WO 1 2 3 4 5 IN THE UNITED STATES DISTRICT COURT 6 7 FOR THE DISTRICT OF ARIZONA 8 Language Technologies Incorporated, 9 No. CV-23-00520-TUC-RCC Plaintiff, 10 **ORDER** 11 v. 12 Microsoft Corporation, 13 Defendant. 14 15 Pending before the Court is Defendant Microsoft Corporation's ("Microsoft") 16 Motion to Dismiss. (Doc. 16.) This matter has been fully briefed. (Docs. 16, 18, 20.) On 17 March 19, 2024, the Court held oral argument. For the reasons set forth below, the Court 18 will grant the motion with leave to amend. 19 I. Case Background 20 Language Technologies, Inc. ("LTI") brought suit against Microsoft Corporation 21 ("Microsoft") for patent infringement. (Doc. 1.) LTI alleges that Microsoft's "Bling FIRE Tokenizer"¹—used in, among other things, Microsoft's Bing search engine—infringes on 22 U.S. Patent No. 7,069,508 ('508 Patent) and U.S. Patent No. 7,346,489 ('489 Patent) owned 23 by LTI (collectively "the Patents"). (*Id.* at 14–17.) 24 II. **The Patents** 25 In 2000, LTI filed for the '508 Patent for a "System and Method for Formatting Text 26 27 ¹ In the realm of natural language processing and machine learning, tokenization refers to

the process of parsing text into smaller bits of data, including sentences, phrases, words, or

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even characters.

reformats it to establish optimal spacing and related features for readability, reader comprehension and publishing economies." (*Id.* at 7.) "The invention has a neural network that uses a library of text data to analyze text and determine phrases. The text is then formatted according to the determined phrases. The neural network learns additional phrase indicators as it analyzes text and adds the additional data to the library." (*Id.*) The '508 Patent provides an alternative to this embodiment saying that "an expert system can be established having rules and templates to be used for analyzing text or the neural network can be used to develop such an expert system." (*Id.*) The '508 Patent describes a method whereby input comes "from any one of a number of different types of devices such as a computer keyboard, a client computer, or a speech recognition device[]" and "output can be used for a number of different types of reading material including printed books, electronic books, Web pages, direct mailing literature, and closed caption systems." (*Id.*)

LTI alleges that Microsoft infringed on Claim 23 of the '508 Patent. (Doc. 1 at 14.) Claim 23 reads:

According to Linguistic, Visual and Psychological Variables." (Doc. 1-2 at 2.) The '508

Patent was issued in 2006. (Id.) The patent describes an "invention [that] analyzes text and

A computer-implemented method for formatting text, comprising the steps of:

- (a) providing text input;
- (b) providing a library of key words and punctuation definitions that identify the beginning or end of a phrase;
- (c) using said key words and punctuation definitions to determine characteristics that predict boundary punctuation;
- (d) examining a plurality of words of said text input;
- (e) using said determined characteristics to predict phrase boundaries within said plurality of words;
- (f) repeating steps d—e for a next plurality of words until all the text input has been analyzed; and
- (g) formatting said text input according to the predicted phrase boundaries.

(Doc. 1-2 at 11.) Claim 23 is representative of the '508 Patent for purposes of this Motion

to Dismiss because the other claims are substantially similar. *Content Extraction & Transmission LLC v. Wells Fargo Bank, Nat'l Ass'n, et al.*, 776 F.3d 1343, 1348 (Fed. Cir. 2014). The parties have also agreed that Claim 23 is representative. (Doc. 16 at 10 n.3; Doc. 18 at 7 n.2.)

In 2006, LTI filed for the '489 Patent for a "System and Method of Determining Phrasing in Text." (Doc. 1-3 at 2.) The '489 Patent was issued in 2008. (*Id.*) It is almost identical to the '508 Patent. (*See id.* at 7–10.) LTI alleges that Microsoft infringed on Claim 1 of the '489 Patent. (Doc. 1 at 15.) Claim 1 reads:

A method for determining phrasing in text, comprising the steps of:

- (a) providing text input;
- (b) providing a library of key words and punctuation definitions that identify the beginning and end of a phrase;
- (c) using said key words and punctuation definitions to determine characteristics that predict phrase or sentence boundaries;
- (d) examining a plurality of words of said text input;
- (e) using said determined characteristics to predict phrase boundaries within said plurality of words; and
- (f) repeating steps d—e for a next plurality of words until phrase boundaries are predicted for each between words between word space in the text input.

(Doc. 1-3 at 10.) Claim 1 is representative of the '489 Patent because it is substantially similar, *Content Extraction*, 776 F.3d at 1348, and the parties have agreed that it is representative (Doc. 16 at 10 n.3; Doc. 18 at 7 n.2).

III. Motion to Dismiss

On January 25, 2024, Microsoft filed a Motion to Dismiss Under Federal Rule of Civil Procedure 12(b)(6). (Doc. 16.) LTI filed a Response (Doc. 18) and Microsoft followed with its Reply (Doc. 20). Microsoft seeks to dismiss both claims in the Complaint, arguing that the Patents are not eligible for patent protection under 35 U.S.C. § 101 as interpreted by *Alice Corporation Pty. Ltd. v. CLS Bank International*, 573 U.S. 208 (2014). (Doc. 16 at 1.) Microsoft contends that the Patents are merely "abstract mental processes

with generic computer technology " (*Id.* at 2.)

Specifically discussing the '489 Patent, Microsoft argues "[C]laim [1] is directed to an abstract idea of identifying phrases in text by evaluating words and punctuation used in the text. But the human mind practices this when writing, reviewing, or editing text." (*Id.* at 11.) This is similar to, if not more abstract than, claims that other courts have found patent ineligible because, Microsoft explains, "the idea of identifying phrases in text by evaluating words and punctuation is simply the idea of evaluating data (words and punctuation in text) to recognize some information about the data (phrases in the text)." (*Id.*) Microsoft reiterates these arguments against the '508 Patent, although the '508 Patent discloses an additional step of formatting the input text. (*Id.* at 12.) Microsoft argues that the formatting step is similarly abstract and does not save the '508 Patent because "such formatting has been in the realm of human knowledge since at least the advent of typesetting" (*Id.*)

Furthermore, Microsoft hones in on the lack of specificity regarding how the Patents' methods rely on computer implementation and computer technology. (*Id.* at 13.) Microsoft emphasizes that Claim 23 of the '508 Patent only mentions that the method is "computer-implemented," and Claim 1 of the '489 Patent does not even specify computer implementation. (*Id.*) Microsoft also argues that the Patents disclose the use of conventional neural networks, "[b]ut nothing in the few general lines of patent description on the subject suggests that the described 'neural network' was inventive or anything other than generic." (*Id.*) Moreover the methods do not even require a neural network but "can be implemented on any type of generic computer" and reliance on conventional computer technology to merely carry out an otherwise abstract function is not patent eligible material. (*Id.* at 13–16.)

Microsoft emphasizes that the Patents do not describe any prior art in computerized text processing that the claimed methods supposedly improve upon. (Doc. 20 at 2.) In other words, the Patents do not identify any problem specific to existing computerized text processing that LTI solves. (*Id.*) The Patents only describe the prior art *before* computers saying the inventions outline methods "distinct from the processes used by linguists to

identify phrases by hand in the prior art." (*Id.* at 3 (quoting Complaint, Doc. 1 at 8).)

In response, LTI argues that Microsoft "overgeneralizes and oversimplifies the claimed methods" when, actually, "the claimed methods are directed to computerized processing of text that improves the operation of devices that present text, whether in visual or verbal form, and do not simply use computers as a tool for carrying out an abstract idea " (Doc. 18 at 1–2.) As LTI describes it, "[t]he claimed methods automate the process of phrase prediction in a body of text through a specific, computerized method that eliminates the subjectivity inherent in the brain's process of phrase identification " (*Id.* at 3.) The "specific method" includes "first provid[ing] 'a library of key words and punctuation definitions that identify the beginning or end of a phrase,' which are used to 'determine characteristics that predict boundary punctuation." (*Id.* at 7 (quoting '508 Patent, Doc. 1-2 at 11).) At oral argument, LTI explained that phrase prediction using the Patents did not just relate to punctuation—like grammar editing—but it instead suggested that the "key words" referenced in the Patents and throughout the pleadings may signal phrase boundaries where there is no corresponding punctuation. However, no further information was given about the "key words."

LTI asserts that it gave two primary examples of how the Patents function to improve existing computer technology in its Complaint. (*Id.* at 4.) The first is ReadSmart that "automates and applies phrase-based processing of text through software algorithms . . . [and] adjust[s] the spacing between words, the size of words, and line endings." (Doc. 1 at 9.) LTI has launched this implementation of the Patents in ReadSmart Format, a typesetting tool for printed materials, and ReadSmart Mobile, an app for publishing documents to mobile devices. (*Id.* at 10.) The second example is the use of tokenization in internet search engines that improves search results by parsing out phrases in the search. (*Id.*) LTI also emphasized closed captioning technology as an important application of the Patents during oral argument.

LTI opposes Microsoft's argument that humans can perform the Patents' method because the claims explicitly disclose a computerized method. (Doc. 18 at 8.) For example, LTI alleges that "library" is clearly "an electronic repository of data, and not the human

brain." (*Id.*) It also emphasizes that the text input comes from a computer or other electronic device. (*Id.* at 9.) Therefore, humans cannot perform any step of the claimed methods. (*Id.*) Instead, the "claims are directed to a method of computerized text phrase prediction that specifically *replaces* the observation, recognition, evaluation, judgment, and opinion of a human reader or linguist with a computer method previously unknown in the art." (*Id.* at 14.)

LTI puts forth the Patents' prosecution history to demonstrate that the claimed methods offer improvements over the prior art. (*Id.* at 10.) After initially rejecting the application, the patent examiner allowed the claims upon understanding that the prior art did not use key words and punctuation definitions to identify characteristics and predict phrase boundaries as applied to specific text. (*Id.*) Moreover, LTI argues that the functional results-based language (i.e., "providing text input" and "using said key words") does not render the Patents ineligible because, far from being "agnostic as to how the step is performed" like Microsoft alleged, they still describe a specific improvement. (*Id.* at 10–11 (quoting Doc. 16 at 13).)

Even if the Court finds the idea abstract at step one, LTI argues the Patents add an inventive concept, namely "unconventional computerized methods and systems for predicting phrase boundaries in a body of text and (for the '508 Patent) formatting the text using the predicted phrase boundaries " (*Id.* at 15.) These methods are allegedly "unconventional" because they differ from the prior art and improve upon existing computer technology. (*See id.* at 16.) LTI asserts that the Court must take the Complaint's allegations that the claimed methods are unconventional as true on a motion to dismiss. (*Id.*) At a minimum, LTI believes its allegations in the Complaint create a plausible factual dispute about whether "the claimed methods are not well-understood, routine or conventional" that makes dismissal inappropriate at this stage. (*Id.* at 2, 6.) If the Court grants Microsoft's Motion to Dismiss, LTI requests leave to amend the Complaint to add more factual allegations. (*Id.* at 17.)

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IV. Relevant Law

a. Motion to Dismiss

Federal Rule of Civil Procedure 12(b)(6) "tests the legal sufficiency of a claim" and allows a party to seek dismissal for failure to state a claim because either the complaint lacks a cognizable legal theory or lacks the factual allegations to support such a theory. *Navarro v. Block*, 250 F.3d 729, 732 (9th Cir. 2001); *see also Balistreri v. Pacifica Police Dep't*, 901 F.2d 696, 699 (9th Cir. 1990). "[A] complaint must contain sufficient factual matter, accepted as true, to 'state a claim to relief that is plausible on its face." *Ashcroft v. Iqbal*, 556 U.S. 662, 678 (2009) (quoting *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 570 (2007)). A claim is only plausible "when the plaintiff pleads factual content that allows the court to draw the reasonable inference that the defendant is liable for the misconduct alleged." *Id.* The law requires the complaint to contain more than "a statement of facts that merely creates a suspicion [of] a legally cognizable right of action." *Twombly*, 550 U.S. at 555. This means that "[t]hreadbare recitals of the elements of a cause of action, supported by mere conclusory statements, do not suffice." *Id.*

Patent eligibility is appropriate for decision on a motion to dismiss "only when there are no factual allegations that, taken as true, prevent resolving the eligibility question as a matter of law." *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018); *Coop. Ent. Inc. v. Kollective Tech., Inc.*, 50 F.4th 127, 130 (Fed. Cir. 2022). "A patent shall be presumed valid." 35 U.S.C. § 282(a). Therefore, "[t]he burden of establishing invalidity of a patent . . . shall rest on the party asserting such invalidity." *Id.* A party seeking to invalidate a granted patent "may overcome this presumption with 'clear and convincing evidence' proving [the patent does not satisfy 35 U.S.C. § 101]." *Datanet LLC v. Microsoft Corp.*, No. 2:22-cv-1545, 2023 WL 3947829, at *2 (W.D. Wash. June 12, 2023) (quoting *Microsoft Corp. v. i4i Ltd. P'ship*, 564 U.S. 91, 97 (2011)).

b. Patent Eligibility

Section 101 of the Patent Act describes patent eligible subject matter stating that "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent

therefor, subject to the conditions and requirements of this title." 35 U.S.C. § 101. A process means "process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material." 35 U.S.C. § 100(b). The Supreme Court has long identified three categories of non-patent eligible material: "'[1]aws of nature, natural phenomena, and abstract ideas are not patentable." *Alice*, 573 U.S. at 216 (quoting *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 589 (2013)). Because "[1]aws of nature, natural phenomena, and abstract ideas are 'the basic tools of scientific and technological work," it would impede innovation if patent law permitted parties to monopolize those tools and enforce that monopoly to the exclusion of the world. *Id.* (quoting *Myriad*, 569 U.S. at 589).

However, "all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc.*, 566 U.S. 66, 71 (2012). Thus, the Supreme Court has instructed courts to "tread carefully in construing this exclusionary principle lest it swallow all of patent law." *Alice*, 573 U.S. at 217. "[A]n invention is not rendered ineligible for patent simply because it involves an abstract concept." *Id.* Rather, "an application of a law of nature . . . to a known structure or process may [deserve] patent protection." *Diamond v. Diehr*, 450 U.S. 175, 185 (1981) (alteration in original).

The Supreme Court has established a two-step framework to determine whether a patent falls into one of the three ineligible categories or whether it claims "patent-eligible applications of those concepts." *Id.* The first step of the framework requires courts to ask if the claims are directed to a law of nature, natural phenomena, or abstract idea. *Id.* "If so, we then ask, '[w]hat else is there in the claims before us?" *Id.* (quoting *Mayo*, 566 U.S. at 78). In other words, step two of the framework "consider[s] the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application" because they add a sufficient "inventive concept." *Id.* at 217–18 (quoting *Mayo*, 566 U.S. at 77–79).

i. Abstractness

"The 'abstract ideas' category embodies 'the longstanding rule that "[a]n idea of itself

is not patentable."" *Id.* at 218 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972)). This "exception prevents patenting a result where 'it matters not by what process or machinery the result is accomplished." *McRO*, *Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1312 (Fed. Cir. 2016) (quoting *O'Reilly v. Morse*, 56 U.S. 62, 113 (1853)). In other words, claims are patent eligible if they are directed to "the means or method that improves the relevant technology" but not if the claims "are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *Id.* at 1314 (citing *Enfish*, *LLC v. Microsoft Corp.*, 822 F.3d 1327, 1336 (Fed. Cir. 2016); *Rapid Litig. Mgmt. Ltd. v. CellzDirect, Inc.*, 827 F.3d 1042, 1048 (Fed. Cir. 2016)).

The Supreme Court, for example, has concluded that mathematical algorithms, including those implemented on a generic computer, are abstract. *See Gottschalk*, 409 U.S. at 71–72 (holding algorithm for converting numerals was abstract and unpatentable because it had no "substantial practical application except in connection with a digital computer," meaning that a patent on that formula would amount to "a patent on the algorithm itself"); *Parker v. Flook*, 437 U.S. 584, 594–95 (1978) (holding algorithm for calculating alarm limits abstract and unpatentable because it required only "purely conventional" computer implementation that was "well-known" in the art). *But c.f. Diehr*, 450 U.S. at 187, 192–93 (holding "an application of a . . . mathematical formula to a known structure or process may well be deserving of patent protection" and finding patent eligible an algorithm for molding rubber because it was not simply a computer-implemented formula but an improvement upon "an industrial process").

Relatedly, the Federal Circuit has held that mental processes are abstract because "the application of only human intelligence to the solution of practical problems is no more than a claim to a fundamental principle." *CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1371 (Fed. Cir. 2011) (citing *Benson*, 409 U.S. at 67; *Flook*, 437 U.S. at 586). Mental processes are methods that "can be performed in the human mind" or "by a human using a pen and paper." *Id.* at 1372–73. Accordingly, "collecting information, including when limited to particular content (which does not change its character as information)," and "analyzing information by steps people go through in their minds, or by mathematical

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algorithms, without more," is an abstract idea. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353–54 (Fed. Cir. 2016) (collecting cases).

"In cases involving software innovations, this inquiry often turns on whether the claims focus on 'the specific asserted improvement in computer capabilities . . . or, instead, on a process that qualifies as an "abstract idea" for which computers are invoked merely as a tool." Finjan, Inc. v. Blue Coat Sys., Inc., 879 F.3d 1299, 1303 (Fed. Cir. 2018) (quoting Enfish, 822 F.3d at 1335–36). In McRO v. Bandai Namco Games America Incorporated, for example, the Federal Circuit held that software for rendering 3-D animations was not abstract because it was not simply a mathematical formula but a set of computerimplemented rules that improved upon existing technology. 837 F.3d at 1314–15. The software "allow[ed] computers to produce 'accurate and realistic lip synchronization and facial expressions in animated characters' that previously could only be produced by human animators." *Id.* at 1313. Prior to the invention, animators made "subjective determinations rather than [using] specific, limited mathematical rules." *Id.* at 1314. The Federal Circuit reasoned that "[i]t [was] the incorporation of the claimed rules, not the use of the computer, that 'improved [the] existing technological process' by allowing the automation of further tasks." *Id.* (quoting *Alice Corp.*, 573 U.S. at 223). The court distinguished this from *Flook* and other cases where the prior method was carried out in essentially the same way as the computer automated process. Id.

ii. Inventive Concept

A claimed invention may still be eligible for patent although it is directed to an abstract idea if the claims offer an "inventive concept" that "transform[s] the abstract concept into a patent-eligible application." *Alice*, 573 U.S. 221. But it requires "more than simply stat[ing] the [abstract idea] while adding the words 'apply it." *Id.* (quoting *Mayo*, 566 U.S. at 72). For example, in *Mayo Collaborative Services v. Prometheus Laboratories*, *Incorporated*, the Supreme Court considered a method for measuring metabolites in blood to determine proper treatment dosage in patients. 566 U.S. at 71. After finding that the patent was directed to a natural law—i.e., the correlation between the level of metabolites in the bloodstream and proper dosage—the Court reasoned that the patent amounted to

little more than instructing physicians to apply a well-known law, which did not constitute an inventive concept. *Id*.

Similarly, implementing an abstract algorithm using generic and existing computer technology is not an inventive application of an abstract idea. *See Benson*, 409 U.S. at 64; *Flook*, 437 U.S. at 594. Indeed, "*Flook* stands for the proposition that the prohibition against patenting abstract ideas cannot be circumvented by attempting to limit the use of [the idea] to a particular technological environment." *Alice*, 573 U.S. at 222–23 (quoting *Bilski*, 561 U.S. at 610–11). In contrast, the patent in *Diehr* was sufficiently inventive because it employed a well-known algorithm but in combination with additional steps within a larger industrial process and improved upon that process. 450 U.S. at 178–79. The patent used a thermocouple to obtain previously unknown constant temperatures inside a rubber mold and feed those measurements into a computer that then used the algorithm to repeatedly recalculate cure time. *Id*.

V. Discussion

The Court finds that the Patents are not patent eligible. First, the Patents are directed to the abstract concept of using "key words" and punctuation to define and identify phrases in text. Because "key words" have not been further defined for this Court, the Court will take them to mean well-established vocabulary in the English language. The Patents describe research in linguistics and discuss how the way text is written and displayed impacts the speed with which we can read it and our ability to understand it, but this does not make the Patents less abstract. Rather, it expands upon the abstract idea, explaining laws of nature regarding how our brains function and how the English language is designed. In other words, the actual steps in Claim 23 and Claim 1 seem to rely on teaching a generic computer well-established rules of grammar and instructing it to identify phrases based on these rules. This is comparable to invoking computers merely as a tool to carry out an abstract mental process like collecting, identifying, and storing particular types of data—in this instance, phrases of text—much in the way that the non-automated process would unfold. See Elec. Power, 830 F.3d at 1353–54. Although the Patents remove some of the subjectivity that a human editor might employ, they do not appear to create or solidify new

rules of writing. The additional step in the '508 Patent of formatting the text based on the phrase locations is similarly abstract, at least the way it is described in Claim 23.

Having found the Patents are directed to an abstract idea, the Court must also consider whether they disclose an additional inventive element. The Court finds they do not. The steps, individually, are abstract function- and outcome-based directions for inputting text, looking at the text, and instructing the computer to apply the rules it was taught (i.e., keywords and punctuation). Likewise, as an ordered combination, the steps in both the representative claims describe an abstract mental process—using well-known grammar rules to identify phrases. The Court disagrees with LTI that the Complaint's allegations that the Patents disclose an "unconventional" method create a bar to dismissal at this point. Although the Court must take as true the factual allegations in a complaint on a motion to dismiss, it need not deny dismissal based on "[t]hreadbare recitals of the elements of a cause of action, supported by mere conclusory statements." *Twombly*, 550 U.S. at 555. LTI's repeated allegation that its method is unconventional—and therefore survives the second step of the *Alice* test—is conclusory and not clearly grounded in the text of the Patents themselves.

Therefore, the Court finds that Microsoft has met its burden of providing clear and convincing evidence that the Patents are not patent eligible under § 101. LTI has, however, requested the alternative remedy of allowing it leave to amend. The Court will grant that request.

Accordingly,

IT IS ORDERED that Microsoft's Motion to Dismiss is GRANTED. (Doc. 16.) IT IS FURTHER ORDERED that LTI may file an Amended Complaint within thirty (30) days of the date of this Order. If LTI does not file an Amended Complaint before this deadline, the matter will be closed.

Dated this 29th day of March, 2024.

Honorable Raner C. Collins Senior United States District Judge