

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GOOGLE INC.,
Petitioner,

v.

ARENDI S.A.R.L.,
Patent Owner.

Case IPR2014-00450
Patent 7,921,356 B2

Before MICHAEL R. ZECHER, NEIL T. POWELL, and
KEVIN W. CHERRY, *Administrative Patent Judges*.

POWELL, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

I. INTRODUCTION

Google Inc. (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–20 of U.S. Patent No. 7,921,356 B2 (Ex. 1001, “the ’356 patent”). Paper 1 (“Pet.”). On August 20, 2014, we instituted an *inter partes* review only as to claims 1, 7, 10, 12, 16, and 20. Paper 10 (“Dec. to Inst.”). On November 4, 2014, Patent Owner, Arendi S.A.R.L., filed its Patent Owner Response. Paper 16 (“PO Resp.”). On February 3, 2015, Petitioner filed a Reply. Paper 22 (“Pet. Reply”).

An oral hearing was held on April 21, 2015. A transcript of the oral hearing is included in the record. Paper 27 (“Tr.”).

We have jurisdiction under 35 U.S.C. § 6(b). This Final Written Decision is issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73. For the reasons that follow, we determine that Petitioner has shown, by preponderance of the evidence, that claims 1, 7, 10, 12, 16, and 20 of the ’356 patent are unpatentable.

A. *Related Proceedings*

Petitioner indicates that the ’356 patent has been asserted in the United States District Court for the District of Delaware in the following cases: *Arendi S.A.R.L. v. Google Inc.*, Case No. 1:13–cv–00919–LPS, filed on May 22, 2013; and Case No. 1:11–cv–00260–LPS, filed on March 29, 2011 and closed as of November 29, 2011. Pet. 1; see Paper 6, 2.

Additionally, other patents related to the ’356 patent have been the subject of petitions for *inter partes* review, including: Cases IPR2014-00203, IPR2014-00206, IPR2014-00207, IPR2014-00208, IPR2014-00214, and IPR2014-00452. Paper 6, 3–4.

B. The '356 Patent (Ex. 1001)

The '356 patent discloses a method, system, and computer readable medium that provide a function of searching a database or file for information corresponding to what a user types, or has partially typed, in a program, such as a word processor. Ex. 1001, [57]. If the database or file includes the corresponding information searched for, the information is displayed and possibly inserted into the word processor. *Id.* The '356 patent discusses an example of this function in connection with Figures 3 and 4. *Id.* at col. 5, l. 64–col. 6, l. 6. Figure 3 is reproduced below.

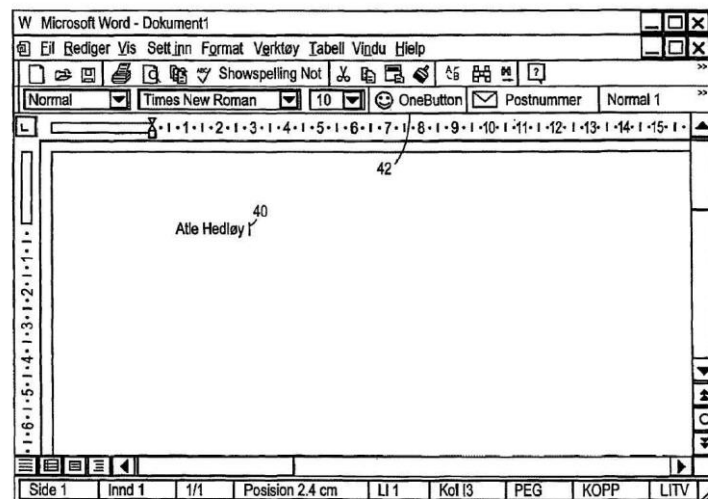


FIG. 3

Figure 3 shows a word processor document in which a user has typed name 40. *Id.* at col. 5, ll. 64–66. When the user hits button 42, the program according to the '356 patent retrieves name 40 from the document and then searches for name 40 in a database. *Id.* at col. 5, l. 66–col. 6, l. 2. As a result of this search, the program retrieves address 44, which is associated with name 40, and inserts address 44 in the document, as shown in Figure 4, reproduced below. *See id.* at col. 6, ll. 1–4.

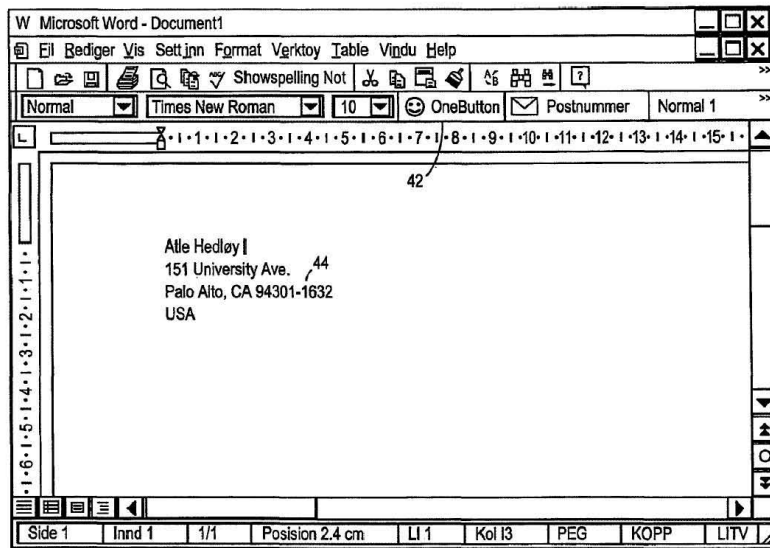


FIG. 4

Figure 4 shows the word processor document of Figure 3 with address 44 inserted. *See id.* The '356 patent discusses its process in greater detail in connection with Figure 1, reproduced below. *Id.* at col. 4, l. 28–col. 5, l. 59.

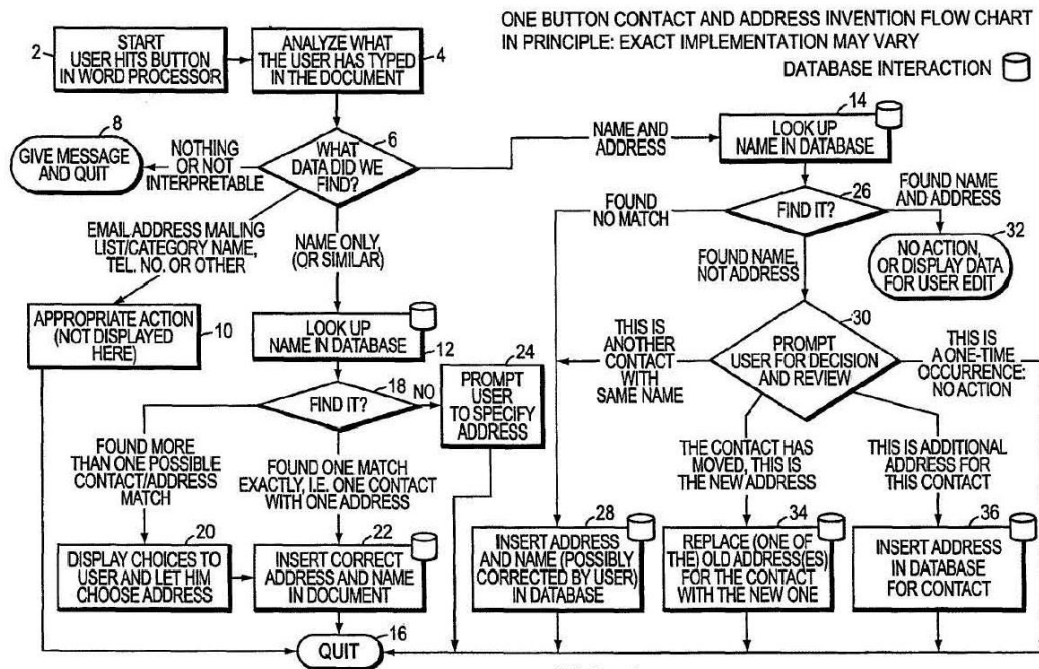


FIG. 1

Figure 1 shows a flow chart illustrating a method for address handling. *Id.* at col. 2, ll. 48–50. At step 2, the user initiates the analyzing and searching process by commanding a button, such as button 42 shown in Figures 3 and 4. *See id.* at col. 4, ll. 29–31; col. 5, l. 66–col. 6, l. 1; col. 6, ll. 5–6. At step 4, “the program analyzes what the user has typed in the document.” *Id.* at col. 4, ll. 29–31.

At step 6, the program determines what it found in the document. *Id.* at col. 4, ll. 31–32. If the program found nothing or uninterpretable information in the document, the program proceeds to step 8, in which the program provides an appropriate message for the user. *Id.* at col. 4, ll. 32–35. If the program found “an e-mail address mailing list/category name telephone number or other information, at step 10 an appropriate action is performed by the program.” *Id.* at col. 4, ll. 43–46.

If the program found only a name, initials, or the like, “the program looks up the name in the database at step 12” and determines at step 18 what it found. *Id.* at col. 4, ll. 46–49. If the program found that the name matches only one contact associated with only one address in the database, the program inserts the address and name in the document at step 22. *Id.* at col. 4, ll. 54–57. If the program found multiple possible addresses associated with the name in the database, the program presents the user with menu choices that allow the user to select the correct name and address for insertion in the document at step 22. *Id.* at col. 4, ll. 49–54.

C. Illustrative Claim

The pending ground of unpatentability involves claims 1, 7, 10, 12, 16, and 20 of the '356 patent. Claims 1, 12, and 20 are independent claims.

Claim 1 is illustrative, and reads as follows:

1. At least one non-transitory computer readable medium encoded with instructions which, when loaded on a computer, establish processes for contact information handling, implemented by a document editing program running in the computer, the processes comprising:

allowing a user to enter textual information into a document using the document editing program;

displaying the textual information in the document electronically using the document editing program;

allowing, in the document editing program, the user to select in the document at least a portion of the textual information while the textual information is displayed;

following user selection of textual information in the document analyzing, by the document editing program, the selected textual information to determine if the selected textual information is regarded by the document editing program as contact information and what type or types of contact information the selected textual information is;

providing an input device configured by the document editing program to allow the user to initiate an operation, such operation being of a type depending at least in part on the type or types of contact information of the selected textual information, the operation comprising identifying at least part of the selected textual information to use as a search term in order to find second information, of a specific type or types, associated with the search term in an information source external to the document;

after identifying at least part of the selected information to use as a search term, and in consequence of receipt by the

document editing program of an execute command from the input device, performing the operation, wherein the operation further comprises:

causing an electronic search in the information source, by an information management program external to the document editing program, for the search term in order to find whether the search term is included in the information source; and performing an action having a type,

wherein the type of action depends at least in part on whether the search term is included in the information source, and if the search term is so included, and if the information source includes the second information, the action comprises causing insertion of at least part of the second information into the document.

Ex. 1001, col. 10, l. 42–col. 11, ll. 21.

D. The Prior Art

The pending ground of unpatentability in this *inter partes* review is based on the following prior art:

U.S. Patent No. 5,859,636, issued Jan. 12, 1999 (“Pandit”) (Ex. 1004).

U.S. Patent No. 6,085,201, issued July 4, 2000 (“Tso”) (Ex. 1009).

E. Instituted Ground of Unpatentability

We instituted an *inter partes* review involving the following ground of unpatentability:

References	Basis	Claims Challenged
Tso and Pandit	§ 103(a)	1, 7, 10, 12, 16, and 20

Petitioner supports its challenge with a Declaration executed by Dennis R. Allison, on February 14, 2014 (“Allison Declaration”) (Ex. 1002).

Patent Owner relies on a Declaration executed by John V. Levy, Ph.D., on November 4, 2014 (“Levy Declaration”) (Ex. 2001).

II. ANALYSIS

A. *Claim Interpretation*

“A claim in an unexpired patent shall be given its broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, No. 2014-1301, 2015 WL 4097949, *7–8 (Fed. Cir. July 8, 2015) (In considering the broadest reasonable interpretation standard for *inter partes* review proceedings, the United States Court of Appeals for the Federal Circuit determined that “Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,” and “the standard was properly adopted by PTO regulation.”), *reh’g en banc denied*, 2015 WL 4100060 (Fed. Cir. July 8, 2015). Under that standard, the claim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art. *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1260 (Fed. Cir. 2010). Thus, we generally give claim terms their ordinary and customary meaning. *See In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (“The ordinary and customary meaning is the meaning that the term would have to a person of ordinary skill in the art in question.”) (citations and internal quotation marks omitted).

Petitioner and Patent Owner proffer constructions for a number of terms. Pet. 8–11; PO Resp. 9–19; Pet. Reply 1–3. In this decision, we construe only those claim terms in controversy, and we do so only to the

extent necessary to resolve the controversy. *See Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

1. “type” (Claims 1, 12, and 20)

Patent Owner and Dr. Levy contend that the claim term “type” means “category.” PO Resp. 9–11; Ex. 2001 ¶¶ 29–30. Additionally, Patent Owner and Dr. Levy make certain assertions about relationships between types of things. PO Resp. 11–15; Ex. 2001 ¶¶ 30–34. Petitioner does not proffer a construction of the term “type” itself, but disputes Patent Owner’s assertions about relationships between types of things. Pet. Reply 1–3.

a. Patent Owner’s argument that “type” means “category”

In support of their contention that “type” means “category,” Patent Owner and Dr. Levy state that:

The term “type” is used consistently throughout the claims and consistently throughout the disclosure of the ‘356 Patent. The independent claims refer to a “type” of operation, a “type” of action, and a “type” of contact information. There are five examples of this usage in the independent claims, as follows:

- a. “to determine if the selected textual information is regarded by the document editing program as contact information and what *type or types of contact information* the selected textual information is”[;]
- b. “providing an input device configured by the document editing program to allow the user to initiate an operation, *such operation being of a type depending at least in part on the type or types of contact information* of the selected textual information”[;]
- c. “the operation comprising identifying at least part of the selected textual information to use as a search

term in order to find *second information, of a specific type or types*”[;]

d. “wherein the operation further comprises ... causing an electronic search ... and *performing an action having a type*”[; and]

e. “wherein *the type of action* depends at least in part on whether the search term is included in the information source, and if the search term is so included, and if the information source includes the second information, the action comprises causing insertion of at least part of the second information into the document.”

PO Resp. 9–10; Ex. 2001 ¶ 29. Based on this assertion, Patent Owner and Dr. Levy conclude that “[t]hus, a ‘type’ refers to a ‘category.’” PO Resp. 10–11; Ex. 2001 ¶¶ 29–30.

We are not persuaded by these contentions of Patent Owner and Dr. Levy. Under the broadest reasonable interpretation standard, “claims should *always* be read in light of the specification and teachings in the underlying patent.” *Suitco Surface*, 603 F.3d. at 1260 (citation omitted) (emphasis added); *see also In re NTP, Inc.*, 654 F.3d 1279, 1288 (Fed. Cir. 2011) (claim construction “cannot be divorced from the specification and the record evidence”). In this case, aside from certain examples in the claims, Patent Owner and Dr. Levy do not cite any recitations of the term “type” in the Specification of the ’853 patent. In their assertion that the claims and disclosure of the ’356 patent use the term “type” consistently, Patent Owner and Dr. Levy point to a number of recitations of the term “type” in the claims, but they do not explain what is consistent about the claims’ use of the term with relevant disclosures in the Specification. *See* PO Resp. 10–11;

Ex. 2001 ¶¶ 29–30. The mere fact that the claims use the term repeatedly, by itself, does not provide a logical basis to conclude that the term means “category.”

Patent Owner and Dr. Levy also assert that the language of claims 1 and 2 demonstrate that “causing insertion of at least part of the second information into the document” constitutes one type of action, and that “causing indication to the user that the information source does not include the search term” constitutes another type of action. PO Resp. 12; Ex. 2001 ¶ 33. We discern no reason to doubt that these constitute two types of actions. At the same time, however, we find this observation does not clarify the meaning of the term “type,” itself. Indeed, we find that neither Patent Owner’s and Dr. Levy’s assertions about the language of the claims, nor the plain language of the claims, adds any clarity to the meaning of the term “type.”

Aside from the claims, the ’853 patent uses the word “type” as a noun or adjective in the following statements:¹

- (1) “Using address type.” Ex. 1001, Fig. 6.
- (2) “Use address type.” *Id.* at Fig. 9.
- (3) “Address type.” *Id.* at Fig. 11.
- (4) “Address type already in use.” *Id.* at Fig. 13.
- (5) “This screen includes . . . the address type selection 54, such as home, business, etc. . . .” *Id.* at col. 7, ll. 6–13.

¹ Although not relevant to the present claim construction issue, we note that the ’356 patent also extensively uses the verb “type,” as in typing text.

(6) “The updated screen includes . . . the fields for the address type selection 54, such as home, business, etc. . . .” *Id.* at col. 7, ll. 54–57.

(7) “Although the present invention is defined in terms of word processing documents, such as WORD™ documents and EXCEL™ spreadsheets, the present invention is applicable to all *types* of word processing documents such as NOTE-PAD™, WORDPAD™, WORDPERFECT™, QUATROPROT™, AMIPRO™, etc., as will be readily apparent to those skilled in the art.

Although the present invention is defined in terms of information management or database programs, such as OUTLOOK™, etc., the present invention is applicable to all *types* of information management or database programs such as ACCESS™, ORACLE™, DBASE™, RBASE™, CARDFILE™, including “flat files,” etc., as will be readily apparent to those skilled in the art.

Although the present invention is defined in terms of providing an input device, such as a button 42 in a word processor for address handling therein, the present invention may be practiced with all *types* of input devices, such as touch screen, keyboard button, icon, menu, voice command device, etc., as will be readily apparent to those skilled in the art.” Ex. 1001, col. 9, l. 64–col. 10, l. 16 (emphases added).

Like the claims, these disclosures, which contain no discussion of what the term “type” means, do not clarify the meaning of the term itself. Neither the claims nor the other disclosures of the ’853 patent suggest any meaning of the term “type” other than its ordinary and customary meaning. Indeed, the intrinsic evidence illustrates the flaw in Patent Owner’s proposed construction. Here, “type” is used in its ordinary sense and “category” is merely another ordinary English word. Patent Owner points to nothing in

the intrinsic evidence that suggests any specific difference that using the word “category” over “type” would illuminate. In this case, without some specific difference in using one ordinary term over the other, Patent Owner’s proposed one-for-one substitution of “category” for “type” in the claims creates opportunities for uncertainty rather than provides clarity.

Given the absence of an explicit definition in the Specification of the ’853 patent, we look simply to the ordinary and customary meaning of “type.” *See Translogic*, 504 F.3d at 1257. In a general purpose dictionary, we find that one ordinary meaning of the term “type” is “a kind, class, or category, the constituents of which share similar characteristics.” COLLINS ENGLISH DICTIONARY (1998) (Ex. 3001). This meaning of the term “type” does not contradict any of the intrinsic evidence regarding the term “type.” *See Starhome GmbH v. AT&T Mobility LLC*, 743 F.3d 849, 856 (Fed. Cir. 2014) (“[J]udges are free to rely on dictionaries at any time during the process of construing claims ‘so long as the dictionary definition does not contradict any definition found in or ascertained by a reading of the patent documents.’”) (citations omitted). Accordingly, we conclude that the broadest reasonable interpretation of the term “type” is “a kind, class, or category, the constituents of which share similar characteristics.”²

b. Patent Owner’s arguments that types must be mutually exclusive

In addition to arguing that “type” means “category,” Patent Owner contends that different instances of a type of thing do not constitute different

² We recognize that our construction of the term “type” includes “category,” but we note that this construction is not limited to “category.”

types of things, but instead merely constitute different instances of the same type. PO Resp. 11 (citing Ex. 2001 ¶¶ 29–30). Patent Owner adds that if each instance of something (e.g., each instance of a template or a name) constituted a different “type” of thing, then the word “type” would be redundant in the claim recitation “type of action.” *Id.* at 13–14. Indeed, Patent Owner argues, the claims require two types of actions, and different instances of those types of actions are only different instances of the same type of action, not different types. *Id.* at 11–14 (citing Ex. 2001 ¶¶ 29–34).

Specifically, Patent Owner argues that “claims 1 and 2 call out two distinct ‘types’ of action: (1) ‘causing insertion of at least part of the second information into the document’[;] and (2) ‘causing indication to the user that the information source does not include the search term.’” *Id.* at 12 (citing Ex. 2001 ¶ 33). In support of this contention, Patent Owner asserts that the claim 1 language “the type of action depends at least in part on whether the search term is included in the information source” creates at least two possibilities: (a) the search term is in the information source, or (b) the search term is not in the information source. *Id.* at 11 (citing Ex. 2001 ¶ 31). Patent Owner elaborates that, “[i]f the search term *is* included, then [claim 1] specifies that if also ‘the information source includes the second information, the action comprises causing insertion of at least part of the second information into the document.’” *Id.* (citing Ex. 2001 ¶ 32). Patent Owner adds that, “[o]n the other hand, if the search term *is not* included, claim 2 requires that ‘when the information source does not include the search term, the action comprises causing indication to the user that the

information source does not include the search term.”” *Id.* at 11–12 (citing Ex. 2001 ¶ 32).

Petitioner disagrees with Patent Owner’s suggestion that the claim language requires mutually exclusive actions depending on whether the search term is in the information source. Pet. Reply 2–3. Petitioner argues that the claim language “wherein the type of action depends *at least in part* on whether the search term is included” (emphasis added) allows for factors other than the presence or absence of the search term to affect the type of the action. *Id.* at 2. Petitioner further argues that the claim language “the action *comprises* causing insertion of at least part of the second information into the document” (emphasis added) allows for aspects of the action other than the insertion to vary. *Id.* In connection with this, Petitioner asserts that “[o]ther exemplary ‘actions’ listed in the specification include displaying contact match choices in a menu for user decision (Ex. 1001, 4:49-52) and presenting data for the user to edit or update (*id.*, 4:62-67).” Pet. Reply 2–3.

Petitioner also argues that Dr. Levy admitted that the characteristics affecting the categories of various items overlap, such that they are not mutually exclusive. Pet. Reply 6 (citing Ex. 1017, 114, l. 21–117, l. 3). For example, Petitioner argues that Dr. Levy admitted that two pens could be both within the same category (e.g., “writing implements”) and in different categories (e.g., “things that write with red ink”). *Id.* (citing Ex. 1017, 117, l. 4–118, l. 10; 118, l. 19–119, l. 9). Petitioner additionally asserts that Dr. Levy acknowledged the existence of an infinite number of ways to divide the world. *Id.* (citing Ex. 1017, 118, ll. 14–16).

We agree with Petitioner that neither the term “type,” itself, nor other aspects of the claim language require dividing actions or other things into a set number of mutually exclusive categories. With respect to the recitation in claim 1 of “wherein the type of action depends at least in part on whether the search term is included in the information source,” the language “at least in part” and “comprises” makes the plain meaning of the claim language broader than Patent Owner contends. Additionally, Petitioner’s observation that the Specification discloses examples of more than two types of actions supports a conclusion that the plain meaning of the claims is consistent with the Specification. *See id.* at 2–3. Furthermore, Dr. Levy’s admission that “there are literally an infinite number of ways to divide the world” vitiates Patent Owner’s arguments that the term “type” requires separating things into a set number of mutually exclusive categories. Ex. 1017, 118, ll. 14–16. Thus, we decline to read this concept of mutually exclusive actions into our construction of “type” recited above.

2. *“wherein the type of action depends at least in part on whether the search term is included in the information source” (claims 1, 12, and 20)*

Patent Owner argues that this claim language “requires two possibilities for the type of action,” including “a first action type that occurs if the search term *is* included in the information source and a second action type that occurs if the search term *is not* include in the information source.” PO Resp. 15. In support of this contention, Patent Owner does not offer any additional arguments beyond those discussed in Section II.A.1.b above.

As also discussed above in Section II.A.1.b, Petitioner argues this claim language is broader than Patent Owner contends. Pet. Reply 1–3.

Petitioner notes that the claim language states that the type of action depends “at least in part” on the presence or absence of the search term, and that the action “comprises” causing insertion of second information. *Id.* at 2.

Petitioner also cites the Specification of the ’356 patent as disclosing examples of types of actions other than the two identified by Patent Owner. *Id.* at 2–3 (citing Ex. 1001, col. 4, ll. 49–52, 62–67). Petitioner contends that the claim language should be construed as requiring that “the character of the action changes based, at least in part, on whether the search term is included in the information source.” *Id.* at 3.

For the reasons discussed above in Section II.A.1.b, we are persuaded by Petitioner that the proper construction of the claim language is broader than Patent Owner asserts. Additionally, we are persuaded that Petitioner’s proposed construction is consistent with the Specification of the ’356 patent and captures the plain meaning of the claim language. Petitioner’s proffered construction captures the plain meaning of the nature of the conditional relationship in the claim—the presence or absence of the search term affects the type of action, but other things also may affect the type of the action. Additionally, Petitioner’s contention that it is “the character of the action” that changes is consistent with our construction of “type” as meaning “a kind, class, or category, the constituents of which share similar characteristics.” See Section II.A.1.a. Accordingly, we conclude that the broadest reasonable construction of the claim language “wherein the type of action depends at least in part on whether the search term is included in the information source” requires that “the character of the action changes based,

at least in part, on whether the search term is included in the information source.”

3. “operation” (*claims 1, 12, and 20*)

Patent Owner states that:

The independent claims of the ‘356 patent all refer to the performance of an “operation”. The claims require that the operation comprises:

causing an electronic search in the information source, by an information management program external to the document editing program, for the search term in order to find whether the search term is included in the information source; *and performing an action* having a type [emphasis added].

PO Resp. 16–17. Based on this, Patent Owner argues that “the operation includes both *searching* an information source and *performing a separate action*.” *Id.* at 17. Patent Owner further notes that the independent claims each recite that the operation has a type, the “type depending at least in part on the type or types of contact information of the selected textual information.” *Id.* Patent Owner adds that “the claim requires at least two different types of operations wherein each operation is dependent on a different type of contact information as identified in the selected textual information.” *Id.*

In response, Petitioner agrees with Patent Owner that the “claims require searching an information source and performing an action based ‘at least in part’ on the results of that search.” Pet. Reply 3. Petitioner argues, however, that Patent Owner’s “apparent argument that both of these undisputed elements should be somehow integrated into the construction of ‘operation’ . . . confuses the issue.” *Id.*

Patent Owner's arguments contain ambiguities that cause some confusion regarding whether Patent Owner is offering a construction of the term "operation," itself, or a construction of all of the other limitations tied to the term "operation." As Petitioner concedes, the limitations related to the operation having a type and including searching and performing an action are recited expressly in the independent claims as further limitations on the recited "operation." Given this, each independent claim as a whole does require these limitations. At the same time, to the extent Patent Owner suggests that the term "operation," itself, requires these other limitations, we disagree. It is well settled that a claim interpretation that renders a claim term or phrase superfluous is disfavored. *Stumbo v. Eastman Outdoors, Inc.*, 508 F.3d 1358, 1362 (Fed. Cir. 2007). If the term "operation," itself, required that the operation have a type and include searching and performing an action, the claims' explicit recitation of these further limitations would be superfluous.

B. Obviousness of Claims 1, 7, 10, 12, 16, and 20 Based on Tso and Pandit

Petitioner asserts that claims 1, 7, 10, 12, 16, and 20 are unpatentable under 35 U.S.C. § 103(a) over Tso and Pandit. Pet. 48–59; Pet. Reply 1–15. Petitioner explains how Tso and Pandit allegedly render obvious the claimed subject matter. Petitioner also relies on the Declaration of Mr. Allison. Ex. 1002. Patent Owner disagrees with Petitioner's assertions and relies on the Declaration of Dr. Levy. PO Resp. 1–41; Ex. 2001.

A claim is unpatentable under 35 U.S.C. § 103(a) "if the differences between the subject matter sought to be patented and the prior art are such

that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” Prior art references must be “considered together with the knowledge of one of ordinary skill in the pertinent art.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Regarding the level of ordinary skill in the art, Petitioner cites Mr. Allison’s testimony. Pet. 11 (citing Ex. 1002 ¶¶ 21–60). Mr. Allison testifies that “a person of ordinary skill in the art pertaining to the ’356 patent in the relevant timeframe would have at least a Bachelor’s degree in Computer Science or Electrical Engineering or related discipline and about two years’ experience designing applications that use databases.” Ex. 1002 ¶ 21. Patent Owner does not specify a level of ordinary skill in the art in its Patent Owner Response, but Dr. Levy testifies that “a person of ordinary skill in the art pertaining to the ’356 patent corresponds to one in 1998 who had at least a Bachelor’s degree in Computer Science or Electrical Engineering or related discipline and approximately two years of experience designing user applications or software modules.” Ex. 2001 ¶ 15. Mr. Allison’s and Dr. Levy’s testimony regarding the level of ordinary skill in the art differ only slightly. Our findings and conclusions apply under either Mr. Allison’s or Dr. Levy’s description of the level of ordinary skill in the art.

1. *Tso*

Tso discloses a context-sensitive template engine that automatically generates a text message, thereby helping a user generate the text message with minimal keyboard access. Ex. 1009, col. 1, ll. 56–63; col. 2, ll. 59–61.

The system allows users to generate a text message “from scratch” or, alternatively, in response to a previously received message. *Id.* at col. 1, ll. 58–60. Tso discloses:

Given an input text passage, such as a portion of a partially-composed outgoing text message or a portion of a received text message, the template engine can suggest one or more predefined, context-appropriate sentences to include in the outgoing text message based on the actual content of the input text passage.

Id. at col. 2, ll. 61–67.

Tso shows how its template engine interacts with other parts of the system architecture illustrated in Figure 1, reproduced below.

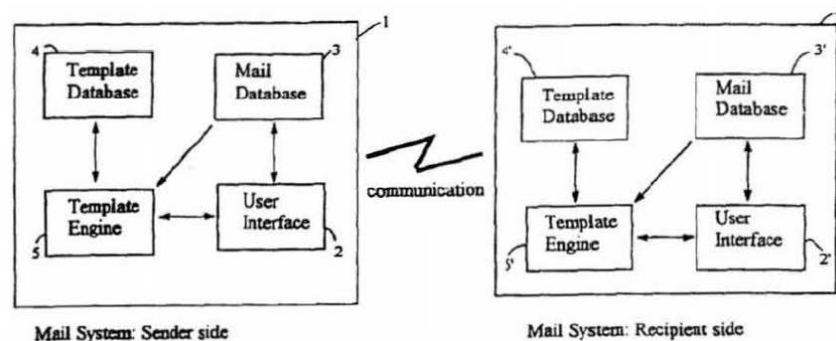


Figure 1

Figure 1 provides a block diagram illustrating relationships between template engines 5, 5' and other parts of a system, including user interfaces 2, 2', mail databases 3, 3', and template databases 4, 4'. *See id.* at col. 2, ll. 46–48; col. 3, ll. 45–49, 63–65. Template database 4 stores a set of predefined templates. *Id.* at col. 5, ll. 7–9. Additionally, Tso discloses that its system allows a user to create custom templates. *Id.* at col. 7, ll. 19–25;

col. 8, ll. 5–14. Tso discloses that “a ‘template’ is a text string consisting of one or more ‘phrases.’” *Id.* at col. 3, ll. 6–7.

Tso also discloses that “each template is associated with a set of ‘keywords,’” and that the keywords each have a predetermined “weight.” *Id.* at col. 3, ll. 16–18. As an example, Tso discloses that one template may be associated with the keywords and weights set forth in the table reproduced below:

keyword	weight
where	50
when	50
meet	45
place	25
time	25

Id. at col. 5, ll. 23–34. The table lists five keywords and an associated weight for each of the keywords.

Tso discloses that, “[w]hen a user wishes to compose a new e-mail message or generate a reply to a received e-mail message, the user selects a text string to be processed, for example, by clicking-on it.” *Id.* at col. 4, ll. 31–34. In response, user interface 2 “pass[es] the entire text message being edited by the user and the current cursor position to” template engine 5 for processing. *Id.* at col. 4, ll. 42–46. Within this text, template engine 5 identifies words to use as search words. *Id.* at col. 4, l. 48–col. 5, l. 41.

Template engine 5 uses the search words to search template database 4. *Id.* at col. 5, ll. 7–9. Template engine 5 does so by comparing the keywords associated with each template to the search words. *Id.* at col. 5, ll. 9–11. In this process,

[i]f a keyword is found in the array, the weight value associated with that keyword is added to a running total

weight value for that template. In this fashion, the template engine 5 determines a total weight value for each template in the template database [4]. The template with the highest total weight value is then designated as the most appropriate template for the text string being processed.

Id. at col. 5, ll. 11–18.

As an example, Tso explains how template engine 5 would compare the weighted keywords in the table reproduced above to the following text string: “When and where would you like to meet?” *Id.* at col 5, ll. 23–41. Tso explains that, because the keywords “where,” “when,” and “meet” match words in the text string, the template associated with the exemplary keywords would receive a weighted score of 145. *Id.* at col. 5, ll. 36–41.

Once template engine 5 “determines the most appropriate template, it passes that template to the user interface 2 for presentation to the user.” *Id.* at col. 5, ll. 42–44. Tso further discloses that “[i]t is conceivable that more than one template will have a highest total weight value, in which case the user interface 2 could present multiple templates to the user” for the user to select the most appropriate one. *Id.* at col. 5, ll. 49–53. Tso additionally discloses that once template engine 5 finishes processing a section of text selected by the user,

the additional text generated by the template engine 5 is passed to the e-mail application for insertion in the message being composed. The user interface 2 could be programmed to automatically insert the generated text at the end of the message text, or alternatively could prompt the user to place the cursor at a particular location where the text is to be inserted.

Id. at col. 6, l. 66–col. 7, l. 6.

2. Pandit (Ex. 1004)

Pandit's disclosure relates to recognizing text in a body of text as belonging to a class of text and executing an operation related to the recognized text. Ex. 1004, col. 1, ll. 51–53. Pandit discusses one example of such operations in connection with Figures 1c and 1d, reproduced below.

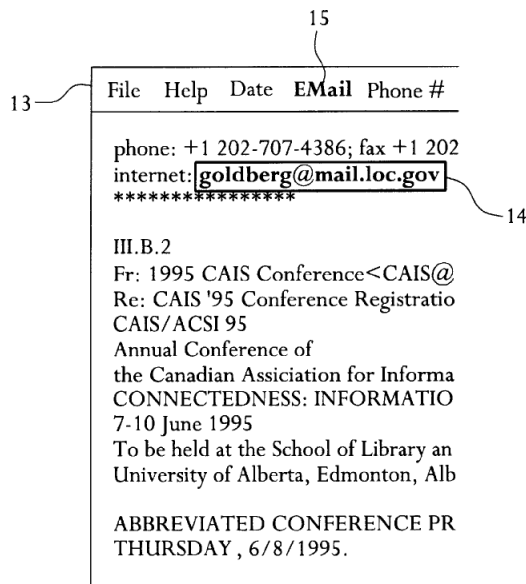


FIG. 1c

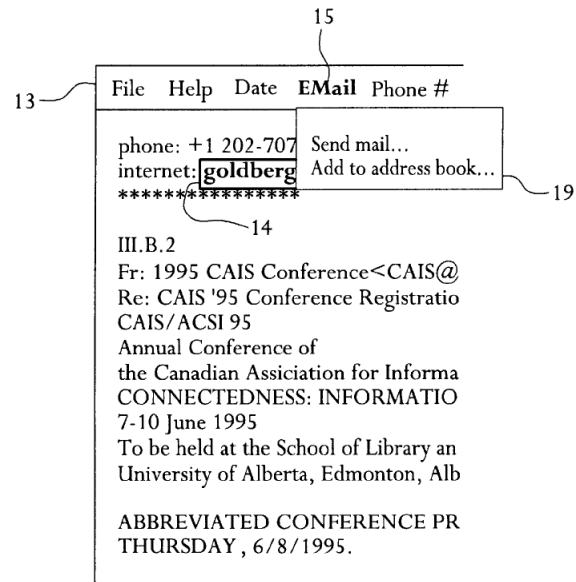


FIG. 1d

Figures 1c and 1d illustrate text on video monitors. *Id.* at col. 1, ll. 60–61. In Figure 1c, e-mail address 14 is accented. *Id.* at col. 2, l. 50. The accented text is recognized, and the name of a menu corresponding to the type of text recognized is highlighted in menu bar 13. *Id.* at col. 2, ll. 9–13; Figs. 1c, 2. Specifically, with e-mail address 14 accented and recognized, menu name EMail 15 is highlighted, indicating that menu is enabled. *See id.* at col. 2, ll. 51–53; Fig. 1c. As shown in Figure 1d, a user can call the enabled menu, resulting in pulled-down EMail menu 19, which includes programs related to e-mail. *See id.* at col. 2, ll. 16–19, 56–63; Figs. 1d, 2.

In connection with Figures 1e and 1f, Pandit discusses another example of recognizing a class of text and executing a related operation. See *id.* at col. 1, ll. 51–53; col. 2, l. 64–col. 3, l. 10. Figures 1e and 1f are reproduced below.

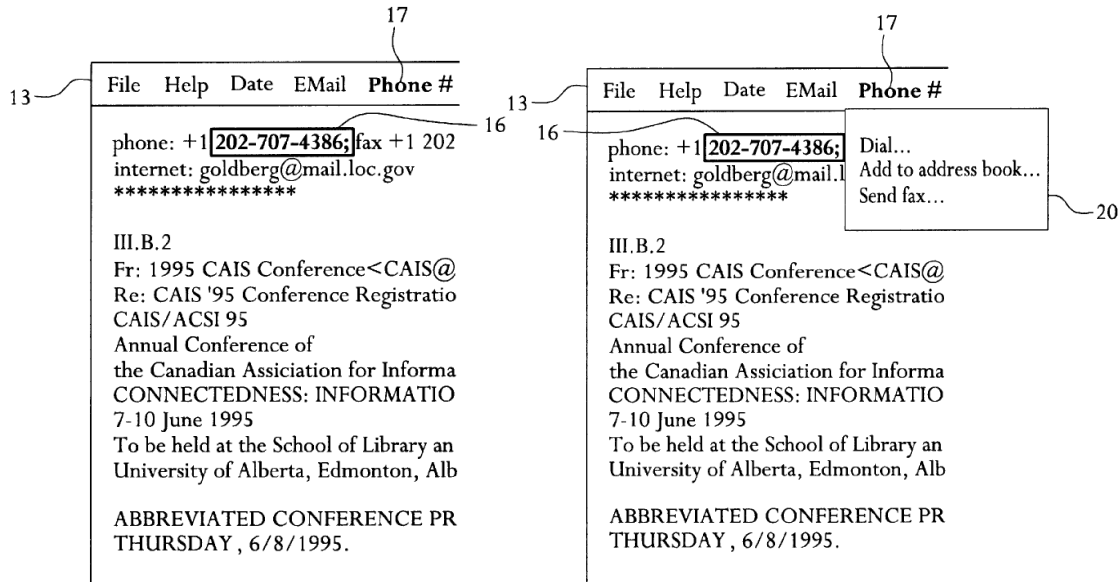


FIG. 1e

FIG. 1f

Figures 1e and 1f illustrate text on video monitors. *Id.* at col. 1, ll. 60–61. In Figure 1e, telephone number 16 is accented. *Id.* at col. 2, ll. 64–65. The accented text is recognized, and the name of a menu corresponding to the type of text recognized is highlighted in menu bar 13. *Id.* at col. 2, ll. 9–13; Figs. 1c, 2. Specifically, “[t]he pull down menu named Phone #17 is highlighted and preferably identifies the executable operations and/or programs which are relevant to telephone and telefax numbers.” *Id.* at col. 2, l. 65–col. 3, l. 1.

3. Discussion

Petitioner contends that each limitation of claims 1, 7, 10, 12, 16, and 20 is taught by, or obvious in view of, Tso and Pandit. Pet. 48–59.

Petitioner cites Tso as teaching most of the limitations of the claims. See Pet. 52–59. For example, Petitioner cites Tso as teaching that its system allows a user to enter text into a document. *Id.* at 53. Petitioner also cites Tso as teaching that its system allows a user to select at least a portion of the text. *Id.* at 53–54. Additionally, Petitioner cites Tso as teaching that its system analyzes the selected text, and that the system identifies at least part of the text to use as a search term in order to find second information associated with the search term in an information source external to the document. *Id.* at 54–56. Petitioner also cites Tso as teaching that its system

perform[s] an action having a type, wherein the type of action depends at least in part on whether the search term is included in the information source, and if the search term is so included, and if the information source includes the second information, the action comprises causing insertion of at least part of the second information into the document.

Id. at 57–58.

Petitioner cites Pandit in connection with the claim language “providing an input device configured by the document editing program to allow the user to initiate an operation, such operation being of a type depending at least in part on the type or types of contact information of the selected textual information.” *Id.* at 55–56. Petitioner asserts that Pandit teaches, among other things, analyzing selected textual information to determine if it is a particular type of contact information, and executing

actions based on the type of information identified. *Id.* at 56. Petitioner cites the following portions of Pandit's claims 1 and 7:

(3) recognizing the selected text as belonging to the predetermined class if the format of the selected text matches the predetermined format; and

(b) performing an operation associated with the predetermined class using the recognized text as a parameter. . . .

7. The method of claim 1, wherein the text is one of a date, name, telephone number, telefax number, e-mail address, and Uniform Resource Locator.

Ex. 1004, col. 5, ll. 63–67, col. 6, ll. 30–32; Pet. 56–57.

Petitioner argues that it would have been obvious “to use Pandit’s recognition of certain types of contact information in Tso’s system,” and, specifically, it would have been obvious “to use Tso’s system to identify contact information in the document, and to insert related contact information.” Pet. 50–51.

Petitioner argues that it would have been obvious for a number of reasons to so combine the teachings of Tso and Pandit. *Id.* at 49–52. Petitioner argues that “the [Tso and Pandit] systems are technically compatible from the outset” because both Tso and Pandit teach analyzing text selected by a user, performing an operation based on the content of the selected text, and using “[dynamic link library] plugins to integrate with common text processing programs, noting that the kind of text-processing program is not of foremost importance.” *Id.* at 49 (citing Ex. 1004, col. 2, ll. 4–8; col. 3, ll. 37–39; col. 4, ll. 32–55; Ex. 1009, col. 3, ll. 20–25; col. 4, ll. 32–47; Ex. 1002 ¶¶ 231–232). In this vein, Petitioner further argues that

Pandit teaches its system can be employed to generate an e-mail templating system like the one Tso discloses, and that Pandit teaches its system can be used with many text processing operations, including text processing operations of e-mail programs. *Id.* at 50 (citing Ex. 1004, col. 2, ll. 56–63; col. 3, ll. 27–33; Ex. 1002 ¶¶ 233–234).

Additionally, Petitioner cites a number of other teachings of Tso and Pandit as support for the argument that it would have been obvious to combine these references. For example, Petitioner further notes that Tso endeavors to reduce the number of keystrokes needed to compose an e-mail, that Tso already discloses templates related to location, and that Tso encourages the creation of new templates. *Id.* at 51 (citing Ex. 1009, col. 6, ll. 24–37, 60–61; col. 7, ll. 14–25; col. 8, ll. 5–14; Ex. 1002 ¶¶ 236–237). In light of this, Petitioner argues that modifying Tso’s system to include templates with specific address information would have furthered Tso’s object of reducing the number of keystrokes needed to compose an e-mail. *Id.*

Petitioner further argues that Pandit’s teaching of processing contact information represented a known technique that could have been applied to Tso’s system without any unpredictable results. *Id.* at 51–52 (citing *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398, 416–19 (2007); Ex. 1002 ¶ 238). Additionally, Petitioner argues that combining the teachings of the references would have been within the ordinary skill in the art, citing to the references’ disclosure of using common technology, as well as Mr. Allison’s supporting testimony. *Id.* at 52 (citing Ex. 1009, 3:23–25; Ex. 1002 ¶ 239).

We have reviewed the evidence and arguments presented in the Petition, Patent Owner's Response, and Petitioner's Reply. Based on that review, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that all of the limitations of each of claims 1, 7, 10, 12, 16, and 20 are taught by, or rendered obvious in view of, Tso and Pandit, and that each of these claims, considered as a whole, would have been obvious over Tso and Pandit. Pet. 3–13, 48–59; PO Resp. 1–41; Pet. Reply 1–15.

The parties' disputes revolve around whether certain limitations of the claims are taught by, or obvious in view of, Tso and Pandit, and whether Petitioner has provided an articulated reason with some rational underpinning to support a conclusion that the claimed inventions would have been obvious in view of Tso and Pandit. Each of the claim limitations in dispute appears verbatim in each of independent claims 1, 12, and 20. Accordingly, our discussion of the disputed claim limitations applies equally to each of independent claims 1, 12, and 20, as well as dependent claims 7, 10, and 16.

a. *Whether Pandit discloses “an operation”*

With respect to “an operation” recited in the independent claims, Petitioner cites Pandit's disclosure of “recognizing the selected text as belonging to the predetermined class” and “performing an *operation* associated with the predetermined class using the recognized text as a parameter.” Ex. 1004, col. 5, ll. 63–67 (emphasis added); Pet. 56–57. Patent Owner argues that Pandit does not teach “the kind of operations as defined by the language of the independent claims” because “Pandit fails to disclose searching.” PO Resp. 18. Based on this, Patent Owner argues that

“Pandit does not associate a ‘type of operation’ with the ‘type of contact information.’” *Id.*

Petitioner responds that Patent Owner admits Pandit identifies different types of contact information and uses that information to perform what Pandit describes as “operations.” Pet. Reply 9. Petitioner further states that Patent Owner “argues that [Pandit’s] operations are ‘not the kind of operations’ of the ’356 Patent.” *Id.* Petitioner argues that the Specification of the ’356 patent contradicts this, citing disclosures in both Pandit and the ’356 patent of updating contact information records. *Id.* (citing Ex. 1001, col. 6, ll. 7–38, col. 6, l. 60–col. 7, l. 23, Figs. 4–5; Ex. 1004, col. 2, l. 51–col. 3, l. 10). Additionally, Petitioner notes that it relies on Tso as teaching certain constituent parts of the claimed “operation,” arguing that it would have been obvious to combine the teachings of the references. Pet. Reply 9–10.

For the reasons explained above in Section II.A.3, the claim language “operation,” itself, does not require an electronic search or performing an action having a type. Accordingly, Patent Owner’s assertion that Pandit does not teach “wherein the operation further comprises: causing an electronic search . . . and performing an action having a type” does not persuade us that Pandit does not teach “an operation.” See PO Resp. 18. To the contrary, Petitioner’s reasoning and evidence, including Pandit’s express disclosure of performing “an operation” and Petitioner’s identification of similarities between Pandit’s disclosure and that of the ’356 patent, persuade us that Pandit discloses an “operation.” Indeed, as Petitioner notes, Patent Owner concedes that “Pandit identifies different types of contact information

(claim 7, e.g. name, telephone number, telefax number, e-mail address) and performs an *operation* based upon the type of contact information (claim 1 i.e. performing an operation associated with the predetermined class).” PO Resp. 18 (emphasis added); Pet. Reply 9.

Furthermore, we are persuaded that Pandit teaches an operation “of a type depending at least in part on the type or types of contact information of the selected textual information,” as recited in the independent claims. See Pet. 11–12, 48–52, 55–57; Pet. Reply 9–10. For example, we are persuaded that this is taught by the disclosure in Pandit’s claims 1 and 7 that Petitioner cites. As noted above in Section II.A.1.a, we construe “type” as meaning “a kind, class, or category, the constituents of which share similar characteristics.” Given this, we find Pandit teaches identifying the type of contact information by disclosing “recognizing the selected text as belonging to the predetermined *class*” “wherein the text is one of a date, name, telephone number, telefax number, e-mail address, and Uniform Resource Locator.” Ex. 1004, col. 5, ll. 63–64, col. 6, ll. 30–32 (emphasis added). Furthermore, we find that Pandit’s disclosure of “performing an operation associated with the predetermined *class* using the recognized text as a parameter” (Ex. 1004, col. 5, ll. 66–67 (emphasis added)) teaches “such operation being of a type depending at least in part on the type or types of contact information of the selected textual information,” as recited in the independent claims.

Furthermore, we are persuaded that Pandit’s statement that “the text is one of a date, name, telephone number, telefax number, e-mail address, and Uniform Resource Locator” identifies multiple classes (i.e., types) of

information that Pandit's system recognizes. *See, e.g.*, Pet. 48–49 (“Pandit describes a system for allowing a user to select text, analyzing the selected text to recognize a class of information such as an email address, a phone number or a street address.”). Additionally, given that the cited disclosure teaches multiple types of contact information that the system may recognize, and that the recited “operation” is associated with the type of contact information recognized, we find that Pandit teaches multiple types of operations, which depend on the type of contact information identified.

Patent Owner's assertion that Pandit's operation does not include all of the other limitations tied to the operation recited in the independent claims is misplaced because Petitioner relies on Tso as teaching these other limitations. *See* Pet. 55–58.

b. Whether Tso discloses an “operation”

Patent Owner argues that Tso does not teach an operation of a “type depending at least in part on the type or types of contact information of the selected textual information,” as recited in the independent claims. PO Resp. 18. We find this argument unpersuasive because we are persuaded that Pandit teaches an operation of a “type depending at least in part on the type or types of contact information of the selected textual information,” and because Petitioner relies on Pandit in combination with Tso as rendering the claims obvious. *See* Pet. 48–59.

c. Whether Petitioner provides an articulated reason with a rational underpinning to justify a conclusion of obviousness

Patent Owner contends that “[t]he Petitioner fails to provide a credible rationale by which a combination of Tso and Pandit would lead to the

invention as claimed. The Petition lacks an ‘articulated reasoning with some rational underpinning to support the legal conclusion of obviousness.’” PO Resp. 25 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)). Patent Owner argues that Petitioner does not provide adequate detail about how the teachings of Tso and Pandit would be combined. *Id.* at 26–28. In concert with this, Patent Owner takes the initiative, alleging to “show that any possible combination of these two references by one of ordinary skill in the art fails to provide more functionality than in any one of the references taken alone, and that the combination therefore fails to render the subject matter obvious.” *Id.* at 26. Patent Owner asserts that Dr. Levy performed an “analysis of how the references would actually be combined by one of ordinary skill in the art,” in which “Dr. Levy considers two possible modes of combining Pandit and Tso.” *Id.* at 28–33.

Patent Owner explains that Dr. Levy’s “first mode” involves “using the system of Pandit with the teachings of Tso.” *Id.* at 29. Regarding his first mode, Dr. Levy opines that “[a] person of ordinary skill in the art attempting to combine Pandit with Tso could take the ‘front-end’ of Pandit and perform recognition on the input text in order to classify it by type.” Ex. 2001 ¶ 39. Dr. Levy elaborates that one could use the results in a search to pull up a template that is a list of options, but Pandit already does this, so this wouldn’t add any additional functionality. *Id.* Dr. Levy also opines that, “[f]urthermore, this analysis does not address the fact that Pandit may classify different input words into different types, and therefore when used as search terms, these Pandit types would be different and conflicting.” *Id.* Dr. Levy also asserts that his first mode of combining the references would

not produce the subject matter of the independent claims because Tso allegedly does not disclose “a database of associations between names and phone numbers,” and Pandit allegedly “uses the *type* of selected textual information as a search term . . . , not the textual information itself.”

Ex. 2001 ¶ 40; PO Resp. 30–31.

Patent Owner explains that in Dr. Levy’s “second mode,” “the system of Tso is modified with the teachings of Pandit.” PO Resp. 31. In this mode, Patent Owner and Dr. Levy assert, one could begin with the teachings of Tso and employ Pandit’s teachings to recognize the type of each search term. Ex. 2001 ¶ 41; PO Resp. 31–32. Asserting that “Pandit can only identify the type of the search terms, and Tso does not teach a way to use type information,” Patent Owner and Dr. Levy conclude that the second mode of combination “fails to add more functionality than present in Tso alone.” Ex. 2001 ¶ 41; PO Resp. 32. Patent Owner asserts that Dr. Levy’s second mode of combining the references does not meet the limitations of the independent claims because Pandit does not teach searching and Tso does not teach using the types of input words. PO Resp. 32–33 (citing Ex. 2001 ¶¶ 36, 42). Based on this, Patent Owner asserts that Dr. Levy’s second mode of combining the references “fails to address the ‘356 Patent claim limitation wherein the ‘operation,’ which includes both ‘searching’ and ‘performing an action,’ must be ‘of a type depending at least in part on the type or types of contact information of the selected textual information.’” PO Resp. 32–33 (citing Ex. 2001 ¶ 42). Based on their contentions that Dr. Levy’s first and second modes of combining the references would not provide any additional functionality, Patent Owner and Dr. Levy contend

that a person of ordinary skill in the art would have no reason to combine Tso and Pandit. PO Resp. 30–32; Ex. 2001 ¶¶ 40–41.

Petitioner responds that Tso and Pandit collectively disclose the elements of the challenged claims, and that the Petition describes, in detail, the compatibilities of these references and articulates how to combine them. Pet. Reply 10–15 (citing Pet. 48–52; Ex. 1002 ¶¶ 235–238). Petitioner elaborates that the Petition asserts that it would have been obvious to combine Tso’s e-mail template-generation system with Pandit’s recognition of the type of contact information to produce a system using related contact information in the templates generated. *Id.* at 13–14 (citing Pet. 50–51; Ex. 1002 ¶¶ 235–238). Petitioner reiterates its assertion that extensive similarities between Tso and Pandit would have motivated a person of ordinary skill in the art to combine the teachings of the references, arguing that Patent Owner did not rebut this assertion. Pet. Reply 14–15 (citing Pet. 18–25, 52–58; Ex. 1004, col. 5, ll. 18–23; Figs. 1c–1d; Ex. 1009, col. 7, ll. 53–63; Ex. 1017, 51, l. 14–52, l. 17; *KSR*, 550 U.S. at 418). Petitioner further notes that “[t]he Petition argued that the combination of the familiar elements of Tso and Pandit yields nothing but predictable results,” and that “[n]either [Patent Owner]’s response nor Dr. Levy’s testimony rebutted this point.” *Id.* at 15 (citing Pet. 51; Ex. 1002 ¶¶ 52–53, 238; Ex. 1017, 140, ll. 9–17; *KSR*, 550 U.S. at 416–419).

Regarding Dr. Levy’s discussion of two ways to combine the teachings of the references, Petitioner asserts that Dr. Levy does not address Petitioner’s assertions directly, and that Dr. Levy’s analysis is overly simplistic. *Id.* at 10–12. Petitioner asserts that Dr. Levy’s first mode of

combining the references—“using the ‘front-end’ of Pandit with some aspects of Tso”—does not address Petitioner’s proposed combination of the references. *Id.* at 11. Regarding Dr. Levy’s second mode of combining the references, Petitioner notes that Dr. Levy concludes the combination would not work because “Pandit can only identify the type of search terms, and Tso does not teach a way to use type information.” *Id.* at 11 (citing PO Resp. 32). Petitioner argues that “this was not the combination offered in the Petition,” but an “overly simplistic approach to combining prior art [that] amounts to little more than mechanically smashing the two system together, without making reasonable modifications to facilitate their integration.” *Id.* Petitioner cites precedent of the Supreme Court and the United States Court of Appeals for the Federal Circuit as conflicting with Dr. Levy’s analysis, stating that:

“A person of ordinary skill is also a person of ordinary creativity, not an automaton.” *KSR v. Teleflex*, 550 U.S. 398, 421 (2007). A factfinder “can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.* at 418. Applying *KSR* to a situation similar to the present case, the Federal Circuit rejected an applicant’s argument that his invention was nonobvious because a “literal, physical combination” of the prior art references would not achieve the patented benefits. *In re Gilbert Chevalier et al.*, 500 Fed. Appx. 932, 934 (Fed. Cir. 2013). Such an argument “misapprehends the nature of the obviousness inquiry,” which “does not ask ‘whether the references could be physically combined but whether the claimed inventions are rendered obvious by the teachings of the prior art as a whole.’” *Id.* (quoting *In re Etter*, 756 F.2d 852, 859 (Fed. Cir. 1985) (*en banc*)). See also *In re Keller*, 642 F.2d 413, 425 (CCPA 1981) (“The test for

obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference”).

Id. at 11–12.

Additionally, Petitioner asserts that the ’356 patent, itself, provides relatively little detail about how to use ordinary commodity information technology to manage contact information. *Id.* at 12 (citing Ex. 1017, 36, ll. 1–3; 37, ll. 16–18; 38, ll. 6–9; 38, l. 24–39, l. 9; 39, ll. 10–13; 40, ll. 7–14). Instead, Petitioner argues, the ’356 patent relies on the skill of an ordinary artisan “to combine the disparate parts and implement the claimed text selection, analysis, searching insertion, and other actions.” *Id.* at 12–13 (citing Ex. 1017, 49, ll. 5–12; 53, l. 3–54, l. 3; 59, ll. 12–20; 60, ll. 13–22; 62, ll. 3–11; 130, ll. 5–24). Petitioner asserts that this belies Patent Owner’s argument that Petitioner has not provided adequate details about how to combine the references, arguing that “the Federal Circuit [has] held that when a patent applicant ‘did not provide the type of detail in his specification that he now argues is necessary in prior art references,’ this ‘supports [a] finding that one skilled in the art would have known how to implement the features of the references.’” *Id.* (quoting *In re Epstein*, 32 F.3d 1559, 1568 (Fed. Cir. 1994)).

We are persuaded that Petitioner has provided an articulated reason with a rational underpinning to justify a conclusion of obviousness. Tso teaches an operation that includes searching and performing an action. *See* Pet. 49–52, 57–58; PO Resp. 18 (conceding “Tso can be read as disclosing an operation”). As discussed above in Section II.B.3.a, we are persuaded that Pandit discloses performing an operation, “such operation being of a

type depending at least in part on the type or types of contact information of the selected textual information,” as recited in the independent claims.

Petitioner’s evidence and reasoning persuades us that it would have been obvious to combine these teachings of the references. *See* Pet. 48–52; Pet. Reply 10–15.

For example, Petitioner provides an articulated reason with a rational underpinning for its position by reasoning that modifying Tso to use Pandit’s recognition of certain types of contact information and insert related contact information would have further advanced Tso’s stated objective of reducing the keystrokes needed to compose an e-mail, particularly where Tso encourages creation of additional templates. *See* Pet. 51 (citing Ex. 1009, col. 6, ll. 24–37, 60–61; col. 7, ll. 14–25; col. 8, ll. 5–14; Ex. 1002 ¶¶ 236–37). Petitioner’s identification of evidence in Pandit and Tso of technical similarity of their systems further supports Petitioner’s contention that it would have been obvious to combine the teachings of the two references. *See id.* at 49 (citing Ex. 1004, col. 2, ll. 4–8; col. 3, ll. 37–39; col. 4, ll. 32–55; Ex. 1009, col. 3, ll. 20–25; col. 4, ll. 32–47; Ex. 1002 ¶¶ 231–32). For example, Petitioner’s observation that Pandit expressly discloses using its system like that disclosed in Tso to create an email template system further supports Petitioner’s assertion of obviousness. *See id.* at 50 (citing Ex. 1004, col. 2, ll. 56–63; Ex. 1002 ¶ 233). Petitioner’s assertion of obviousness is further supported by Mr. Allison’s testimony that Tso was a known system, Pandit discloses a known approach, and “Pandit could have been applied to the Tso system without unpredictable results.” Ex. 1002 ¶ 238.

The arguments and evidence presented by Patent Owner do not rebut persuasively Petitioner's demonstration of obviousness. Patent Owner does not address persuasively Petitioner's assertion that it would have been obvious to combine the teachings of the references because using Pandit's recognition of contact information type in Tso's system to insert related contact information would advance Tso's stated desire to reduce key strokes. Nor does Patent Owner address persuasively the assertion of Petitioner and Mr. Allison that the combination would have involved nothing more than applying a known technique to Tso's system to achieve predictable results. Pet. 51; Pet. Reply 15; Ex. 1002 ¶ 238.

Additionally, we find unpersuasive Patent Owner's citation of Dr. Levy's two modes of combining Tso and Pandit. In particular, we are not persuaded by Patent Owner's assertion that Dr. Levy's reasoning demonstrates that "any possible combination of these two references by one of ordinary skill in the art" would not produce the claimed invention. See PO Resp. 26. As an initial matter, we are not persuaded that Dr. Levy's two modes of combining these references represent "any possible combination." In any event, Patent Owner focuses on Dr. Levy's testimony in this regard as though it was articulated and relied upon by Petitioner in its Petition. As we discussed previously, Petitioner provides an articulated reason with a rationale underpinning to justify a conclusion of obviousness. Dr. Levy's testimony regarding the two modes of combining the references does not negate or otherwise undermine the arguments or evidence presented and developed by Petitioner in its Petition.

Furthermore, we find unpersuasive Dr. Levy's assertion that the teachings of the references do not mesh because "Pandit can only identify the type of the search terms, and Tso does not teach a way to use type information." Ex. 2001 ¶ 41; PO Resp. 32. Dr. Levy's analysis distills down to an assertion that it would not have been obvious to combine the references, and that combining the references would not produce the limitations of the claims, because each reference lacks an express teaching of how to use the disclosure of the other reference. This does not negate or otherwise undermine Petitioner's sound reasoning and evidence supporting a conclusion that the claimed invention would have been obvious in view of Tso and Pandit. See *KSR*, 550 U.S. at 418 ("[T]he analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ."); *id.* at 421 ("A person of ordinary skill is also a person of ordinary creativity, not an automaton.").

d. *"wherein the type of action depends at least in part on whether the search term is included in the information source"*

Petitioner cites Tso as teaching this limitation. Pet. 57–58; Pet. Reply 3–7. Petitioner argues that "Tso teaches that **if a template match is found**, the template can be **inserted** directly into the email document." Pet. 57–58. Petitioner also argues that the particular template used depends on whether the system finds search terms in the information source, and Petitioner cites Mr. Allison's testimony that "[t]he Tso patent discusses the that predefined template, or the second information, is inserted only if the information source includes the search term." *Id.* at 58 (citing Ex. 1002

¶ 185). Thus, Petitioner argues that Tso performs different types of actions, depending at least in part on the results of its search. *Id.* at 57–58; Pet. Reply 3–9.

Patent Owner asserts that Tso’s system “always behaves the same way, whether or not key word(s) are found.” PO Resp. 16 (citing Ex. 2001 ¶¶ 23, 27). Specifically, Patent Owner asserts that “the Tso system always displays a template or templates for the user to elect to insert or not.” *Id.* (citing Ex. 2001 ¶¶ 26–28).

One issue raised by the parties’ arguments is whether Tso’s system provides a template only if a search term is found. Additionally, the parties dispute whether Tso’s disclosure of providing different templates constitutes one and only one type of action, as Patent Owner asserts, or multiple types of actions. PO Resp. 12–13; Pet. Reply 5–7. We address these issues in turn.

i. *Whether Tso teaches inserting a template only if its system finds a search term*

The parties dispute whether Tso’s system provides a template only if its system finds at least one search term (keyword). Pet. 58 (citing Ex. 1002 ¶ 185); Pet. Reply 3–5; PO Resp. 16, 35, 39–40. As noted above, Petitioner cites Mr. Allison’s testimony that “[t]he Tso patent discusses that the predefined template, or the second information, is inserted only if the information source includes the search term.” Pet. 58 (citing Ex. 1002 ¶ 185). Mr. Allison explains that “[t]he system requires the search term, or keyword, to be found in the information source,” quoting Tso’s disclosure that:

If a keyword is found in the array, the weight value associated with that keyword is added to a running total weight value for that template. In this fashion, the template engine 5 determines a total weight value for each template in the template database 5. The template with the highest total weight value is then designated as the most appropriate template for the text string being processed.

Ex. 1002 ¶ 185 (emphasis added); Ex. 1009, col. 5, ll. 11–17.

Patent Owner counters that, “[c]ontrary to Mr. Allison’s conclusion that a template is inserted only if a search term is found, Dr. Levy explains that Tso teaches that even when no search term (key word) is found, the user is presented with one or more possible templates to insert.” PO Resp. 40 (citing Ex. 2001 ¶ 28). Citing the above passage of Tso, Dr. Levy testifies that, “[i]n the comparison of the identified words from the input text string to the keywords associated with a template, the system of Tso calculates a score that determines a degree of match between the input text string and the template.” Ex. 2001 ¶ 25. Dr. Levy further testifies that “Tso presents the template that has the associated highest score to the user of the system.” *Id.*

Dr. Levy notes that “Tso does not give an example of presenting a template whose associated search terms do not match any of the search text.” *Id.* ¶ 26. Dr. Levy asserts, however, that Tso “suggests what would happen when none of the search terms match any of the templates” in the passage at column 5, lines 53–60, reproduced below. *Id.*

It is also conceivable that the template or templates which the template engine 5 determines to be most appropriate may not meet the user’s particular needs. In such a case, the user could request that the template engine 5 present additional templates from which the

user may choose. These additional templates would typically be presented to the user in an order based on their respective total weight values.

Ex. 1009, col. 5, ll. 53–60. In the event that a user deems the templates initially presented as unsuitable, Dr. Levy asserts that Tso’s system presents additional templates, and “[a] person of ordinary skill in the art would understand that one or more of such additional templates may have a weighted value of zero.” *Id.* ¶ 27.

Dr. Levy further testifies that “it is possible for the terms in the search text to be found in *none* of the template-associated keywords.” *Id.* ¶ 28. Dr. Levy asserts that

From [column 5, lines 53–60] and the entire disclosure of Tso, a person of ordinary skill would conclude that in such case the system of Tso would nonetheless display at least one “default” template. This is also supported by one of the objectives of the Tso patent, which is to reduce the amount of typing required of a user.

Id.

In response, Petitioner asserts that Dr. Levy’s testimony that Tso’s system would offer templates even when no search terms match is based on speculation. Pet. Reply 4. Petitioner argues that Dr. Levy, in his deposition, admitted Tso does not discuss “default” templates. *Id.* at 4–5 (citing Ex. 1017, 133, l. 15–134, l. 2).

We find Mr. Allison’s testimony persuasive. The portion of Tso cited by Mr. Allison discloses that the system assigns points to a template if a search match is found. Ex. 1009, col. 5, ll. 11–17; Ex. 1002 ¶ 185. Given that templates with no search-term matches would appear to have no discernible relationship to the user’s task, it makes sense that the system

would not provide a template with no score. Accordingly, we are persuaded by Mr. Allison's testimony that "[t]he Tso patent discusses that the predefined template, or the second information, is inserted only if the information source includes the search term." Ex. 1002 ¶ 185.

By contrast, we find Dr. Levy's testimony unpersuasive. We are not persuaded that column 5, lines 53–60 of Tso suggests providing a default template when no search terms match. *See* Ex. 2001 ¶¶ 26–28. This portion of Tso says that, if a user finds unsuitable the templates suggested by the system, the user could request additional templates, which "would typically be presented to the user in an order based on their respective total weight values." Ex. 1009, col. 5, ll. 53–60. This disclosure of what the system does when the user does not like the templates retrieved based on search-term matches does not appear to have any bearing on what the system does if no search-term matches occur. We also find unpersuasive Dr. Levy's contention that "one of the objectives of the Tso patent, which is to reduce the amount of typing required of a user," demonstrates that Tso returns a default template when the system finds no search terms. Ex. 2001 ¶ 28. Dr. Levy does not explain how this stated objective of Tso supports his position, and it does not appear logical that presenting a default template that has no apparent relationship to the user's task (as reflected by a lack of any search-term matches) would help the user.

For the foregoing reasons, we are persuaded that Tso's system provides a template only if at least one of the search terms is found, and refrains from providing a template if no search term is found. In our view, providing a template constitutes the opposite of refraining from providing a

template. As such, providing a template and refraining from providing a template constitute different types of actions. Because we are persuaded that Tso's system either provides a template or refrains from inserting a template based on whether it finds a search term, we are persuaded that Tso teaches the claim limitation "wherein the type of action depends at least in part on whether the search term is included in the information source."

ii. Different templates

Patent Owner and Dr. Levy contend that "insertion of a Tso template into the document qualifies as a single type of action regardless of the information in the specific template being inserted in any given instance." PO Resp. 12–13; Ex. 2001 ¶ 34. As noted above, Patent Owner and Dr. Levy generally assert that inserting information constitutes a type of action, and that different instances of a type of action are only different instances, not different types. PO Resp. 11–12; Ex. 2001 ¶¶ 30–33.

Petitioner counters that "Tso's disclosure of returning different templates constitutes performing different types of actions." Pet. Reply 7. Additionally, Petitioner argues that Patent Owner does not dispute that Tso discloses insertion of a template based on its search results. *Id.* (citing Pet. 57–58; Ex. 1009, col. 5, ll. 11–17, col. 6, l. 66–col. 7, l. 6).

Petitioner further argues that, "[Patent Owner] misconstrues its own construction" of "type" because, "[e]ven assuming that 'type' means 'category,' this does not imply that different templates are all of the same type." Pet. Reply 6. Petitioner argues that Dr. Levy demonstrated this in his deposition testimony. *Id.* at 6–7 (citing Ex. 1017, 114, l. 21–118, l. 10; 118, ll. 14–16; 118, l. 19–119, l. 9). For example, Petitioner argues that Dr. Levy

conceded that two things, such as two pens of different colors, may both belong to one category but still be divided among other categories. *Id.* at 6 (citing Ex. 1017, 117, l. 4–118, l. 10; 118, l. 19–119, l. 9). Petitioner further cites Dr. Levy’s testimony that “there are literally an infinite number of ways to divide the world.” Ex. 1017, 118, ll. 14–16; Pet. Reply 6.

As discussed above in Section II.A.1.b, this testimony vitiates Patent Owner’s contention that the term “type” requires separating things into a set number of mutually exclusive categories. Accordingly, we disagree with Patent Owner’s contention that Tso’s teaching of providing and inserting different templates constitutes one and only one type of action. Given the ordinary meaning of “type” as dividing things based on different characteristics (*see* Section II.A.1.a), we are persuaded that Tso’s disclosure of producing and inserting different templates with different characteristics teaches different types of actions. Accordingly, Petitioner’s assertion that the particular template used by Tso depends on whether the search term is found in the information source constitutes another reason that we are persuaded Tso teaches the claim limitation “wherein the type of action depends at least in part on whether the search term is included in the information source,” as recited in the independent claims. *See, e.g.*, Pet. 58; Pet. Reply 5–7.

- e. *“if the search term is so included, and if the information source includes the second information, the action comprises causing insertion of at least part of the second information into the document.”*

Petitioner relies on Tso as teaching this limitation. Pet. 57–58; Pet. Reply 8–9. Petitioner cites Tso’s disclosure that

[T]he additional text generated by the template engine 5 is passed to the e-mail application for **insertion in the message being composed**. The user interface 2 could be programmed to **automatically insert the generated text** at the end of the message text, or alternatively could prompt the user to place the cursor at a particular location where the text is to be inserted.

Pet. 58 (citing Ex. 1002 ¶ 184); Ex. 1009, col. 6, l. 66–col. 7, l. 6.

Patent Owner contends that Tso does not cause insertion if the search term is present and the information source includes the second information. PO Resp. 34–40 (citing Ex. 2001 ¶¶ 22–28). Patent Owner argues that, instead, Tso always provides one or more templates for possible insertion, always requiring user discretion for insertion. *Id.* at 34 (citing Ex. 2001 ¶¶ 23, 27–28). In connection with this, Patent Owner discusses Tso’s disclosure of providing a user with a choice as to which template to insert. *Id.* at 34–38 (citing Ex. 1009, col. 2, ll. 59–67, col. 4, l. 31–col. 5, l. 6, col. 5, ll. 7–15, 18–60; Ex. 2001 ¶¶ 22–28). Patent Owner argues that, “[c]onsequently[,] Tso allows a user to reject a template (‘second information associated with the search term’) if the search term is present in the information source (i.e. keyword in the template database) and there is associated second information (i.e. a template).” *Id.* at 37 (citing Ex. 2001 ¶¶ 22–28). Patent Owner further argues that, contrary to Petitioner’s argument, Tso’s system always provides a template that the user can elect to insert. *Id.* at 38–40 (citing Pet. 58; Ex. 1002 ¶ 185; Ex. 1009, col. 5, ll. 11–17, 49–57; Ex. 2001 ¶¶ 23–28).

Petitioner responds that Tso does not always return a template and does not necessarily require user discretion for insertion. Pet. Reply 3–5, 8–

9. Petitioner asserts that Patent Owner’s argument that Tso always provides a template rests on speculative testimony of Dr. Levy. *Id.* at 4. Petitioner asserts that Tso does not require user discretion because Tso “specifically states that ‘[t]he user interface 2 could be programmed to **automatically insert the generated text at the end of the message text.**’” *Id.* at 8 (quoting Ex. 1009, col. 7, ll. 3–4). Petitioner argues that Tso provides the option, not a requirement, for a user to exercise discretion in the insertion of a template. *Id.* (citing Ex. 1009, col. 5, ll. 48–60). Additionally, Petitioner contends that Patent Owner’s discussion of the option to decline insertion of a template “is a red herring” because “the relevant inquiry is whether Tso discloses the insertion of a template as a result of matching the search term.” *Id.* (citing PO Resp. 37). Petitioner contends that Tso discloses inserting a template as a result of matching the search term, and that this is not negated by Tso also disclosing another option. *Id.* (citing Pet. 57–58).

Petitioner further argues that “the ’356 patent claims do not *exclude* embodiments having user discretion — they use the ‘comprising’ transition, and do not include any negative limitations around the ‘inserting’ limitation.” *Id.* Petitioner further notes that the ’356 patent discloses embodiments that include user discretion prior to insertion. *Id.* at 8–9 (citing Ex. 1001, Fig. 1, col. 7, l. 25–col. 8, l. 5). Petitioner, therefore, argues that “the claims permit extra steps, such as the inclusion of user discretion, as long as the ‘second information’ is eventually inserted.” *Id.* at 9 (citing *Vitronics v. Conceptronic*, 90 F.3d 1576, 1583 (Fed. Cir. 1996)).

At the oral hearing, Patent Owner further addressed Tso’s disclosure at column 7, lines 3–6, that “[t]he user interface 2 could be programmed to

automatically insert the generated text at the end of the message text, or alternatively could prompt the user to place the cursor at a particular location where the text is to be inserted.” Tr. 34, l. 21–35, l. 7. Patent Owner asserted that “the automatically has to do with where you are going to place – where you are going to insert the template, not are you going to accept this choice of a template.” *Id.* at 35, ll. 5–7.

We first note that the disputed claim language includes the permissive language “if,” which indicates the claim language that follows is optional and, therefore, is not required. *See In re Johnston*, 435 F.3d 1381, 1384 (Fed. Cir. 2006) (“[O]ptional elements do not narrow the claim because they can always be omitted.”). For at least this reason, we are persuaded that the disputed claim language does not patentably distinguish over the cited references.

Additionally, even if the disputed claim language did positively limit the claim, we are persuaded that Tso teaches “if the search term is so included, and if the information source includes the second information, the action comprises causing insertion of at least part of the second information.” We are persuaded that Tso’s disclosure that “[t]he user interface 2 could be programmed to automatically insert the generated text at the end of the message text, or alternatively could prompt the user to place the cursor at a particular location where the text is to be inserted” teaches a mode that automatically inserts a template without requiring the user to exercise discretion to determine whether to insert the text. *See* Ex. 1009, col. 7, ll. 3–6; Pet. 57–58; Pet. Reply 3–5, 8–9; Ex. 1002 ¶ 184. The fact

that this disclosure specifies where the system automatically inserts the text does not negate the disclosure that it automatically inserts the text.

Additionally, we are not persuaded that Tso's discussions of allowing user discretion apply to the disclosed automatic insertion mode of operation. *See* PO Resp. 34–38. Furthermore, in view of Petitioner's accurate observation that the '356 patent discloses user discretion in the process of inserting text, we are persuaded that, even if Tso did require user discretion, Tso's system meets the claim limitation because it ultimately inserts the text. *See* Pet. Reply 8–9.

Regarding Patent Owner's argument that Tso always provides a template, we are unpersuaded by this argument for the reasons explained above in Section II.B.3.d.i. Furthermore, even if Tso's system did always provide a template, this does not negate that its disclosure of automatically inserting a template meets the claim limitation “if the search term is so included, and if the information source includes the second information, the action comprises causing insertion of at least part of the second information.”

f. *Summary*

In summary, we determine that Petitioner has demonstrated, by a preponderance of the evidence, that claims 1, 7, 10, 12, 16, and 20 are unpatentable because they would have been obvious over Tso and Pandit.

III. CONCLUSION

Petitioner has shown, by a preponderance of the evidence, that claims 1, 7, 10, 12, 16, and 20 of the '356 patent would have been obvious over Tso and Pandit.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that claims 1, 7, 10, 12, 16, and 20 are determined to be *unpatentable*; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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