IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

IMPROVED SEARCH LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civil Action No. 16-650-JFB-SRF
	)	
MICROSOFT CORPORATION,	)	
	)	
Defendant.	)	

REPORT AND RECOMMENDATION

I. INTRODUCTION

In this patent infringement action filed by plaintiff Improved Search LLC ("Improved Search") against defendant Microsoft Corporation ("Microsoft"), Improved Search alleges infringement of United States Patent Nos. 6,604,101 ("the '101 patent") and 7,516,154 ("the '154 patent") (collectively, the "Asserted Patents"), which are directed to cross-language translation of query and search information as well as retrieval of multilingual information over a computer network. Presently before the court is the matter of claim construction. This decision sets forth the court's recommendations of constructions for the disputed claim terms discussed in the briefing and at the *Markman* hearing held on February 13, 2018.

II. BACKGROUND

A. Parties

Improved Search is a Florida limited liability company with its headquarters in Fort Lauderdale, Florida. (D.I. 1 at ¶ 3) Improved Search is the assignee of all substantial rights, title, and interest in and to the Asserted Patents. (*Id.* at ¶ 4)

Microsoft is a Washington state corporation with its principal place of business in Redmond, Washington. (*Id.* at ¶ 5) Microsoft manufactures and sells products and services including Bing or Bing Search, an internet search platform through which customers may enter queries with which to search a set of multilingual websites. (*Id.* at ¶ 6)

B. The Asserted Patents

1. The '101 Patent

The '101 patent, entitled "Method and system for translingual translation of query and search and retrieval of multilingual information on a computer network," relates to methods of and systems for translating queries from a source language to a target language, and searching and retrieving Web documents in the target language. (D.I. 1 at ¶ 12; '101 patent, Abstract) The '101 patent is directed to solving the problem that most internet search engines "cater to the needs of the English speaking community alone and help in the search and retrieval of monolingual documents only," rendering the search tools "almost useless to the non-English speaking Internet users who constitute as much as 75% of the Internet user population." ('101 patent, col. 2:10-18)

2. The '154 Patent

The '154 patent, entitled "Cross language advertising," is a continuation-in-part of a divisional of the '101 patent, and shares the specification of the '101 patent with some minor additions. The '154 patent discloses a method and system to send a user one or more advertisements in a source language, over the Internet, while the user is performing a cross language search. ('154 patent, Abstract) The server conducts a search in a database of advertisements and returns one or more advertisements relevant to the content word in either the source language or the target language. (*Id.*, col. 4:35-49)

C. Procedural Posture

Improved Search filed suit against Microsoft on July 29, 2016, alleging that Microsoft infringes the '101 and '154 patents. (D.I. 1) On December 7, 2016, this action was referred by Judge Robinson for discovery and all motions to dismiss, amend, transfer, and any discovery motions permitted. (D.I. 14) The case was subsequently reassigned to Judge Bataillon on August 1, 2017. Judge Bataillon referred this action to the undersigned magistrate judge for all dispositive and nondispositive matters on all issues, including claim construction, except for summary judgment motions, *Daubert* motions, and pretrial motions *in limine*. (D.I. 30) The parties completed briefing on claim construction of the '101 and '154 patents on February 5, 2018. (D.I. 42; D.I. 51; D.I. 57; D.I. 60) A *Markman* hearing was held on February 13, 2018. (D.I. 56; 2/13/18 Tr.)

III. LEGAL STANDARD

Construing the claims of a patent presents a question of law, although subsidiary fact finding is sometimes necessary. *Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 135 S. Ct. 831, 837-38 (2015) (citing *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 977-78 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370, 388-90 (1996)). "It is a bedrock principle of patent law that the claims of a patent define the invention to which the patentee is entitled the right to exclude." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (internal quotation marks omitted). "[T]here is no magic formula or catechism for conducting claim construction." *Id.* at 1324. Instead, the court may attach the appropriate weight to appropriate sources "in light of the statutes and policies that inform patent law." *Id.*

The words of the claims "are generally given their ordinary and customary meaning," which is "the meaning that the term would have to a person of ordinary skill in the art in question

at the time of the invention, i.e., as of the effective filing date of the patent application." *Phillips*, 415 F.3d at 1312-13 (internal citations and quotation marks omitted). "[T]he ordinary meaning of a claim term is its meaning to the ordinary artisan after reading the entire patent." *Id.* at 1321 (internal quotation marks omitted); *see also Eon Corp. IP Holdings v. Silver Spring Networks, Inc.*, 815 F.3d 1314, 1320 (Fed. Cir. 2016). Claim terms are typically used consistently throughout the patent, and "usage of a term in one claim can often illuminate the meaning of the same term in other claims." *Phillips*, 415 F.3d at 1314 (observing that "[o]ther claims of the patent in question, both asserted and unasserted, can also be valuable sources of enlightenment . . . [b]ecause claim terms are normally used consistently throughout the patent . . . .").

It is likewise true that "[d]ifferences among claims can also be a useful guide . . . . For example, the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Id.* at 1314-15 (internal citation omitted). This "presumption is especially strong when the limitation in dispute is the only meaningful difference between an independent and dependent claim, and one party is urging that the limitation in the dependent claim should be read into the independent claim." *SunRace Roots Enter. Co., Ltd. v. SRAM Corp.*, 336 F.3d 1298, 1303 (Fed. Cir. 2003) (citing *Ecolab Inc. v. Paraclipse, Inc.*, 285 F.3d 1362, 1375 (Fed. Cir. 2002).

Other intrinsic evidence, including the patent 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." *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). "[T]he specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess. In such cases, the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316 (citing *CCS Fitness, Inc. v. Brunswick Corp.*,

288 F.3d 1359, 1366 (Fed. Cir. 2002)). It bears emphasis that "[e]ven when the specification describes only a single embodiment, the claims of the patent will not be read restrictively unless the patentee has demonstrated a clear intention to limit the claim scope using words or expressions of manifest exclusion or restriction." *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 906 (Fed. Cir. 2004) (internal quotation marks omitted), *aff'd*, 481 F.3d 1371 (Fed. Cir. 2007). The specification "is not a substitute for, nor can it be used to rewrite, the chosen claim language." *SuperGuide Corp. v. DirecTV Enters., Inc.*, 358 F.3d 870, 875 (Fed. Cir. 2004).

In addition to the specification, a court "should also consider the patent's prosecution history, if it is in evidence." *Markman*, 52 F.3d at 980. The prosecution history, which is also "intrinsic evidence," "consists of the complete record of the proceedings before the PTO [Patent and Trademark Office] and includes the prior art cited during the examination of the patent." *Phillips*, 415 F.3d at 1317. "[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be." *Id.*

A court also may rely on "extrinsic evidence," which "consists of all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises." *Markman*, 52 F.3d at 980. For instance, technical dictionaries can assist the court in determining the meaning of a term to those of skill in the relevant art because such dictionaries "endeavor to collect the accepted meanings of terms used in various fields of science and technology." *Phillips*, 415 F.3d at 1318. In addition, expert testimony can be useful "to ensure that the court's understanding of the technical aspects of the patent is consistent with that

of a person of skill in the art, or to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field." *Id.* Nonetheless, courts must not lose sight of the fact that "expert reports and testimony [are] generated at the time of and for the purpose of litigation and thus can suffer from bias that is not present in intrinsic evidence." *Id.* ("[C]onclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court."). Overall, while extrinsic evidence may be useful to the court, it is less reliable than intrinsic evidence, and its consideration "is unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence." *Id.* at 1318-19.

Finally, "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction." *Renishaw PLC v. Marposs Societa' Per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998). It follows that "a claim interpretation that would exclude the inventor's device is rarely the correct interpretation." *Osram GmbH v. Int'l Trade Comm'n*, 505 F.3d 1351, 1358 (Fed. Cir. 2007).

IV. CONSTRUCTION OF DISPUTED TERMS[1]

A. "dialectal standardization / dialectally standardized / dialectally standardizing / dialectal standardization of the at least one content word extracted from the query / dialectal standardization of the content word extracted from the query / dialectally standardizing a content word extracted from the query / dialectally standardized content word" ('101 patent, claims 1, 12, 22, and 23; '154 patent, claims 1, 7)

Improved Search	Microsoft	Court
replacing the at least one content word in the first language with a commonly known word in the first language so that the second-language search engine will recognize it	Replacing the at least one extracted content word in the first language with a more commonly-known word in a different dialect of the first language so that the second-language search engine will recognize it.	Replacing the at least one extracted content word in the first language with a more commonly-known word in a different dialect of the first language so that the second-language search engine will recognize it.
replacing the content word in the first language with a commonly-known word in the first language so that the second-language search engine will recognize it	Replacing the extracted content word in the first language with a more commonly-known word in a different dialect of the first language so that the second-language search engine will recognize it.	Replacing the extracted content word in the first language with a more commonly-known word in a different dialect of the first language so that the second-language search engine will recognize it.
the commonly-known word in the first language selected so that the second-language search engine will recognize it	A more commonly-known word in a different dialect of the first language selected so that the second-language search engine will recognize it. These phrases should also be construed to exclude standardization based on synonyms or lemmatization.	A more commonly-known word in a different dialect of the first language selected so that the second-language search engine will recognize it. These phrases should also be construed to exclude standardization based on synonyms or lemmatization.

[1] The parties have reduced the number of terms in dispute to seven. (D.I. 42 at 4 n.1) Improved Search agrees with Microsoft's proposed constructions for the terms "search in the second language / searching in the second language" and "cross language advertising." (*Id.*)

I recommend that the court adopt Microsoft's proposed construction of the disputed terms, which finds support in the intrinsic record. Claim 1 of the '101 patent modifies the requisite standardization with the word "dialectal," and requires the translation of "at least one dialectally standardized content word into a second language through a translator." ('101 patent, col. 8:5-8) In a preferred embodiment, the specification identifies the purpose of dialectally standardizing a commonly known word or term "to bring about a consistency in the meaning of a word notwithstanding dialectal variations." ('101 patent, col. 5:33-35; D.I. 51, Ex. G at 76:24-77:5) Moreover, the examples of dialectal variations cited in the specification uniformly support Microsoft's argument that the claimed dialectal standardization is intended to achieve consistency in the meaning of words across dialects. ('101 patent, col. 5:36-43) (specifically identifying "centre vs. center, lorry vs. truck, queue vs. line and petrol vs. gasoline etc.") Thus, the intrinsic record repeatedly indicates that the standardization occurs to bring consistency to the translation across dialects.

The specification includes an embodiment regarding different variations of the word "auto" from within the American English dialect, including "automobile" and "transportation vehicle":

> In a preferred embodiment of the present invention, if the dialectal controller fails to recognize the word and thus is unable to perform dialectal standardization, the query prompter unit may prompt the user for more input or request the user to choose from a set of expressions to assist, to clarify and to sharpen his/her query. In that case the user may submit another query to the query input device. Such a query may either be a standard term or a non-standard term. For instance, different variations of the word "auto" including automobile and transportation vehicle are permitted to be input by the user as part of the dialectal standardization process.

('101 patent, col. 5:56-67; *see also* '154 patent, col. 5:16-25) According to Improved Search, this embodiment establishes that the claim term should not be read so narrowly to include only

variations of a word from different dialects. However, the embodiment describes the process of a user manually adding terms to a query after the dialectal standardization process fails, and does not refer to the process of dialectal standardization itself. The variations of "auto" identify words that can be input by the user, as opposed to the query results following completion of the dialectal standardization process. ('101 patent, col. 5:56-67; 2/13/18 Tr. at 21:8-23)

Improved Search's proposed construction does not give effect to the claim language "dialectal." "A claim construction that gives meaning to all the terms of the claim is preferred over one that does not do so." *Merck & Co., Inc. v. Teva Pharms. USA, Inc.*, 395 F.3d 1364, 1372 (Fed. Cir. 2005). Improved Search stresses that "dialectal" and "standardization" must be construed together, but fails to identify how its proposed construction would differ from a construction of "standardization" in isolation. (2/13/18 Tr. at 6:13-19) According to Improved Search, the claim language contains no requirement that the standardization occur across dialects, and instead requires standardization of a query or word "to a commonly known word." ('101 patent, col. 5:48-49; 2/13/18 Tr. at 6:21-7:16, 9:6-12) Improved Search overlooks the claim language's express requirement that the standardization required by the claims is "dialectal."

In support of its proposed construction, Improved Search relies on Judge Robinson's construction of the term "dialectal standardization" in *Improved Search LLC v. AOL, Inc.*, C.A. No. 15-262-SLR, D.I. 92 at ¶ 4 (D. Del. Mar. 30, 2017). In construing the same patents and claim terms presently before the court, Judge Robinson considered and rejected the argument that Improved Search's proposed construction would read out "dialectal" from the term "dialectal standardization." (D.I. 43, Ex. 3 at ¶ 4) However, Judge Robinson's prior ruling is not binding on this court. *See St. Clair Intellectual Prop. Consultants, Inc. v. Matsushita Elec.*

Indus. Co., C.A. No. 04-1436-JJF-LPS, 2009 WL 3834541, at *5 (D. Del. Nov. 13, 2009). For the reasons set forth above, I recommend that the court adopt Microsoft's proposed construction.

The court's recommendation extends to Microsoft's argument that Improved Search disclaimed lemmatization and synonyms in an *inter partes* review ("IPR") proceeding. (D.I. 51, Ex. D at 33-34) Improved Search expressly distinguished the disclosure of lemmatization in the *Fluhr '97* prior art reference from the invention disclosed in the '101 patent: "Importantly, [lemmatization] is different from finding standardized words corresponding to those possibly in the dialect of the query or standard words that are less ambiguous." (*Id.* at 33) Likewise, Improved Search claimed that normalization of synonyms does not involve the same process as dialectal standardization. (*Id.* at 33 n.3; Ex. G at 22:17-23:3; 2/13/18 Tr. at 27:23-28:19) Consequently, the court recommends a construction of the disputed terms that excludes standardization based on synonyms or lemmatization.

B. Means-Plus-Function Claim Elements

Means-plus-function limitations permit a patentee to claim an element of the invention in terms of the element's function without reciting the corresponding structure in the claim itself:

> An element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112, ¶ 6; *see Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, 711 F.3d 1348, 1363-64 (Fed. Cir. 2013). If a claim term does not use the word "means," there is a presumption that means-plus-function claiming does not apply. *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349 (Fed. Cir. 2015); *CCS Fitness, Inc. v. Brunswick Corp.*, 288 F.3d 1359, 1369 (Fed. Cir. 2002). The presumption may be overcome if the claim term recites a function without reciting sufficiently definite structure for performing that function. *See*

Williamson, 792 F.3d at 1349. Courts may consider both intrinsic and extrinsic evidence to determine whether a claim limitation is "so devoid of structure that the drafter constructively engaged in means-plus-function claiming." *Inventio AG v. ThyssenKrupp Elevator Americas Corp.*, 649 F.3d 1350, 1357 (Fed. Cir. 2011), *rev'd on other grounds*, *Williamson*, 792 F.3d at 1349.

To construe a means-plus-function claim term, the court must first determine the claimed function. The second step is to "identify the corresponding structure in the written description of the patent that performs that function." *Applied Med. Res. Corp. v. U.S. Surgical Corp.*, 448 F.3d 1324, 1332 (Fed. Cir. 2006) (internal citation omitted). Means-plus-function claims are statutorily limited to the structure disclosed in the patent specification that corresponds to the claimed function. *See Med. Instrumentation & Diagnostics Corp. v. Elekta AB*, 344 F.3d 1205, 1219 (Fed. Cir. 2003). The identified structure is required to "permit one of ordinary skill in the art to 'know and understand what structure corresponds to the means limitation.'" *Finisar Corp. v. DirecTV Grp., Inc.*, 523 F.3d 1323, 1340 (Fed. Cir. 2008) (quoting *Biomedino, LLC v. Waters Techs. Corp.*, 490 F.3d 946, 950 (Fed. Cir. 2007)). Otherwise, the term is invalid. *Id.*

In cases where the claimed invention is computer-implemented, the structure identified in the specification must be more than a general purpose computer or microprocessor, which "can be programmed to perform very different tasks in very different ways." *Aristocrat Techs. Austl. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008). Instead, a computer-implemented means-plus-function term must generally disclose a computer programmed to carry out an algorithm, in which case "the disclosed structure is not the general purpose computer, but rather the special purpose computer programmed to perform the disclosed algorithm." *Id.* (quoting *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1349 (Fed. Cir. 1999)); *see also*

Harris Corp. v. Ericsson Inc., 417 F.3d 1241, 1253 (Fed. Cir. 2005). An exception to this rule arises when the claimed functions "can be achieved by any general purpose computer without special programming." *In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1316 (Fed. Cir. 2011). This exception is a "narrow" one that applies "only in the rare circumstances where any general-purpose computer without any special programming can perform the function." *Ergo Licensing, LLC v. CareFusion 303, Inc.*, 673 F.3d 1361, 1364-65 (Fed. Cir. 2012).

1. "means to send the search results and the matching advertising cues to the user's computer screen" ('154 patent, claim 7)

Improved Search	Microsoft	Court
Means Plus Function: Function: to send the search results and the matching advertising cues to the user's computer screen. Structure: Server, or equivalents.	*Means Plus Function:* Function: to send the search results and the matching advertising cues to the user's computer screen. Structure: No disclosed corresponding structure.	*Means Plus Function:* Function: to send the search results and the matching advertising cues to the user's computer screen. Structure: No disclosed corresponding structure.

The parties agree that the disputed term is governed by § 112, ¶ 6, and the claimed function is to "send the search results and the matching advertising cues to the user's computer screen." (D.I. 42 at 5; D.I. 51 at 11) The parties' dispute centers on the corresponding structure. Improved Search identifies the structure as the browser and/or the server, while Microsoft contends that there is no disclosed corresponding structure. (*Id.*; D.I. 57 at 1-2) I recommend that the court adopt Microsoft's proposed construction, which is consistent with the intrinsic record. Improved Search's proposed construction is not adequately supported by a corresponding structure disclosed in the patent's written description.

The specification of the '154 patent does not identify a structure capable of sending the search results and the matching advertising cues to the user's computer screen. The abstract provides that, "while a user is performing a cross language search on the Internet, she receives the search results and concurrently receives one or more advertisements." ('154 patent, Abstract) Improved Search argues that the server transmits both the search results and the matching advertising cues, but the specification itself does not disclose the server as the structure performing this function. (D.I. 57 at 1) Other portions of the specification identify the server as the structure sending the claimed advertisements to the user, but do not identify the server as the structure sending the search results to the user. ('154 patent, col. 4:48-50; 7:52-54) The specification's numerous mentions of search results fail to identify how those results are sent to the user's computer screen. ('154 patent, col. 5:39-40, 6:7-10, 6:29-30) The language of claim 7 makes clear that both the search results and the matching advertising cues must be sent to the user's computer screen, but the specification does not disclose a structure for conveying the search results in the claimed manner. ('154 patent, col. 11:4-5)

Moreover, the server disclosed in the '154 patent is a generic server, and there is no intrinsic evidence that an algorithm for sending search results and matching advertising cues to a user's display is part of the claimed server. (D.I. 61 at ¶¶ 9-11) Although sending search results is a conventional function of a web server, the structure proposed by Improved Search does not specify that it is a web server. (*Id.* at ¶ 9) Sending search results and matching advertising cues could be performed by a software program run by a generic server, but the '154 patent does not disclose a software program capable of selecting and sending an advertisement based on relevance to the translated keyword. (*Id.* at ¶¶ 10-11) Consequently, I recommend that the court adopt Microsoft's proposed construction.

2. "means for receiving from the user through an input device a query in a first language" ('154 patent, claim 7)

Improved Search	Microsoft	Court
Means Plus Function: Function: receiving from the user through an input device a query in a first language. Structure: Server, or equivalents	*Means Plus Function:* Function: receiving from the user through an input device a query in a first language. Structure: No disclosed corresponding structure.	*Means Plus Function:* Function: receiving from the user through an input device a query in a first language. Structure: No disclosed corresponding structure.

The parties agree that the disputed term is governed by § 112, ¶ 6, and the claimed function is "receiving from the user through an input device a query in a first language." (D.I. 44 at ¶ 48; D.I. 51 at 12) The parties' dispute centers on the corresponding structure. Improved Search identifies the structure as a server, or equivalents,[2] while Microsoft contends that there is no disclosed corresponding structure. (D.I. 62 at 4) For the following reasons, I recommend that the court adopt Microsoft's proposed construction.

The claim language requires "at least one server" comprising a "means for receiving from the user through an input device a query in a first language." ('154 patent, col. 10:56-58) The specification provides that "[t]he user inputs a query in her native language (i.e., the source language) through an input device such as a keyboard," and "[t]he input is received by a dialectal controller in the server which processes the query input, identifies the user's input language, and

[2] Improved Search initially identified the corresponding structure for this term as "Keyboard or equivalents." (D.I. 35 at 5) In its claim construction reply brief, Improved Search amended the corresponding structure to a "generic computer." (D.I. 57 at 5) In the amended joint claim construction statement, Improved Search identified the corresponding structure as "Server, or equivalents." (D.I. 62 at 4) The relevant inquiry in construing a means-plus-function term is whether "a person of ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function in the claim." *Williamson*, 792 F.3d at 1352. Improved Search's repeated amendments of the claimed structure undercut to some degree its position that the corresponding structure is readily identifiable to a person of ordinary skill in the art.

extracts a content word or keyword out of the query input." ('154 patent, col. 4:53-59) The evidence on the record suggests that a generic server is not capable of receiving a query in a first language without special programming. (D.I. 61 at ¶ 17) (concluding that the claimed functionality would have to be performed "by a special user-interface and back-end program run by the server, which not every server would include.") Consequently, the server identified in the '154 patent would need to be accompanied by an algorithm to provide sufficient corresponding structure to the claimed function. Improved Search does not identify any such algorithm or special programming of the claimed server.

For the first time during the *Markman* hearing, Improved Search relied on the Federal Circuit's decision in *In re Katz* in support of its position that claimed functions such as "processing," "receiving," and "storing" "can be achieved by any general purpose computer without special programming." 639 F.3d 1303, 1316 (Fed. Cir. 2011). However, Improved Search no longer identifies a generic computer as the corresponding structure in the most recent amended claim chart, and the intrinsic record reflects a distinction between a general computer and a server. (D.I. 62 at 4; '154 patent, col. 4:33-37 ("The system includes one or more Internet based servers and one or more clients installed in computers via which a user may access the Internet. The use [sic] inputs a query from the computer, which is connected to the server via the Internet.")) Consequently, *In re Katz* is not sufficiently analogous to the circumstances presently before the court to warrant adoption of Improved Search's proffered construction.

3. "dialectal controller for dialectally standardizing a content word extracted from the query" ('154 patent, claim 7)

Improved Search	Microsoft	Court
This term is not governed by 35 U.S.C. § 112(6). If it is ruled to be so governed, Improved Search submits that the following structures provide the function of "dialectally standardizing a content word extracted from the query": Structure: Server, or equivalents, that implement the following algorithm, as disclosed in 152, 154 and 156 of Fig. 3 of the '101 patent and at 4:56-63, 5:27-35 and 7:7-16 of the '101 patent: Extracting a content word from the query; Identifying the standard form of the keyword; and Substituting the dialectally standardized keyword.	*Means Plus Function:* Function: dialectally standardizing a content word extracted from the query. Structure: No disclosed corresponding structure.	*Means Plus Function:* Function: dialectally standardizing a content word extracted from the query. Structure: No disclosed corresponding structure.

The parties disagree regarding whether this claim term should be construed as a means-plus-function limitation and, if so, what accompanying structure is disclosed in the specification. According to Improved Search, the term is presumptively not a means-plus-function claim term because it does not include the word "means." (D.I. 42 at 12) In response, Microsoft alleges that § 112, ¶ 6 applies notwithstanding the language used because the claim term fails to recite sufficiently definite structure for performing the claimed function. (D.I. 51 at 14)

I recommend that the court adopt Microsoft's proposal and construe the disputed term as a means-plus-function limitation despite the presumption against means-plus-function claiming in the absence of the word "means." *See Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1349

(Fed. Cir. 2015) (If a "term lacks the word 'means,' the presumption can be overcome and § 112, para. 6 will apply if the challenger demonstrates that the claim term fails to 'recite sufficiently definite structure' or else recites 'function without reciting sufficient structure for performing that function.'"). Similar to the circumstances before the Federal Circuit in *Williamson*,[3] in which the disputed term was "in a format consistent with traditional means-plus-function claim limitations" if the term "module" was replaced with the term "means," the disputed term in the present case is not limited to the dialectal controller itself, but also encompasses the function performed by the dialectal controller. 792 F.3d 1339, 1350 (Fed. Cir. 2015). In this context, "controller" is a generic nonce word comparable to "mechanism," "element," or device" that is "tantamount to using the word 'means'" in the absence of sufficiently definite structure. *Id.*

Turning to the sufficiency of the corresponding structure, the algorithm cited by Improved Search is deficient in the present case because the first step of the algorithm occurs before the claimed function and therefore does not participate in the claimed function. Specifically, the identification of the standard form of the keyword occurs prior to the claimed function of dialectal standardization. ('101 patent, Fig. 3 at 152; 2/13/18 Tr. at 42:2-10) Moreover, the last step, which inquires whether standardization was successful, occurs only after the completion of the standardization process and is not linked to the claimed function itself. ('101 patent, Fig. 3 at 156; 2/13/18 Tr. at 42:11-16) The remaining step, which requires the

[3] In support of its argument that the presumption against invoking § 112, ¶ 6 applies in the present case, Improved Search relies on two unpublished District Court decisions that addressed the Federal Circuit's decision in *Williamson*: *M2M Solutions, LLC v. Sierra Wireless America, Inc.*, C.A. No. 12-30-RGA, 2016 WL 1298961, at *5-6 (D. Del. Mar. 31, 2016), and *Finjan, Inc. v. Proofpoint, Inc.*, 2015 WL 7770208, at *10 (N.D. Cal. Dec. 3, 2015). However, unlike the facts presently before the court, the courts in *Finjan* and *M2M* determined that the disputed claim terms recited sufficiently definite structure. The cases cited by Improved Search are therefore distinguishable and do not alter the court's analysis.

performance of the claimed function of dialectal standardization, is insufficient to constitute an algorithm because it merely restates the recited function. *See Augme Techs., Inc. v. Yahoo! Inc.*, 755 F.3d 1326, 1338 (Fed. Cir. 2014) (concluding that disclosure of a black box that performed the recited function was not a sufficient explanation of the algorithm). Similar to the circumstances before the Federal Circuit in *Augme*, the specification generally states that "the dialectal controller applies dialectal standardization logic to standardize the keyword to a commonly known word/term." ('101 patent, col. 5:30-33, 7:13-16) Without additional explanation regarding how to achieve the claimed function of dialectal standardization, the written description fails to identify sufficient structure in the form of an algorithm.

Improved Search correctly notes that the specification offers additional guidance on the nature of the dialectal controller. (2/13/18 Tr. at 44:4-45:10) However, steps such as receiving the query and identifying the keyword from the query input are not associated with the agreed-upon claimed function of dialectally standardizing a content word extracted from the query. The law is well-established that the recited corresponding structure must be sufficient for performing the claimed function. *See Watts v. XL Sys., Inc.*, 232 F.3d 877, 880 (Fed. Cir. 2000) (citing *Rodime PLC v. Seagate Tech., Inc.*, 174 F.3d 1294, 1302 (Fed. Cir. 1999)). Improved Search has not cited evidence from the written description tying its algorithm specifically to the agreed-upon function.

Improved Search relies on the Federal Circuit's decision in *Enfish v. Microsoft*, in which the Federal Circuit determined that the recited four-step algorithm was a sufficient structure for the claimed function. 822 F.3d 1327, 1339-40 (Fed. Cir. 2016). However, in *Enfish*, all four recited steps of the algorithm related to the claimed function of configuring the memory according to a logical table. *Id.* Specifically, the first step of the algorithm required setting up a

table in computer memory, followed by three steps setting forth particular details for modifying well-known configurations in accordance with the claimed invention. *Id.* at 1340. Unlike the circumstances presently before the court, each of these steps was directly tied to the claimed invention and explained how the claimed function was achieved.

4. "means to search the database of the advertising cues based on the relevancy to the translated content word" ('154 patent, claim 7)

Improved Search	Microsoft	Court
Means Plus Function: Function: to search the database of the advertising cues based on the relevancy to the translated content word Structure: Server and/or Search Engine or equivalents	*Means Plus Function:* Function: to search the database of the advertising cues based on the relevancy to the translated content word. Structure: No disclosed corresponding structure.	*Means Plus Function:* Function: to search the database of the advertising cues based on the relevancy to the translated content word. Structure: No disclosed corresponding structure.

The parties agree that the disputed term is governed by § 112, ¶ 6, and the claimed function is "to search the database of the advertising cues based on the relevancy to the translated content word." (D.I. 44 at ¶ 59; D.I. 51 at 17) The parties' dispute centers on the corresponding structure. Improved Search identifies the structure as a server and/or search engine, or equivalents, while Microsoft contends that there is no disclosed corresponding structure. (D.I. 42 at 15-16; D.I. 51 at 17-19) I recommend that the court adopt Microsoft's proposed construction, which is consistent with the intrinsic record.

The specification of the '154 patent discloses that the "server conducts a search in the database and returns to the user one or more advertisements relevant to the content word or keyword." ('154 patent, col. 4:42-45) However, the specification does not identify specific programming for the server enabling it to perform the claimed searching function. The

specification provides that the server may operate with the LACE application, but the LACE application functions to send a user advertisements, as opposed to performing the claimed function of searching for relevant advertisements. (*Id.*, col. 7:32-39) The specification discloses only a generic server with no algorithm capable of performing the function of searching for relevant advertisements. *See Net MoneyIN, Inc. v. VeriSign, Inc.*, 545 F.3d 1359, 1367 (Fed. Cir. 2008).

To the extent that Improved Search alleges that the relevant structure is the disclosed search engine, the specification does not sufficiently identify the role played by the search engine in performing the identified function. The specification explains that the server is connected to a search engine through the Internet, but does not expressly link the search engine to the function of searching the database of the advertising cues based on the relevancy to the translated content word. ('154 patent, col. 4:36-39) The claim language also fails to support Improved Search's position, as claim 7 separately recites a "search engine" for searching URLs. ('154 patent, col. 10:63-65) Claim 7 would consequently require two search engines under Improved Search's proposal, but there is no support for two separate search engines in the written description. Further complicating Improved Search's position, Improved Search's own expert identifies only the server, and not the search engine, as the corresponding structure for the term. (D.I. 44 at ¶ 60)

The results of the IPR proceeding regarding the '154 patent further support the court's conclusion. The Patent Trial and Appeal Board ("PTAB") concluded in the IPR proceeding that claim 7 of the '154 patent failed to disclose any sufficiently definite structure that is clearly linked to the claimed function of determining relevancy. (D.I. 51, Ex. F at 7-11) Specifically, the PTAB determined that a typical server without an algorithm could not perform the claimed

function of searching the database of the advertising cues based on the relevancy to the translated content word. (*Id.* at 9) For these reasons, I recommend that the court adopt Microsoft's proposed construction.

C. "with reading aids" ('101 patent, claims 8 and 18; '154 patent, claim 5)

Improved Search	Microsoft	Court
Devices and systems that assist users with language translation.	No construction.	No construction.

I recommend that the court adopt Microsoft's proposed construction. The parties' experts agree that the term "reading aids" does not have a well-known meaning in the art. (D.I. 51, Ex. O at ¶ 73; Ex. G at 33:3-9) The specification of the '101 patent describes a user's ability to choose between "a simple machine translation with reading aids . . . or a more intelligible translation of the search results and the contents of those web sites." ('101 patent, col. 4:10-14) The specification indicates that users selecting machine translations with reading aids will "get an idea about the contents of the site in a broad manner" if they "are totally unfamiliar with the sites in the target language." (*Id.* at col. 6:48-51, 7:43-47)

Improved Search's expert represented that "[t]he plain meaning of 'reading aid' [is] something that assists in reading," which differs from its proposed construction of "devices and systems that assist users with language translation." (D.I. 44 at ¶ 63) There is no support in the intrinsic record for Improved Search's position that users perform language translation. Consequently, I recommend that the court adopt Microsoft's proposed construction.

D. "well-translated pages" ('101 patent, claim 8)

Improved Search	Microsoft	Court
Webpages that have existing online translations	No construction.	No construction.

I recommend that the court adopt Microsoft's proposal and decline to construe the disputed claim term. The '101 patent draws a distinction between machine translations understood through the use of reading aids and "well-translated" translations indexed in the database of a search engine. ('101 patent, Fig. 2 at blocks 136, 138, 140, and 142; col. 7:34-41) The specification suggests that machine translations provide "an idea about the contents of the site in a broad manner," while well-translated sites offer users "a more clear and unambiguous translation." (*Id.*, col. 7:42-49) However, the distinction is blurred by testimony explaining that well-translated pages may encompass machine translations. (D.I. 51, Ex. G at 40:25-41:5, 42:12-22) The specification distinguishes machine translations from well-translated sites based on the comprehensibility of the translation, but the evidence before the court does not establish an objective measure for determining the relative degrees of comprehensibility. (D.I. 51, Ex. G at 41:16-43:8)

The prosecution history further supports Microsoft's position that the disputed claim term is not amenable to construction. During prosecution of the '154 patent, the examiner found the disputed term indefinite pursuant to § 2173.05(d)[4] of the Manual of Patent Examining Procedure ("MPEP"), concluding that "it is unclear to examiner what is the measurement or degree for the translation to be 'well.'" (D.I. 51, Ex. H at 2) The examiner allowed the claim after the phrase

[4] Section 2173.05(d) of the MPEP is directed to exemplary claim language phrases, including "for example" and "such as," which may lead to confusion over the intended scope of the claim. The discussion of subjective terms in § 2173.05(b) of the MPEP is also relevant to the present discussion, as the crux of the parties' argument is whether the '101 patent provides an objective standard for measuring the scope of the term "well-translated pages."

"well-translated" was amended to "translated." (*Id.* at 11-12) Improved Search has offered no objective definition or standard for determining when a site is "well-translated."[5] *See Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1350 (Fed. Cir. 2005), *abrogated on other grounds by Nautilus, Inc. v. Biosig Instruments, Inc.*, 134 S. Ct. 2120, 2127 (2014). An objective standard is necessary "to allow the public to determine the scope of the claimed invention," which "cannot depend solely on the unrestrained, subjective opinion of a particular individual purportedly practicing the invention." *Id.* (citing *In re Musgrave*, 431 F.2d 882, 893 (C.C.P.A. 1970)). Consequently, the term "well-translated pages" is not amenable to construction.

V. CONCLUSION

For the reasons set forth above, I recommend that the court construe disputed terms as follows:

[5] The testimony of Improved Search's expert, Dr. Shamos, indicates that a well-translated page can be objectively ascertained by determining whether there is an existing online translation. (D.I. 51, Ex. G at 42:9-18) However, Dr. Shamos further testified that "it's not possible to determine from the online translation whether it was done by a machine or not." (*Id.* at 43:2-8)

Claim Term	Recommended Construction
"means to send the search results and the matching advertising cues to the user's computer screen"	*Means Plus Function:* Function: to send the search results and the matching advertising cues to the user's computer screen. Structure: No disclosed corresponding structure.
"dialectal standardization / dialectally standardized / dialectally standardizing / dialectal standardization of the at least one content word extracted from the query / dialectal standardization of the content word extracted from the query / dialectally standardizing a content word extracted from the query / dialectally standardized content word"	Replacing the at least one extracted content word in the first language with a more commonly-known word in a different dialect of the first language so that the second-language search engine will recognize it. Replacing the extracted content word in the first language with a more commonly-known word in a different dialect of the first language so that the second-language search engine will recognize it. A more commonly-known word in a different dialect of the first language selected so that the second-language search engine will recognize it. These phrases should also be construed to exclude standardization based on synonyms or lemmatization.
"means for receiving from the user through an input device a query in a first language"	*Means Plus Function:* Function: receiving from the user through an input device a query in a first language. Structure: No disclosed corresponding structure.
"dialectal controller for dialectally standardizing a content word extracted from the query"	*Means Plus Function:* Function: dialectally standardizing a content word extracted from the query. Structure: No disclosed corresponding structure.

"means to search the database of the advertising cues based on the relevancy to the translated content word"	*Means Plus Function:* Function: to search the database of the advertising cues based on the relevancy to the translated content word. Structure: No disclosed corresponding structure.
"with reading aids"	No construction.
"well-translated pages"	No construction.

This Report and Recommendation is filed pursuant to 28 U.S.C. § 636(b)(1)(B), Fed. R. Civ. P. 72(b)(1), and D. Del. LR 72.1. The parties may serve and file specific written objections within fourteen (14) days after being served with a copy of this Report and Recommendation. Fed. R. Civ. P. 72(b)(2). The objections and responses to the objections are limited to ten (10) pages each. The failure of a party to object to legal conclusions may result in the loss of the right to de novo review in the District Court. *See Sincavage v. Barnhart*, 171 F. App'x 924, 925 n.1 (3d Cir. 2006); *Henderson v. Carlson*, 812 F.2d 874, 878-79 (3d Cir. 1987).

The parties are directed to the court's Standing Order For Objections Filed Under Fed. R. Civ. P. 72, dated October 9, 2013, a copy of which is available on the court's website, http://www.ded.uscourts.gov.

Dated: March 30, 2018

Sherry R. Fallon
UNITED STATES MAGISTRATE JUDGE