UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
13/454,791	04/24/2012	Kenichiro Kobayashi	1946-0377	1092

60803 7590 12/06/2016

Paratus Law Group, PLLC
1765 Greensboro Station Place
Suite 320
Tysons Corner, VA 22102

EXAMINER
PARK, GRACE A

ART UNIT	PAPER NUMBER
2157	

MAIL DATE	DELIVERY MODE
12/06/2016	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte KENICHIRO KOBAYASHI and
MASAAKI HOSHINO

Appeal 2016-001225
Application 13/454,791
Technology Center 2100

Before ST. JOHN COURTENAY III, NATHAN A. ENGELS, and ALEX S. YAP, *Administrative Patent Judges*.

COURTENAY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

This is a decision on appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1 and 3–14. Claim 2 is cancelled. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

The Invention

The disclosed and claimed invention "relates to an information processing apparatus, an information processing method, a program, and an information processing system." (Spec. ¶ 1).

Claim 1 is representative of the subject matter on appeal:

1. An information processing apparatus comprising:

at least one processor;

a search condition information acquiring unit that acquires using the at least one processor search condition information that is text information in a first language indicating search conditions for searching for search object text;

a language processing unit that executes using the at least one processor language analysis processing with respect to the search condition information;

a structure extracting unit that extracts using the at least one processor a sentence structure of the search condition information using the language analysis result of the search condition information;

a search expression generating unit that generates using the at least one processor a search expression in a second language reflecting the sentence structure of the search condition information used to search for the search object text according to the sentence structure of the search condition information in the first language; and

a searching unit that searches in the second language using the at least one processor for text matching the search conditions from the search object text according to the sentence structure of the search condition information in the first language using the generated search expression,

[L] *wherein the search condition information in the first language includes a plurality of sentences and the searching unit searches for text matching* **transitions of predicate structures** *in the second language from the search object text on the basis of the* **transitions of the predicate structures** *of the sentences included in the search condition information in the first language.*

(Contested limitation L lettered and emphasized.)

Rejections

A. Claims 1 and 10–13 are rejected under 35 U.S.C. § 103(a) as being obvious over the combined teachings and suggestions of Marchisio et al. (US 2003/0233224 A1; pub. Dec. 18, 2003), in view of Chang et al. (US 2004/0167800 A1; pub. Aug. 26, 2004), Evans (US 2002/0184206 A1; pub. Dec. 5, 2002), and Caudill et al. (US 2002/0129015 A1; pub. Sep. 12, 2002).

B. Claims 3–9 are rejected under 35 U.S.C. § 103(a) as being obvious over the combined teachings and suggestions of Marchisio, Chang, Evans, and Caudill, in view of Sokolan et al. (US 2011/0264646 A1; pub. Oct. 27, 2011).

C. Claim 14 is rejected under 35 U.S.C. § 103(a) as being obvious over the combined teachings and suggestions of Marchisio, Chang, Evans, and Caudill, in view of Chen (US 2009/0024595 A1; pub. Jan. 22, 2009).

Claim Grouping

Based on Appellants' arguments (App. Br. 15–24), we decide the appeal of rejection A of claims 1 and 10–13, on the basis of representative independent claim 1. We address the claims rejected under rejections B and C separately, *infra*. To the extent Appellants have not advanced separate, *substantive* arguments for particular claims and/or particular claim limitations on appeal, such arguments are considered waived. *See* 37 C.F.R. § 41.37(c)(1)(iv).

ANALYSIS

We have considered all of Appellants' arguments and any evidence presented. We find Appellants' arguments unpersuasive for the reasons discussed *infra*. We adopt as our own: (1) the findings and legal conclusions set forth by the Examiner in the action from which this appeal is taken, and (2) the findings, legal conclusions, and explanations set forth in the Answer in response to Appellants' arguments. We highlight and address specific findings and arguments for emphasis in our analysis below.

Rejection A of Claim 1 under § 103

Issue: Under 35 U.S.C. § 103(a), did the Examiner err in finding the cited combination of Marchisio, Chang, Evans, and Caudill would have taught or suggested contested "wherein" clause limitation L, (particularly the contested "**transitions of predicate structures**"), within the meaning of representative claim 1? [1]

Claim Construction

At the outset, we note contested limitation L is directed to functional statements recited within a "wherein" clause in an apparatus claim. We conclude such functional language does not further limit the structure of the

[1] We give the contested claim limitations the broadest reasonable interpretation consistent with the Specification. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir. 1997). *See* Spec. ¶ 184 ("The preferred embodiments of the present disclosure have been described in detail with reference to the appended drawings. However, *the present disclosure is not limited to the above examples*. It will be apparent to those skilled in the art that various modifications and changes may be made thereto without departing from the scope and spirit of the present disclosure defined by the appended claims.") (Emphasis added).

claimed apparatus.[2] Nor does claim 1 recite language such as "configured to" or "adapted to" that could be construed as imposing a structural limitation, such that the structural components of the apparatus must be "capable of" performing the contested functions.[3] Therefore, under a broad but reasonable interpretation, we conclude the contested "wherein" clause functional limitations L do not further limit the structure of the apparatus of claim 1.[4]

To the extent that our reviewing court may give patentable weight to

---

[2] *See* MPEP § 2111.04 regarding "wherein" clauses: **Claim scope is not limited by claim language** that suggests or makes optional but does not require steps to be performed, **or by claim language that does not limit a claim to a particular structure.** However, examples of claim language, although not exhaustive, that may raise a question as to the limiting effect of the language in a claim are:

(A) "adapted to" or "adapted for" clauses;

(B) **"wherein" clauses**; and

(C) "whereby" clauses.

MPEP § 2111.04 (Ninth Ed., Nov. 2015) (emphasis added).

[3] *See e.g., In re Man Mach. Interface Techs. LLC*, 822 F.3d 1282, 1286 (Fed. Cir. 2016) ("We have noted that the phrase 'adapted to' generally means 'made to,' 'designed to,' or 'configured to,' though it can also be used more broadly to mean 'capable of' or 'suitable for.'") (citations omitted).

[4] Regarding apparatus claims generally, our reviewing court guides the patentability of an apparatus claim "depends on the claimed structure, not on the use or purpose of that structure." *Catalina Marketing Int'l., Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 809 (Fed. Cir. 2002); *Paragon Solutions, LLC v. Timex Corp.*, 566 F.3d 1075, 1090 (Fed. Cir. 2009); *Hewlett-Packard Co. v. Bausch & Lomb Inc.*, 909 F.2d 1464, 1468 (Fed. Cir. 1990) ("[A]pparatus claims cover what a device *is*, not what a device *does*.").

the contested functional language, we are not persuaded by Appellants' arguments, because they are not directly responsive to the Examiner's specific findings.

In asserting limitation L is not taught by the cited combination of references, Appellants adopt the following general pattern of argument in the Brief (5–24): (1) Appellants merely recite the claim language and assert it is not taught by the cited references; (2) Appellants reproduce portions of the references cited by the Examiner; (3) Appellants attack the references separately, considered in isolation;[5] and (4) Appellants fail to substantively traverse the specific findings set forth by the Examiner.

For example, in following this pattern of argument for limitation L of claim 1, Appellants assert "[s]ince Caudill has nothing to do with translating from a first language to a second language, Caudill cannot alleviate the admitted deficiencies of Marchisio, Chang, and Evans." (App. Br. 24).

However, the Examiner explains: "Evans, not Caudill, teaches translation from a first language to a second language [see pg. 6, par. 2 of the Final Office Action]. Caudill is cited as teaching the claim limitations relating to searching based on predicate structures [see pg. 7, par. 1 of the Final Office Action], not as teaching translation from a first language to a second language." (Ans. 4).

In support, *see* Evans (¶ 6): "It is another object of the present invention to provide a method for retrieving relevant documents from a

[5] *See In re Merck & Co., Inc.*, 800 F.2d 1091, 1097 (Fed. Cir. 1986) (One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.).

database in which documents are stored in a foreign language." [6] *See* Caudill (¶ 45.) "The transformation of natural language sentences into predicate structures is performed by an ontological parser . . . ." (*Id.*)

Caudill further describes: "Ontologies are hierarchies of *related concepts*, usually represented by tree structures." (¶ 47.) We find such "related concepts" (*id.*) teach or suggest *topics* of interest (as discussed further, *infra*). Caudill (¶ 52) converts ontologically parsed text and derived predicate structures into vector representations for comparison (i.e., matching):

> The vectorization unit has two configurations, a document vectorization unit 130 and a query vectorization unit 134. Each of these configurations converts ontologically parsed text into vector representations. The document vectorization unit 130 converts the set of predicate structures derived from ontologically parsing a document into one or more large-dimensioned numerical vectors.

Caudill (¶ 72) describes: "Each query predicate structure is *compared* with each document predicate structure to determine a *matching* degree, represented by a real number." (Emphasis added).

---

[6] The Examiner finds: "Evans discloses a query that is in a familiar language [par. 20, " . . . type in a query (through keybo[ar]d 7) in a language familiar to a user"] being parsed in phrases based on sentence structure [par. 21, " . . . the query is parsed . . . into noun[] phrases . . . by . . . the user of lexicons, morphological analyzers or natural language grammar structures], and the phrases are translated into a foreign language and used to search a database in that foreign language [par. 22, "[a]fter the query is parsed, Step 120 compiles a series of translation alternatives for each noun phrase . . . each word in the query list can generally be translated into the language of the database"]. As such, Evans teaches that the search condition information is in a first language, the search expression is in a second language, and the searching is in the second language." (Advisory Action 2, mailed March 31, 2015).

Given this evidence, we find the cited *combination* of references teaches or suggests contested limitation L: i.e., comparing the predicate structures of a *search query* ("search condition information" – claim 1) (Caudill ¶ 72, "*query* predicate structure") with predicate structures for (target document) text to find matching predicate structures (*id.*), where Evans (¶6) teaches or suggests a query in a first language which searches for text in a target database in a second (foreign) language.

However, Appellants in the Reply Brief (6) focus on the claim term "transitions" and urge:

> in proposing the modification of Marchisio with the teachings of Caudill, the Examiner states that "search results are retrieved based on matching of the predicate structures as taught by Caudill." Final Office Action at page 7. The interpretation set forth in the Final Office Action *disregards the recited transitions*, and therefore is not a reasonable interpretation of the claims as a whole because it fails to account for material elements of the claims.

In reviewing the record, we find no definition or disclaimer in the originally-filed Specification regarding the contested "*transitions* of predicate structures" (claim 1), nor do Appellants argue a definition for "transitions" in the Briefs.[7] Because the contested "transitions" are not defined in the claims, we turn to the Specification for *context*.[8]

---

[7] It is the Appellants' burden to precisely define the invention, not the PTO's. *In re Morris*, 127 F.3d 1048, 1056 (Fed. Cir. 1997).

[8] Regarding descriptions in the Specification that are not definitions or clear and unambiguous disclaimers, our reviewing "court has repeatedly 'cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification.'" *Williamson v. Citrix Online, LLC*, 792 F.3d 1339, 1346-47 (Fed. Cir. 2015) (quoting *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1328 (Fed. Cir. 2002)).

Appellants point to paragraphs 70 and 80 of the Specification for support. (App. Br. 8). In each of these paragraphs (*id.*), we find "transitions" are described as "topics" in accordance with non-limiting, exemplary embodiments. For example, *see* Spec. (¶ 70) "text based on the transitions of the *topics* designated as the search conditions can be easily searched . . . ." *See also* Spec. (¶ 80):

> When a plurality of sentences are included in the search condition information, the data searching unit 115 determines the *transitions of the predicate structures* of the sentences included in the search condition information as the *transitions of the topics* in the search condition information and searches the text matching the search conditions among the search object text on the basis of the *transitions of the topics*. (Emphasis added).

Although the scope of the contested claimed "transitions" is not limited to the preferred embodiments described in the Specification[9] (¶¶ 70, 80), we find Caudill's description (¶ 45) of transforming natural language sentences into predicate structures using an ontological parser, where ontologies are described as "hierarchies of *related concepts*" (¶ 47) is equivalent to, or at least suggestive of, hierarchies of related *topics*. Therefore, we find the Examiner's proffered *combination* teaches, or at least

[9] We note the scope of the claims on appeal, at a minimum, at least covers the corresponding supporting embodiment(s) described in the Specification. We emphasize, however, that under a broad but reasonable interpretation, the scope of the claims is not limited to the preferred embodiments described in the Specification: "[A]lthough the specification often describes very specific embodiments of the invention, we have repeatedly warned against confining the claims to those embodiments. . . . [C]laims may embrace 'different subject matter than is illustrated in the specific embodiments in the specification.'" *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en banc) (citations and internal quotation marks omitted). *See also* Appellants' Spec. (¶ 184).

suggests, the contested "*transitions* of predicates structures," within the meaning of claim 1. (Emphasis added).

When Caudill is combined with Evans (and Marchisio and Chang — *see* Final Act. 4–7), we find comparing and matching "*transitions* of predicates structures" of a search query in a first natural language with "*transitions* of predicates structures" of (target) textual content in a second natural language, would have merely realized a predictable result. The Supreme Court guides: "If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007). Moreover, we find the Examiner (Final Act. 5–7) sets forth sufficient "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *KSR*, 550 U.S. at 418 (quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

Given the aforementioned evidence, and the guidance of our reviewing courts, on this record, Appellants have not persuaded us the Examiner erred.

For the aforementioned reasons, we find a preponderance of the evidence supports the Examiner's underlying factual findings and ultimate legal conclusion of obviousness regarding contested limitation L of representative independent claim 1. Because Appellants have not persuaded us the Examiner erred, we sustain rejection A of representative claim 1, and rejection A of the associated grouped claims 10–13. *See* Grouping of Claims, *supra*.

Rejections B and C of Dependent Claims 3–9 and 14 under § 103

Regarding rejection B of dependent claims 3–9, and rejection C of dependent claim 14, Appellants contend the additionally cited references fail

to remedy the deficiencies regarding the Examiner's rejection A over the base combination of Marchisio, Chang, Evans, and Caudill. (App. Br. 24–25). However, we find no deficiencies regarding the base combination of cited references in rejection A, for the reasons discussed above regarding claim 1. Because Appellants have not persuaded us the Examiner erred, and based upon a preponderance of the evidence, we sustain rejection B of dependent claims 3–9, and rejection C of dependent claim 14.

Reply Brief

To the extent Appellants advance new arguments in the Reply Brief not in response to a shift in the Examiner's position in the Answer, we note arguments raised in a Reply Brief that were not raised in the Appeal Brief or are not responsive to arguments raised in the Examiner's Answer will not be considered except for good cause. *See* 37 C.F.R. § 41.41(b)(2).

Conclusion

For the aforementioned reasons, we find a preponderance of the evidence supports the Examiner's underlying factual findings and ultimate legal conclusion of obviousness regarding all contested issues on appeal.

DECISION

We affirm the Examiner's decision rejecting claims 1 and 3–14 under 35 U.S.C. § 103.

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). *See* 37 C.F.R. § 41.50(f).

AFFIRMED