to one or more keywords."

Google contends this term must be construed because the word "graph," as the word is commonly-understood (for instance X-Y plots, bar graphs, pie graphs, or line graphs), will lead the jury in the wrong direction.[36] Google argues those graphs are completely different from the claimed association graph.[37] Citing a dictionary of mathematics, Google states "graph," as used in the '855 patent, is a term of art in the field of mathematics and an "association graph" is a specific type of mathematical graph

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[33] *Id.*, 18:26-27.

[34] *Id.*, 24:34-37 (emphasis added); *compare* '855 patent, 15:33-36 ("In exemplary association graph 100 shown in FIG. 3, a first vertex 110 includes the *single-keyword term* 'physics,' while a second vertex 112 includes the *single-keyword term* 'angular.'") (emphasis added).

[35] In light of the court's conclusion that the claims and specification support Google's proposed construction, it is unnecessary to discuss Google's argument that Collarity surrendered subject matter during prosecution.

[36] D.I. 63 at 8.

[37] *Id.*

defined in the patent.[38] To support its proposed construction, Google cites the specification's statement that "[a]n association graph can be represented visually as a plurality of vertices linked (i.e., connected) by lines representing edges, as shown in FIG. 3, or as an adjacency matrix, as described hereinbelow with reference to FIG. 4."[39] The specification states Figure 4, which shows a matrix, "represents the same association information represented by association graph 100 of FIG. 3 . . . ."[40]

The court notes the citations Google references are descriptions of particular embodiments.[41] "[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments."[42] Google, however, maintains the patentee disavowed claim scope by the specification's statement that "[i]n some embodiments of the present invention, the system uses profiles that *do not comprise association graphs*, such as lists (e.g., ranked lists), vectors, sets of sets, and a non-associative multi-dimensional matrix (e.g., three or more dimensions)."[43] It contends those data structures are not association graphs because they do not associate vertices to one or more vertices.[44] Consequently, Google argues the proper construction of "association graph" is a data structure that

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[38] *Id.*

[39] '855 patent, 15:9-12.

[40] *Id.*, 15:43-45.

[41] *Id.*, 14:17-20 ("Reference is made to FIG. 3 which shows *an exemplary association graph 100*, in accordance with *an embodiment* of the present invention.") (emphasis added); *id.*, 15:43-46 ("FIG. 4 shows *an exemplary association adjacency matrix 150* that represents the same association information represented by association graph 100 of FIG. 3, in accordance with *an embodiment of the present invention*.") (emphasis added); *see also id.*, 26:20-26 ("Reference is made to FIG. 11, which is *an exemplary* hotspot 520 . . . . [E]ach hotspot is an association graph, which can be represented, *for example, as a graph or adjacency matrix*, and can be stored in an appropriate data structure.").

[42] *Phillips*, 415 F.3d at 1323.

[43] '855 patent, 7:42-46 (emphasis added).

[44] D.I. 67 at 6.

encompasses the graphs depicted in Figures 3 and 4, but does not encompass data structures identified as not comprising association graphs.[45]

The court determine's Google's construction improperly narrows the claims. The specification broadly describes an "association graph": "[t]he phrase 'association graph,' *as used herein, including the claims, includes any data structure that conceptually includes vertices linked by edges*, regardless of the nomenclature used to describe the data structure, or how it may be represented, stored, structured, and/or manipulated in memory and/or another storage medium."[46] That description encompasses Figures 3 and 4, as well as additional data structures. It also excludes data structures identified as not comprising association graphs, which Google states are not association graphs because they do not associate vertices with one or more vertices, through its description of an association graph as "any data structure that conceptually includes *vertices linked by edges*."[47] Consequently, the court construes "association graph" to mean "any data structure that conceptually includes vertices linked by edges, regardless of the nomenclature used to describe the data structure, or how it may be represented, stored, structured, and/or manipulated in memory and/or another storage medium."

3. *anchor keyword* / *non-anchor keyword* (claims 1-15)

Collarity's proposed construction for anchor keyword is: "anchor keyword." Its proposed construction for non-anchor keyword is: "non-anchor keyword."

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[45] *Id.*

[46] '855 patent, 15:15-20 (emphasis added).

[47] *Id.*, 15:15-20 (emphasis added); *see also id.* 15:1-3 ("Each association graph comprises one or more vertices, each of which is linked to one or more other vertices by respective edges.").

Google's proposed construction anchor keyword is: "a keyword that the search system will not attempt to replace." Its proposed construction for non-anchor keyword is: "a keyword that the search engine will attempt to replace."

The language of claim 1 is instructive in construing these terms. The claim recites:

> using at least one association graph comprising keywords, identifying, by the search system, one or more suggested replacement keywords for one or more of the keywords of the search query;
>
> * * * * *
>
> wherein identifying the one or more suggested replacement keywords comprises:
>
> > designating, by the search system, one or more of the keywords of the search query as anchor keywords, and the remaining keywords of the search query as non-anchor keywords; and
> >
> > identifying, by the search system, the one or more suggested replacement keywords for one or more of the non-anchor keywords and not for any of the anchor keywords.[48]

As discussed below, the court determines the "designating" step must occur before the "identifying" step. Therefore, the claim requires "one or more of the keywords of the search query" be "designated . . . as anchor keywords, and the remaining keywords of the search query as non-anchor keywords." Once that designation has occurred, the search system identifies "the one or more suggested replacement keywords for one or more of the non-anchor keywords and not for any of the anchor keywords."

Thus, after the designation of anchor and non-anchor keywords is made, the

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[48] *Id.*, claim 1.

search system does *not* identify "one or more suggested replacement keywords . . . for any of the anchor keywords." This language supports Google's proposed construction and is consistent with the specification's statement: "[a]t an anchor term designation step 1012, refinement processor 64 designates one or more of the terms of the query as anchors. The anchors are generally particularly meaningful terms in the query, for which the refinement processor *does not offer replacement options*."[49]

Also after the designation of anchor and non-anchor keywords is made, the search system identifies "the one or more suggested replacement keywords for *one or more* of the non-anchor keywords." This language does not support Google's proposed construction, that a non-anchor keyword is "a keyword that the system *will* attempt to replace." The claim language requiring identification of suggested replacement keywords for "*one or more* of the non-anchor keywords" does not require that the search system *will* attempt to replace each non-anchor keyword. Rather, in contrast to anchor keywords the search system will *not* attempt to replace, the search system *may*, or may not, attempt to replace each non-anchor keyword, so long as suggested replacement keywords for one or more of the non-anchor keywords is identified.

Consequently, the court construes "anchor keyword" to mean "a keyword that the search system will not attempt to replace" and "non-anchor keyword" to mean "a keyword that the system may attempt to replace."

4. *designating, by the search system, one or more keywords as anchor keywords and the remaining keywords as non-anchor keywords* (claims 1-15)

Collarity's proposed construction is: "designating, by the search system, one or

[49] *Id.*, 40:24-28 (emphasis added).

more keywords as anchor keywords and the remaining keywords as non-anchor keywords."

Google's proposed construction is: "designating or identifying at least one keyword as an anchor keyword that the search engine will not attempt to replace, and designating or identifying at least one keyword as a non-anchor keyword that the search engine will attempt to replace."

Google's proposed construction essentially inserts its proposed construction for anchor keyword and non-anchor keyword into this phrase. As the court has construed those terms, above, it is not necessary to repeat those constructions in this phrase. That redundancy would more likely confuse, rather than aid, the jury's understanding of the claim language.

Google's only other substantive addition to the phrase is adding "or identifying" after "designating." Google contends the specification supports the inclusion of "identifying" through its interchangeable use of "identifying" and "designating" in reference to anchor and non-anchor keywords.[50]

The court does not view the addition of "or identifying" as aiding the jury's understanding of the claim language. Although Google asserts this phrase "contains such terse language that might be confusing to a jury,"[51] the court determines the word

[50] D.I. 63 at 14 (citing '855 patent, 40:40-41("[T]he refinement processor *identifies* a first anchor, and decides whether to *designate* a second anchor based on [certain criteria]."); '855 patent, 41:20-22 ("Sometimes the refinement processor does not *identify* any anchors for a query. For example, the refinement processor may not *designate* any anchors for a query if [certain conditions are met]." (emphasis added))).

[51] *Id.* at 15.

"designating" is neither terse nor would it be confusing to the jury.[52] Consequently, the court construes this phrase as written: "designating, by the search system, one or more keywords as anchor keywords and the remaining keywords as non-anchor keywords."[53]

5. order of steps (claims 1-16)

Collarity contends the asserted claims do not require the steps therein to be performed in a particular order.

Google contends the claimed steps must be performed in the following order:

> 1. The designating step must be performed before the identifying step. (i.e., designating, by the search system, one or more of the keywords of the search query as anchor keywords, and the remaining keywords of the search query as non-anchor keywords) must be performed before the identifying step (i.e., identifying, by the search system, the one or more suggested replacement keywords for one or more of the non-anchor keywords and not for any of the anchor keywords).
>
> 2. The identifying step must be performed before the presenting the suggested replacement keywords step (i.e., presenting the suggested replacement keywords to the user).
>
> 3. The presenting the suggested replacement keywords step must be performed before the substituting step (i.e., responsively to a selection of

[52] *See Funai Elec. Co., Ltd. v. Daewoo Elecs. Corp.*, 616 F.3d 1357, 1366 (Fed. Cir. 2010) ("The criterion is whether the explanation aids the court and the jury in understanding the term as it is used in the claimed invention.").

[53] Google also suggests changing "*one or more* keywords as an anchor keyword and *the remaining* keywords as non-anchor keywords" to "*at least one* keyword as an anchor keyword . . . and . . . *at least one* keyword as a non-anchor keyword." That suggestion appears to be little more than changing the claim language for the sake of making a change and is also rejected.

one of the suggested replacement keywords by the user, substituting, by the search system, the selected suggested replacement keyword for the corresponding one of the keywords of the search query, to generate a refined search query).

"Unless the steps of a method actually recite an order, the steps are not ordinarily construed to require one."[54] To determine "if the steps of a method claim that do not recite an order, must nonetheless be performed in the order in which they are written" the court first looks "to the claim language to determine if, as a matter of logic or grammar, they must be performed in the order written" and, if not, it looks "to the rest of the specification to determine whether *it* 'directly or implicitly requires such a narrow construction.'"[55] Examples of when, as a matter of logic or grammar, the claims must be performed in the order written are where something referenced in a step does not exist until a pervious step has been completed.[56]

Google contends step order is required because both as a matter of logic or grammar the claims require that order and because the specification directly or implicitly requires performing the claimed steps in the order written.[57] Collarity argues the claim language does not recite a step order, the steps do not refer to each other, and no step references anything that is not in existence or is otherwise unavailable until a previous

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[54] *Interactive Gift Express, Inc. v. Compuserve Inc.*, 256 F.3d 1323, 1342 (Fed. Cir. 2001) (citing *Loral Fairchild Corp. v. Sony Corp.*, 181 F.3d 1313, 1322 (Fed. Cir. 1999) (stating that "not every process claim is limited to the performance of its steps in the order written")).

[55] *Altiris, Inc. v. Symantec Corp.*, 318 F.3d 1363, 1369-70 (Fed. Cir. 2003) (emphasis in original) (quoting *Interactive Gift*, 256 F.3d at 1343).

[56] *See, e.g., Loral Fairchild*, 181 F.3d at 1321 (finding a step order where the second step involved the alignment of a structure created in the first step); *Mantech Evntl. Corp. v. Hudson Envtl. Servs., Inc.*, 152 F.3d 1368, 1375-76 (Fed. Cir. 1998) (holding the claim must be performed in the order written where subsequent steps utilized the result of prior steps).

[57] D.I. 63 at 15.

step is completed.[58] It states Google's specification-based argument improperly relies on the description of a preferred embodiment and that "'[n]owhere . . . is there any statement that this order is important, any disclaimer of any other order of steps, or any prosecution history indicating a surrender of any other order of steps.'"[59] Collarity also notes that, even where claim language requires steps to be performed in a certain order, the prerequisite step may not have to be fully complete before the subsequent step can begin.[60]

Google annotates claim 1 as follows:

> 1. A computer-implemented method comprising:
> [a] receiving, by a search system, from a user a search query comprising keywords;
>
> [b] using at least one association graph comprising keywords, identifying, by the search system, one or more suggested replacement keywords for one or more of the keywords of the search query;
>
> [c] [("the presenting step")] presenting the suggested replacement keywords to the user;
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> [d] [("the substituting step")]
>
> > [d(1)] responsively to a selection of one of the suggested replacement keywords by the user,

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[58] D.I. 65 at 16.

[59] *Id.* at 17-18 (quoting *Altiris*, 318 F.3d at 1371).

[60] *Id.* at 16 (citing *Cybersettle, Inc. v. Nat'l Arbitration Forum, Inc.*, 243 Fed. Appx. 603, 609 (Fed. Cir. 2007) (Holding the step of comparing an offer and a demand cannot occur until the step of receiving the offer and demand but rejecting the argument that the step of comparing offers and demands cannot begin until all offers and demands have been received. The court stated "the comparison and testing steps logically cannot begin until an offer and a demand are received. But that does not mean that the 'receiving' steps must be completed before the comparison and testing steps begin. To the contrary, the step of calculating the differences between demands and offers can occur concurrently with the receipt of multiple demands and offers. As each new pair of bids is received, the bids are compared."); *Xerox Corp. v. Google Inc.*, 801 F. Supp. 2d 293, 302 (D. Del. 2011) (Where the claimed method involved formulating a search query based on the categorization of content, the court determined that "[t]he claims contain no basis to require that the 'formulating the query' step begin only after the 'identifying' and 'categorizing' steps are completed.")).

[d(2)] substituting, by the search system, the selected suggested replacement keyword for the corresponding one of the keywords of the search query, to generate a refined search query; and

[e] presenting search results to the user responsively to the refined search query

[b (continued)] wherein identifying the one or more suggested replacement keywords
comprises:

[step b(1)] [("the designating step")] designating, by the search system, one or more of the keywords of the search query as anchor keywords, and the remaining keywords of the search query as non-anchor keywords; and

[step b(2)] [("the identifying step")] identifying, by the search system, the one or more suggested replacement keywords for one or more of the non-anchor keywords and not for any of the anchor keywords.

According to Google, the steps of claim 1 naturally follow the sequence in which the steps are written:

Step a: The system retrieves a query from the user.

Steps b and b(1): The system designates the anchor and non-anchor keywords in the user-submitted query.

Steps b and b(2): The system identifies potential replacement keywords for the non-anchor keywords only.

Step c: The system presents the potential replacement keywords to the user.

Step d(1): The user selects one replacement keyword, and, in response the system performs step d(2).

Step d(2): The system substitutes the selected keyword for the corresponding non-anchor keyword in the user-submitted query to generate a new, refined, query.

Step e: The refined query is executed and search results are presented.[61] Google maintains each step relies on the one that precedes it so the sequential nature of the steps is apparent from the plain meaning of the claim language. Google states the specification's description of these steps confirms this order of steps.[62] The court agrees with Google that a logical reading of claim 1 requires the steps be performed in the order it suggests.

Claim 1 requires "*designating*, by the search system, *one or more of the keywords of the search query as anchor keywords, and the remaining keywords of the search query as non-anchor keywords*" and "*identifying*, by the search system, *the one or more suggested replacement keywords for one or more of the non-anchor keywords and not for any of the anchor keywords*." The identifying step refers to the non-anchor keywords and anchor keywords previously designated. Thus, that designation must be made before suggested replacement keywords for one or more of the non-anchor keywords, but not for any of the anchor keywords, can be identified.

The claim also requires "*presenting the suggested replacement keywords* to the user." Logically, the suggested replacement keywords must be identified before they can be presented to the user. Next, the claim recites "responsively to a selection of one of the suggested replacement keywords by the user, *substituting*, by the search system, *the selected replacement keyword* for the corresponding one of the keywords of the search query, to generate a refined search query." A user cannot select a suggested replacement keyword for substitution until a suggested replacement keyword is

[61] D.I. 63 at 16.
[62] *Id.* at 17 (citing '855 patent, 39:64-42:65).

presented to the user.

Because, "the sequential nature of the claim steps is apparent from the plain meaning of the claim language and nothing in the written description suggests otherwise,"[63] the court adopts Google's proposed step order requirement.

IV. CONCLUSION

IT IS ORDERED, ADJUDGED, and DECREED that the disputed claim language is construed as follows:

Claim Term	Court's Construction
keyword (claims 1-16)	a single word in a search query
association graph (claims 1-16)	any data structure that conceptually includes vertices linked by edges, regardless of the nomenclature used to describe the data structure, or how it may be represented, stored, structured, and/or manipulated in memory and/or another storage medium
anchor keyword (claims 1-15)	a keyword that the search system will not attempt to replace
non-anchor keyword (claims 1-15)	a keyword that the system may attempt to replace
designating, by the search system, one or more keywords as anchor keywords and the remaining keywords as non-anchor keywords (claims 1-15)	designating, by the search system, one or more keywords as anchor keywords and the remaining keywords as non-anchor keywords

[63] *Mantech*, 152 F.3d at 1376; *cf. Xerox Corp. v. Google Inc.*, 801 F. Supp. 2d 293, 303 (D. Del. 2011) ("[T]he specification discusses and contemplates concurrent performance of steps."). Here, Collarity has not pointed to the specification discussing or contemplating concurrent performance of steps.

Claim Term	Court's Construction
order of steps (claims 1-16)	1. The designating step must be performed before the identifying step. (i.e., designating, by the search system, one or more of the keywords of the search query as anchor keywords, and the remaining keywords of the search query as non-anchor keywords) must be performed before the identifying step (i.e., identifying, by the search system, the one or more suggested replacement keywords for one or more of the non-anchor keywords and not for any of the anchor keywords). 2. The identifying step must be performed before the presenting the suggested replacement keywords step (i.e., presenting the suggested replacement keywords to the user). 3. The presenting the suggested replacement keywords step must be performed before the substituting step (i.e., responsively to a selection of one of the suggested replacement keywords by the user, substituting, by the search system, the selected suggested replacement keyword for the corresponding one of the keywords of the search query, to generate a refined search query).

Wilmington, Delaware
May 6, 2013

/s/ Mary Pat Thynge
UNITED STATES MAGISTRATE JUDGE