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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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Ex parte BO-JUNE HSU, KUANSAN WANG, and HUIZHONG DUAN

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Appeal 2018-001654
Application 13/069,526
Technology Center 2100

_____

Before JOHN A. JEFFERY, THU A. DANG, and
ELENI MANTIS MERCADER, *Administrative Patent Judges.*

JEFFERY, *Administrative Patent Judge.*

DECISION ON APPEAL

Appellants[1] appeal under 35 U.S.C. § 134(a) from the Examiner's decision to reject claims 1–5, 10–13, and 16–25.[2] We have jurisdiction under 35 U.S.C. § 6(b). We affirm.

_____

[1] Appellants identify the real party in interest as Microsoft Technology Licensing, LLC. App. Br. 2.
[2] This claim listing reflects the Examiner's rejections as presented in the Examiner's Answer indicating that the Examiner (1) withdrew the obviousness rejection of claims 3–6, and (2) entered a new ground of rejection under § 101 for claims 1–5, 10–13, and 16–25. *See* Ans. 2, 14. Although the Examiner indicates that claim 6 is rejected under § 101 in the "Grounds of Rejection to be Reviewed on Appeal" section preceding the § 101 rejection (Ans. 2), the rejection itself does not include claim 6 in the statement of the rejection or the corresponding discussion. *See* Ans. 2–14. Accordingly, we presume that claim 6 was not rejected under § 101.

STATEMENT OF THE CASE

Appellants' invention corrects spelling and completes phrases as a sequence of characters is received from a client computing device. To this end, phrases are identified with correct spelling of words that can then be submitted to a search engine. *See generally* Spec. ¶¶ 5–9, 21–25, 64; Figs. 1, 5. Claim 1 is illustrative:

> 1. A method that is executed by at least one processor at a server computing device, the method being for performing spelling correction and phrase completion as a sequence of characters are received, the method comprising:
>
> receiving, from a client computing device in communication with the server computing device, a misspelled portion of a word, the misspelled portion of the word being a portion of a query to be submitted to a search engine;
>
> responsive to receiving the misspelled portion of the word and prior to receiving an entirety of a misspelling of the word from the client computing device, identifying a multi-word phrase, the multi-word phrase comprises the entirety of the word and at least one other word that follows the word, the word being correctly spelled in the multi-word phrase; and
>
> responsive to identifying the multi-word phrase and prior to receiving the entirety of the misspelling of the word, causing the multi-word phrase to be displayed on a display of the client computing device as a suggested query for submission to the search engine.

App. Br. 14 (Claims Appendix).

THE REJECTIONS

The Examiner rejected claims 1–5, 10–13, and 16–25 under 35 U.S.C. § 101 as directed to ineligible subject matter. Ans. 2–14.[3]

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[3] Throughout this opinion, we refer to (1) the Final Rejection mailed October 6, 2016 ("Final Act."); (2) the Appeal Brief filed June 6, 2017 ("App. Br.");

The Examiner rejected claims 1, 11–13, 20, 21, 23, and 24 under 35 U.S.C. § 103 as unpatentable over Richardson (US 2006/0190436 A1; published Aug. 24, 2006), Church (US 5,572,423; issued Nov. 5, 1996), and Jania (US 2009/0254818 A1; published Oct. 8, 2009). Final Act. 2–8.

The Examiner rejected claim 2 under 35 U.S.C. § 103 as unpatentable over Richardson, Church, Jania, and Medlock (US 2012/0029910 A1; published Feb. 2, 2012). Final Act. 8–10.

The Examiner rejected claims 16–18 and 22[4] under 35 U.S.C. § 103 as unpatentable over Richardson, Church, Jania, and Ortega (US 6,564,213 B1; issued May 13, 2003). Final Act. 10–14.

The Examiner rejected claims 10, 19, and 25 under 35 U.S.C. § 103 as unpatentable over Richardson, Church, Jania, and Sandoval (US 2009/0216563 A1; Aug. 27, 2009). Final Act. 14–16.

THE INELGIBILITY REJECTION

The Examiner finds that the claimed invention is directed to an abstract idea, namely correcting spelling and completing a phrase responsive to receiving a misspelled portion of a word. Ans. 2–3. According to the Examiner, the claimed elements do not add significantly more to the abstract idea to render the claimed invention patent-eligible because, among other things, the claims recite generic computer components that perform functions that merely implement the abstract idea on a computer. Ans. 3.

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(3) the Examiner's Answer mailed October 4, 2017 ("Ans."); and (4) the Reply Brief filed December 4, 2017 ("Reply Br.").

[4] This claim listing reflects the Examiner's withdrawing the rejection of claims 3–6 on this ground. *See* Ans. 14.

The Examiner adds that using a suggested term or phrase as a search query is a well-understood, routine, and conventional mechanism previously known to the search engine industry as evidenced by the Richardson reference cited in the obviousness rejection. *Id.*

Appellants argue that the claimed invention is not directed to an abstract idea, but rather is directed to performing spelling correction and phrase completion as a query is submitted to an Internet search engine such that a helpful suggested query is presented to an end user. Reply Br. 3. According to Appellants, the claimed invention does not just correct spelling and complete phrases responsive to receiving misspelled words as the Examiner contends, but rather does so when the user attempts to submit a query to a search engine. Reply Br. 5. This functionality is said to be tied to Internet search technology, where (1) a misspelled portion of a word that forms part of a search query that is to be submitted to a search engine is received from a client computing device; (2) a server causes a suggested query with a correctly-spelled word to be displayed on the client computing device; and (3) the multi-word phrase is identified as the user types, where the phrase includes the entirety of the word and word(s) that follow the word. Reply Br. 5–6. According to Appellants, the claims' focus is on improving computing technologies, namely with respect to Internet search engines, where helpfulness of the engine's query suggestions decreases when a query prefix includes misspelled words or word portions. Reply Br. 6–9. Appellants add that the claims are not abstract when comparing them to those considered by the Supreme Court and Federal Circuit in earlier cases. Reply Br. 9–13.

ISSUE

Has the Examiner erred in rejecting claim 1 by concluding that it is directed to ineligible subject matter under § 101? This issue turns on whether the claimed invention is directed to a patent-ineligible abstract idea and, if so, whether the claim's elements—considered individually and as an ordered combination—transform the nature of the claim into a patent-eligible application of that abstract idea.

ANALYSIS

To determine whether claims are patent eligible under § 101, we apply the Supreme Court's two-step test articulated in *Alice Corp. Proprietary Ltd. v. CLS Bank International*, 134 S. Ct. 2347 (2014). First, we determine whether the claims are directed to a patent-ineligible concept: laws of nature, natural phenomena, and abstract ideas. *Id.* at 2354–55. If so, we then proceed to the second step and examine the claim's elements—both individually and as an ordered combination—to determine whether the claim contains an "inventive concept" sufficient to transform the claimed abstract idea into a patent-eligible application. *Id.* at 2357.

Alice Step One

Applying *Alice* step one, we agree with the Examiner that the claimed invention is directed to an abstract idea, namely correcting spelling and completing a phrase responsive to receiving a misspelled portion of a word. Ans. 2–3. Claim 1 recites, in pertinent part, a server computing device (1) receiving, from a client computing device, a misspelled portion of a word that is part of a query to be submitted to a search engine; (2) identifying a

multi-word phrase comprising the entire word—correctly spelled—and other word(s) that follow the correctly-spelled word responsive to receiving the misspelled word portion; and (3) causing the multi-word phrase to be displayed on the client device as a suggested search query responsive to identifying the multi-word phrase. Notably, steps (2) and (3) must occur before the entire misspelled word is received.

In essence, the claimed invention suggests phrases with words as alternatives to those that the system perceives were at least partially misspelled before they are submitted to a search engine. Despite Appellants' arguments to the contrary (Reply Br. 2–13), we agree with the Examiner that claim 1 is directed to an abstract idea, namely correcting spelling and completing a phrase responsive to receiving a misspelled portion of a word.

It is well settled that collecting information is within the realm of abstract ideas—even when the information is limited to particular content. *Elec. Power Grp., LLC v. Alstom S.A.*, 830 F.3d 1350, 1353 (Fed. Cir. 2016). It is also well settled that analyzing information by steps people go through in their minds, or by mathematical algorithms, without more, are essentially mental processes within the abstract idea category. *Id.* at 1354. And merely presenting the results of abstract processes of collecting and analyzing information, without more (such as identifying a particular tool for presentation), is abstract as an ancillary part of such collection and analysis. *Id.*

Similar to the claims at issue in *Electric Power*, the claimed invention here gathers, manipulates, analyzes, and presents information of a specified content, namely words and phrases, but does not use any particular inventive

technology for performing those functions. *Accord* Ans. 3 (citing *Electric Power*). And, as the Examiner explains, the recited functions could be performed mentally by, among other things, (1) correcting a misspelled word, and (2) identifying a candidate phrase based on that word. Ans. 3. And even assuming, without deciding, that this process also involves using books, such as dictionaries and thesauri, to compare text and identify suitable candidate words and phrases before submission to a search engine, the recited functions could still be performed manually.

We find unavailing Appellants' contention that the claimed invention improves computing technologies, namely with respect to Internet search engines, where helpfulness of the engine's query suggestions decreases when a query prefix includes misspelled words or word portions. Reply Br. 6–9. To be sure, claim 1 recites a method executed by a processor at a server computing device that corrects spelling and completes phrases as a character sequence is received from a client computing device, and, in particular, before a query including the misspelled text is submitted to a search engine. But the claimed invention is not directed to improving the computer's operation by, for example, improving its speed and efficiency, but rather corrects entered text and suggests candidate phrases with general-purpose computing components—functions that could otherwise be performed manually as noted previously. Although these functions may be beneficial by reducing a user's erroneous search queries and corresponding results, a claim for a useful or beneficial abstract idea is still an abstract idea. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379–80 (Fed. Cir. 2015).

Nor are we persuaded that the claimed invention improves the computing devices' functionality or efficiency, or otherwise changes the way those devices function, at least in the sense contemplated by the Federal Circuit in *Enfish LLC v. Microsoft Corporation*, 822 F.3d 1327 (Fed. Cir. 2016), despite Appellants' arguments to the contrary (Reply Br. 7–8). The claimed self-referential table in *Enfish* was a specific type of data structure designed to improve the way a computer stores and retrieves data in memory. *Enfish*, 822 F.3d at 1339. To the extent Appellants contend that the claimed invention uses such a data structure to improve a computer's functionality or efficiency, or otherwise change the way that device functions (*see* Reply Br. 7–8, 12), there is no persuasive evidence on this record to substantiate such a contention.

To be sure, the court in *Amdocs (Israel) Ltd. v. Openet Telecom, Inc.*, 841 F.3d 1288, 1299–1300 (Fed. Cir. 2016) held that a claim directed to using accounting information with which a network accounting record is correlated to *enhance* the record was held eligible because the claim involved an *unconventional* technological solution (enhancing data in a distributed fashion) to a technological problem (massive record flows which previously required massive databases). Although the court recognized that this solution used generic components, the recited enhancing function necessarily required these generic components to operate in an *unconventional* manner to achieve an improvement in computer functionality. *Id.* at 1300–01. Notably, the recited enhancement in *Amdocs* depended on not only the network's distributed architecture, but also on the network devices and "gatherers" working together in a distributed environment. *Id.* at 1301. In reaching its eligibility conclusion, the court

noted the patent's emphasis on the drawbacks of previous systems where all network information flowed to one location making it very difficult to keep up with massive record flows from network devices and requiring huge databases. *Id.* at 1300. The court also noted similar network-based drawbacks that were overcome by similar unconventional distributed solutions in other patents at issue. *See id.* at 1305–06.

That is not the case here. Although the claimed invention uses conventional computing components that exchange data, there is no persuasive evidence on this record to show that these generic components operate in an *unconventional* manner to achieve an improvement in computer functionality as in *Amdocs* apart from Appellants' arguments (Reply Br. 12) that have little probative value. *See In re Geisler*, 116 F.3d 1465, 1470 (Fed. Cir. 1997); *see also Enzo Biochem, Inc. v. Gen-Probe, Inc.*, 424 F.3d 1276, 1284 (Fed. Cir. 2005) ("Attorney argument is no substitute for evidence.").

Appellants' reliance on *Trading Technologies International v. CQG, Inc.*, 675 F. App'x 1001 (Fed. Cir. 2017) (unpublished) (Reply Br. 8–9) is likewise unavailing. In this non-precedential decision, the court held eligible claims reciting a method for displaying market information relating to a traded commodity where, among other things, two indicators were displayed dynamically in bid and ask display regions, respectively, of a graphical user interface, the regions positioned along a common static price axis. *Trading Techs.*, 675 F. App'x at 1002–06. The claimed invention in that case also displayed an order entry region with locations for receiving trade order commands, and, responsive to selecting a particular location, (1) commodity-related trade order parameters were set, and (2) a trade order

was sent to an electronic exchange. *Id.* at 1003. Notably, the court held that claimed invention did not simply display information on a graphical user interface, but rather required a specific, structured graphical user interface paired with prescribed functionality directly related to the interface's structure that addressed and resolved a specifically-identified problem in the art and, therefore, was not directed to an abstract idea. *Id.* at 1004.

That is not the case here. Although the claimed invention here displays phrases on a client computing device as suggested search queries, where the phrases are based on a user misspelling a portion of a word, to the extent that Appellants contend that the claimed invention is directed to a specific, structured graphical user interface paired with prescribed functionality directly related to the interface's structure that addresses and resolves a specifically-identified problem in the art as in *Trading Technologies* (*see* Reply Br. 8–9, 12–13), there is no persuasive evidence on this record to substantiate such a contention. Although the recited functions may be beneficial by reducing a user's erroneous search queries and corresponding results, a claim for a useful or beneficial abstract idea is still an abstract idea. *See Ariosa*, 788 F.3d at 1379–80.

Appellants' reliance on *DDR Holdings, LLC v. Hotels.Com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014) on pages 13 of the Reply Brief is likewise unavailing. There, instead of a computer network operating in its normal, expected manner by sending a website visitor to a third-party website apparently connected with a clicked advertisement, the claimed invention in *DDR* generated and directed the visitor to a hybrid page that presented (1) product information from the third party, and (2) visual "look and feel" elements from the host website. *DDR*, 773 F.3d at 1258–59. Given this

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particular Internet-based solution, the court held that the claimed invention did not merely use the Internet to perform a business practice known from the pre-Internet world, but rather was necessarily rooted in computer technology to overcome a problem specifically arising in computer networks. *Id.* at 1257.

That is not the case here. As noted previously, Appellants' claimed invention, in essence, suggests phrases with words as alternatives to those that the system perceives were at least partially misspelled before they are submitted to a search engine. Despite Appellants' arguments to the contrary (Reply Br. 13), the claimed invention here is not necessarily rooted in computer technology in the sense contemplated by *DDR* where the claimed invention solved a challenge particular to the Internet. Although the recited functions of Appellants' invention uses a network to transfer data between client and server computing devices, and involves search queries to be submitted to a search engine, it does not solve a challenge particular to that network. That Appellants' disclosure indicates that standard off-the-shelf computer technology is usable to implement the claimed invention in paragraphs 74 to 77 and Figure 9 only bolsters the notion that the claimed invention does not focus on an improvement in computers as tools, but rather certain independently abstract ideas that use computers as tools. *See Elec. Power*, 830 F.3d at 1354.

We, therefore, agree with the Examiner that claim 1 is directed to an abstract idea.

Alice Step Two

Turning to *Alice* step two, the recited elements—considered individually and as an ordered combination—do not transform the nature of claim 1 into a patent-eligible application of the abstract idea to ensure that the claim amounts to significantly more than that idea. *See Alice*, 134 S. Ct. at 2357.

That the recited method is executed by a processor at a server computing device does not change our conclusion. As the Examiner explains, the claimed invention merely uses generic computing components to perform the recited abstract idea, namely correcting spelling and completing a phrase responsive to receiving a misspelled portion of a word. *See* Ans. 3. Merely reciting these generic computing components cannot transform a patent-ineligible abstract idea into a patent-eligible invention. *See Alice* 134 S. Ct. at 2358–59; *see also Mortgage Grader Inc. v. First Choice Loan Services, Inc.*, 811 F.3d 1314, 1324–25 (Fed. Cir. 2016) (noting that components such an "interface," "network," and "database" are generic computer components that do not satisfy the inventive concept requirement); *buySAFE v. Google, Inc.*, 765 F.3d 1350, 1355 (Fed. Cir. 2014) ("That a computer receives and sends the information over a network—with no further specification—is not even arguably inventive.").

Indeed, the recited generic computing components merely do that which can be performed mentally or with pen and paper—exclusive functions ineligible for patent protection under § 101. *See CyberSource Corp. v. Retail Decisions, Inc.*, 654 F.3d 1366, 1372 (Fed. Cir. 2011). *Accord* Ans. 3 (noting that a human mind can correct a misspelled word and identify a candidate phrase based on the word). To the extent that

Appellants contend that the recited functions could not otherwise be performed manually, including (1) receiving a misspelled portion of a word that is part of a query to be submitted to a search engine; (2) identifying a multi-word phrase comprising the entire word—correctly spelled—and other word(s) that follow the correctly-spelled word responsive to receiving the misspelled word portion; and (3) suggesting a search query to a user responsive to identifying the multi-word phrase (*see* Reply Br. 14–17), there is no persuasive evidence on this record to substantiate such a contention. We reach this conclusion despite the fact that the latter two steps occur before the entire misspelled word is received for, here again, these steps could be performed manually as noted previously.

Nevertheless, even assuming, without deciding, that the recited components add efficiency, any speed increase comes from the capabilities of the generic computer components—not the recited process itself. *See FairWarning IP, LLC v. Iatric Systems, Inc.*, 839 F.3d 1089, 1095 (Fed. Cir. 2016) (citing *Bancorp Services, LLC v. Sun Life Assurance Co.*, 687 F.3d 1266, 1278 (Fed. Cir. 2012) ("[T]he fact that the required calculations could be performed more efficiently via a computer does not materially alter the patent eligibility of the claimed subject matter.")). Like the claims in *FairWarning*, the focus of claim 1 is not on an improvement in computer processors as tools, but on certain independently abstract ideas that use generic computing components as tools. *See FairWarning*, 839 F.3d at 1095 (citations and quotation marks omitted).

In short, merely reciting these generic computing components cannot transform a patent-ineligible abstract idea into a patent-eligible invention. *Id.* at 2358. In other words, merely reciting an abstract idea while adding the

words "apply it with a computer" does not render an abstract idea non-abstract: there must be more. *See Alice*, 134 S. Ct. at 2359. Nor does the claimed invention improve the computer processor device's functionality or efficiency, or otherwise change the way that device functions. *Cf. Enfish LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016). Appellants' contention, then, that the claimed invention is rooted in technology (Reply Br. 15–16) is unavailing.

Appellants' contention that the Examiner provided no evidence that the recited elements of the claimed invention are well-understood, routine, and conventional (Reply Br. 16) is likewise unavailing. In the rejection, the Examiner finds that the additional recited elements, including the recited processor, server and client computing devices, and display are generic, well-known computer components. Ans. 3. The Examiner also finds that using a suggested term or phrase as a search query is a well-understood, routine, and conventional mechanism previously known to the search engine industry as evidenced by the Richardson reference cited in the obviousness rejection. *Id.* Appellants do not squarely address—let alone persuasively rebut—these particular findings in connection with the eligibility rejection and, therefore, we are unpersuaded of error in those findings.

Appellants' reliance on *BASCOM Global Internet Services, Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016) on pages 14 of the Reply Brief is unavailing. There, the court held eligible claims directed to a technology-based solution to filter Internet content that overcame existing problems with other Internet filtering systems by making a known filtering solution—namely a "one-size-fits-all" filter at an Internet Service Provider (ISP)—more dynamic and efficient via individualized filtering at the ISP.

BASCOM, 827 F.3d at 1351. This customizable filtering solution improved the computer system's performance and, therefore, was patent-eligible. *See id.*

But unlike the filtering system improvements in *BASCOM* that added significantly more to the abstract idea in that case, the claimed invention here uses generic computing components to implement an abstract idea, namely correcting spelling and completing a phrase responsive to receiving a misspelled portion of a word.

Lastly, we find unavailing Appellants' contention that the claimed invention adds significantly more to the alleged abstract idea because the claimed invention does not preempt that idea. Reply Br. 16–17. Where, as here, the claims cover a patent-ineligible concept, preemption concerns "are fully addressed and made moot" by an analysis under the *Alice* framework. *See Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, 1379 (Fed. Cir. 2015).

For the foregoing reasons, then, the recited elements—considered both individually and as an ordered combination—do not contain an "inventive concept" sufficient to transform the claimed abstract idea into a patent-eligible application. Therefore, we are not persuaded that the Examiner erred in rejecting claim 1, and claims 2–5, 10–13, and 16–25 not argued separately with particularity.

THE REJECTION OVER RICHARDSON, CHURCH, AND JANIA

Regarding claim 1, the Examiner finds that Richardson discloses, among other things, (1) receiving a misspelled portion of a word ("wellne" in Figure 8) as part of a query to be submitted to a search engine; (2)

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identifying a multi-word phrase ("wellness dog food" or "wellness center") comprising the entire word ("wellness")—correctly spelled—and other words ("dog food" or "center") that follow the correctly-spelled word responsive to receiving the misspelled word portion; and (3) causing the multi-word phrase to be displayed on the client device as a suggested search query responsive to identifying the multi-word phrase. Final Act. 3–4; Ans. 15. The Examiner also finds that steps (2) and (3) occur before the entire word is received in Richardson. *See id.* Although the Examiner acknowledges that Richardson does not *explicitly* teach (1) the received word portion is misspelled and corrected, and (2) identifying and displaying a suggestion before receiving the entire misspelled word, the Examiner cites Church and Jania for teaching these respective features in concluding that the claim would have been obvious. Final Act. 3–4; Ans. 15–16.

Appellants argue that the cited prior art does not teach or suggest identifying a multi-word phrase responsive to receiving a misspelled portion of a word and before receiving the entire misspelling of the word, where the multi-word phrase comprises the entire correctly-spelled word and at least one other word that following the word as claimed. App. Br. 7–10; Reply Br. 17–20. According to Appellants, modifying Richardson with Church's teachings as the Examiner proposes would result in submitting words in a query to a search engine, and *then* identifying the query's misspelled words and generating candidate corrections. App. Br. 9. Appellants emphasize that any multi-word phrase would not be identified until after Church's spelling correction is performed and, therefore, after the entire word is received from the client computing device. *Id.* Appellants add that Jania does not cure this deficiency because when spelling assistance is provided in

Jania, the user must type the word's correct spelling and, therefore, Richardson's multi-word phrase would not be identified or presented to the user until after the user correctly spelled the word. App. Br. 10; Reply Br. 18–20.

ISSUE

Under § 103, has the Examiner erred in rejecting claim 1 by finding that Richardson, Church, and Jania collectively would have taught or suggested identifying a multi-word phrase (1) responsive to receiving a misspelled portion of a word, and (2) before receiving the entire misspelling of the word, where the multi-word phrase comprises the entire correctly-spelled word and at least one other word that following the word (the "multi-word phrase identification limitation")?

ANALYSIS

As noted above, the multi-word phrase identification limitation has two key temporal aspects, namely that a multi-word phrase is identified (1) responsive to receiving a *misspelled portion* of a word, and (2) before receiving the entire misspelling of the word. Our emphasis underscores that the claim requires that the multi-word phrase identification is triggered by misspelling a *portion* of a word—not the word itself.

As noted previously, the Examiner relies principally on Richardson for teaching many aspects of the multi-word phrase identification limitation, but also cites Church and Richardson for teaching that which is not taught *explicitly* in Richardson. *See* Final Act. 3–4. But in the Answer, the

Examiner finds that Richardson teaches the disputed claim language in its entirety. Ans. 15.

Nevertheless, we see no error in the Examiner's reliance on Richardson for at least suggesting the multi-word phrase identification limitation. As shown below, Richardson's Figure 8 shows a user interface that enables the user to enter a phrase in text entry box 830. Richardson ¶¶ 67–68. Suggestions, along with a number of possible hits or results for a search on that suggestion, are listed in text field 840—suggestions that may be selected by the user for use as a complete search query by selecting the desired entry and clicking the "Search" button 850. *Id.* ¶ 68.

As the user enters a phrase, results are displayed in area 860 that are based on a preliminary search. *Id.* ¶ 69. As the user continues to type, the list of suggestions can change as the user provides a more complete phrase. *Id.* The user can then submit a suggestion as a query by clicking the Search button. *Id.* Richardson's user interface in Figure 8 is reproduced below:
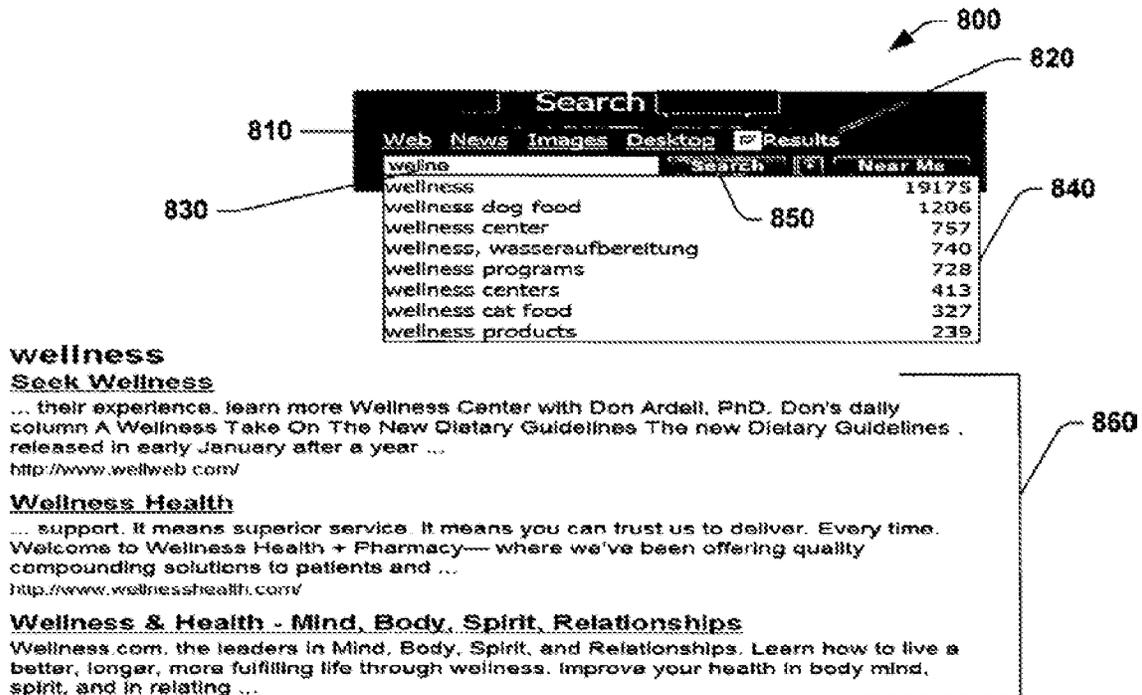
Richardson's user interface in Figure 8

In the example in Richardson's Figure 8 shown above, the term "wellne" was entered in text entry box 830 resulting in a list of suggestions including "wellness dog food" and "wellness center." The Examiner finds, and we agree, that the entered term "wellne" is misspelled because it lacks the letters "ss" at the end, thus rendering the term incomplete. Ans. 15. Not only is the term "wellness" misspelled in this example, but also a *portion* of that term, namely "wellnes." So even assuming, without deciding, that "wellne" is a prefix for the term "wellness" as Appellants contend (Reply Br. 18), Appellants' contention that there is ostensibly no portion of "wellne" that is misspelled is, at best, overstated, for there is at least one *other* portion of "wellness" that is misspelled.

Given Richardson's user interface functionality in Figure 8, Richardson at least suggests (1) receiving a misspelled portion of a word ("wellne") as part of a query to be submitted to a search engine; (2) identifying a multi-word phrase ("wellness dog food" or "wellness center") comprising the entire word ("wellness")—correctly spelled—and other words ("dog food" or "center") that follow the correctly-spelled word responsive to receiving the misspelled word portion; and (3) causing the multi-word phrase to be displayed on the client device in text field 840 as a suggested search query responsive to identifying the multi-word phrase. Notably, steps (2) and (3) occur before an entire misspelled word, namely "wellnes," is received.

Therefore, Richardson alone at least suggests the disputed limitation as the Examiner indicates. *See* Ans. 15. Although Church and Jania are technically cumulative to Richardson in this regard, we nonetheless see no harmful error in the Examiner's additional reliance on Church and Jania for the limited purposes for which they were cited, namely merely to show that it is known to (1) correct a received misspelled word portion, and (2) identify and display a suggestion before receiving the entire misspelled word. *See* Final Act. 3–4; Ans. 15–16. Appellants' arguments regarding Church's and Jania's individual shortcomings (*see* App. Br. 9–10; Reply Br. 18–20) are not only not germane to the limited purposes for which the references were cited, but do not persuasively rebut the Examiner's principal reliance on Richardson for also at least implicitly teaching or suggesting these features.

THE OTHER OBVIOUSNESS REJECTIONS

We also sustain the Examiner's obviousness rejections of claims 2, 10, 16–19, 22, and 25. Final Act. 8–16. Because these rejections are not argued separately with particularity, we are not persuaded of error in these rejections for the reasons previously discussed.

CONCLUSION

The Examiner did not err in rejecting (1) claims 1–5, 10–13, and 16–25 under § 101, and (2) claims 1, 2, 10–13, and 16–25 under § 103.

DECISION

We affirm the Examiner's decision to reject claims 1–5, 10–13, and 16–25.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED