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.
13/400,263	02/20/2012	Anna Stavrianou	20111290USNP-XER2815US01	1063

62095 7590 09/16/2019	EXAMINER
FAY SHARPE / XEROX - ROCHESTER 1228 EUCLID AVENUE, 5TH FLOOR THE HALLE BUILDING CLEVELAND, OH 44115	NGUYEN, THU N

ART UNIT	PAPER NUMBER
2154	

MAIL DATE	DELIVERY MODE
09/16/2019	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.

PTOL-90A (Rev. 04/07)

UNITED STATES PATENT AND TRADEMARK OFFICE

—————

BEFORE THE PATENT TRIAL AND APPEAL BOARD

—————

Ex parte ANNA STAVRIANOU and CAROLINE BRUN

—————

Appeal 2017-009901
Application 13/400,263
Technology Center 2100

—————

Before KALYAN K. DESHPANDE, LARRY J. HUME, and
JAMES W. DEJMEK, *Administrative Patent Judges.*

HUME, *Administrative Patent Judge.*

DECISION ON APPEAL

Pursuant to 35 U.S.C. § 134(a), Appellant,[1] Anna Stavrianou et al.,
appeal from the Examiner's decision rejecting claims 1 and 3–20, which are
all claims pending in the application. Appellant has canceled claim 2. Final
Act. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

---

[1] We use the word "Appellant" to refer to "Applicant" as defined in 37
C.F.R. § 1.42(a) (2015). Appellant identifies the real party in interest as
Xerox Corporation. App. Br. 1.

STATEMENT OF THE CASE[2]

The Invention

The claims are directed to a system and method for providing recommendations based on information extracted from reviewers' comments. Title. In particular, Appellant's disclosed embodiments and claimed invention "relate[] to information extraction . . . [with] particular application in connection with an apparatus and method for generating recommendations for new items based on opinions of other items." Spec. ¶ 1.

Exemplary Claims

Claims 1 and 12, reproduced below, are representative of the subject matter on appeal (formatting added, and *emphases* added to contested prior-art limitations):

> 1. A method for generating recommendations comprising:
>
> receiving a user's review of an item which includes a textual comment;
>
> [L1] *applying a set of extraction patterns to the textual comment, each of the extraction patterns being configured to identify a deficient feature of the item based on a finding of a specified syntactic relation between words of the textual comment*;
>
> providing for, when a deficient feature is identified:

---

[2] Our decision relies upon Appellant's Appeal Brief ("App. Br.," filed June 15, 2016); Reply Brief ("Reply Br.," filed Mar. 13, 2017); Examiner's Answer ("Ans.," mailed Feb. 15, 2017); Final Office Action ("Final Act.," mailed Dec. 16, 2015); and the original Specification ("Spec.," filed Feb. 20, 2012).

[L2] *identifying an attribute of each of a plurality of features for the reviewed item, the plurality of features including the identified deficient feature*;

comparing the identified attributes of the reviewed item with stored attributes for the plurality of features for other items in a set of items to identify an improved item from the set of items which has an attribute for the deficient feature which is determined to be an improvement over the attribute of the deficient feature for the reviewed item; and

[L3] *generating a recommendation for the identified improved item*, wherein the identifying of the deficient feature, identifying of attributes, comparing the identified attributes, and generating the recommendation are performed with a computer processor.

12.   The method of claim 1, *wherein the item comprises a non-transitory product.*

Prior Art

The Examiner relies upon the following prior art as evidence in rejecting the claims on appeal: The prior art relied upon by the Examiner is:

Heber	US 2006/0253345 A1	Nov. 9, 2006
Salvetti et al. ("Salvetti")	US 8,671,098 B2	Mar. 11, 2014

Rejection on Appeal

Claims 1 and 3–20 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over the combination of Heber and Salvetti. Final Act. 5.

CLAIM GROUPING

Based on Appellant's arguments (App. Br. 6–14) and our discretion under 37 C.F.R. § 41.37(c)(1)(iv), we decide the appeal of the obviousness rejection of claims 1, 3–11, 13, and 14 on the basis of representative claim 1; we decide the appeal of the obviousness rejection of claims 15–19 on the basis of representative claim 15; we decide the appeal of the obviousness rejection of separately argued claims 12 and 20, *infra*.[3]

ISSUES

Appellant argues (App. Br. 6–11; Reply Br. 6–15) the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) as being obvious over the combination of Heber and Salvetti is in error. These contentions present us with the following issues:

(a) Did the Examiner err in finding the cited prior art combination teaches or suggests a method for generating recommendations that includes, *inter alia*, the limitations of:

> [L1] applying a set of extraction patterns to the textual comment, each of the extraction patterns being configured to identify a deficient feature of the item based on a finding of a specified syntactic relation between words of the textual comment;
>
> providing for, when a deficient feature is identified:

---

[3] "Notwithstanding any other provision of this paragraph, the failure of appellant to separately argue claims which appellant has grouped together shall constitute a waiver of any argument that the Board must consider the patentability of any grouped claim separately." 37 C.F.R. § 41.37(c)(1)(iv). In addition, when Appellant does not separately argue the patentability of dependent claims, the claims stand or fall with the claims from which they depend. *In re King*, 801 F.2d 1324, 1325 (Fed. Cir. 1986).

[L2] identifying an attribute of each of a plurality of features for the reviewed item, the plurality of features including the identified deficient feature; [and]

[L3] generating a recommendation for the identified improved item,

as recited in claim 1?

(b) Did the Examiner err by not providing a reason to combine Heber and Salvetti because, as asserted by Appellant (App. Br. 10), "[t]here is no suggestion of how using Salvetti's natural language technology in Heber would identify a deficient feature of Heber's website"?

PRINCIPLES OF LAW

"[O]ne cannot show non-obviousness by attacking references individually where . . . the rejections are based on combinations of references." *In re Keller*, 642 F.2d 413, 426 (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 . . . . Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art." *Id.* at 425.

In *KSR*, the Court stated "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007).

> When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary

skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill . . . . [A] court must ask whether the improvement is more than the predictable use of prior art elements according to their established functions.

Id. at 417.

Further, the relevant inquiry is whether the Examiner has set forth "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) (cited with approval in *KSR*, 550 U.S. at 418).

ANALYSIS

In reaching this decision, we consider all evidence presented and all arguments actually made by Appellant. To the extent Appellant has not advanced separate, substantive arguments for particular claims, or other issues, such arguments are waived. 37 C.F.R. § 41.37(c)(1)(iv).

We disagree with Appellant's arguments with respect to claims 1 and 3–20 and, unless otherwise noted, we incorporate by reference herein and adopt as our own (1) the findings and reasons set forth by the Examiner in the action from which this appeal is taken, and (2) the reasons and rebuttals set forth in the Examiner's Answer in response to Appellant's arguments. We highlight and address specific findings and arguments regarding claims 1 and 12 for emphasis as follows.

Claims 1, 3–11, 13, and 14

(a) All Limitations are Taught or Suggested

L1 — Applying Extraction Patterns to Identify a Deficient Feature

The Examiner finds that Heber teaches identifying a deficient feature of an item based upon a scoring program used to analyze a website to identify deficient areas of the website (Final Act. 5 (citing Heber ¶¶ 28, 29, 53)), and relies upon Salvetti as teaching or suggesting receiving an item review that includes textual comments, and then applying a set of extraction patterns thereto. Final Act. 6 (citing Salvetti 6:15–64). The Examiner provides motivation to combine the references, as discussed further, *infra*. *See id.*

Appellant responds:

> Heber does not identify a deficient feature of the website based on a finding of a specified syntactic relation between words of a textual comment in a user's review of the website. Rather Heber considers the website, not a review of it. For example, Heber compares the scoring data of the presently analyzed website with the database of previously scored website to identify where the website can be improved. Thus Heber's analysis is not based on a review.

App. Br. 7 (emphasis omitted). Appellant further alleges, "Heber does not consider the text content itself as a feature, just the size and location on the page. Thus Heber analyzes quite different features from those presently claimed." App. Br. 8. "Even assuming that Salvetti discloses receiving a user's review, the purpose to which the reviews are put does not suggest the claimed method. Salvetti does not consider the review of a user, but a set of different opinions, which are combined. Thus Salvetti's combined review

would not allow the identification of an item to recommend to a specific user." *Id.*

With respect to the Examiner's reliance upon Salvetti, Appellant contends, "the aim of Salvetti is to generate a lively composite review of an item, not to identify deficient features or to improve the item . . . [and t]here is no suggestion in either Heber or Salvetti that Heber's website would be improved by analysis of text of reviews of the website. Nor is there any suggestion of there being such reviews to analyze." App. Br. 9.

We are not persuaded by Appellant's arguments for several reasons. First, Appellant argues the references separately, when the rejection is based upon what *the combination* of Heber and Salvetti *would have suggested* to a person of ordinary skill in the art. *See Keller*, 642 F.2d at 426.

Second, we find Heber's teaching of a comparison of the scoring data of the presently analyzed website with the database of a previously scored website to identify where the website can be improved *at least suggests* that a review of an item, e.g., a website, was previously conducted, thereby providing a previous score. Accordingly, we find that Heber teaches or at least suggests identifying a deficient feature of an item, e.g., a website, and, we find that Salvetti teaches or suggests receiving an item review that includes textual comments, whether from one reviewer/user or multiple users represented by a combined review, and then applying a set of extraction patterns to the received comments. *See* App. Br. 8–9.[4]

---

[4] Appellant arguably admits that Salvetti teaches or suggests using a set of extraction patterns to analyze textual comments:

> Representative phrases from reviews are extracted and
> aggregated into coherent sentences to create the composite

L2 — Identifying an Attribute Including an Identified Deficient Feature

Appellant argues "since Heber does not distinguish deficient features from text comments, there is no suggestion of providing for identifying an attribute of that feature when a deficient feature is identified." App. Br. 11.

We disagree with Appellant and agree with the Examiner that:

> [Heber's s]coring program [is] arranged to control the computer system to analyze a website to produce a score for that website . . . as well as a website improvement, which receives the code of the website and identifies deficient areas of the website . . . [and which is i]dentified using the content identification data and [which] applies the analysis criteria and scoring method . . . to arrive at a score for each content element. The individual scores can then be combined as described previously to produce a total score for the website. The individual score and the overall score are stored in the scoring data . . . . *Each of score or criteria is an attribute for the reviewed item.* Therefore, Heber discloses this limitation.

Ans. 5 (citing Heber ¶¶ 53, 55) (emphasis added).

---

review. Semantic analysis using linguistic processing is used to produce a composite review for an item from a set of reviews for that item. Comments about aspects of a product containing evaluative language (e.g., sentiment-bearing terms with a positive or negative connotation) are automatically identified in different reviews written by different reviewers, using natural language methods. Templates or full-scale natural language generation techniques are used to assemble these comments into a composite review. Product reviews are analyzed using natural language technology to identify and extract sentiment-bearing phrases and grammatically well-formed linguistic phrases (Adj-Noun, Verb-Adj, Verb-Adv, etc.). The most lively and interesting phrasings are selected, whether an evaluation or ranking of comments is done or not.

App. Br. 8–9.

We agree that Heber's score or criteria teaches or at least suggests the recited "attribute" for the review item.

L3 —Generating a Recommendation for the Identified Improved Item

Appellant argues Heber "does not generate a recommendation for an identified improved item . . . [but instead merely] suggests improvements to the website itself, not a recommendation for a different item." App. Br. 11 (citing Heber ¶ 67). We disagree.

We disagree with Appellant's argument because, as the Examiner found under the broadest reasonable interpretation, Heber discloses identifying a deficient feature, admittedly of a website, and Salvetti, used in combination with Heber, produces a composite review of an item from textual reviews submitted regarding that item. Ans. 3. Thus, under the Examiner's claim construction, the recited "item" broadly but reasonably reads on Heber's website. With respect to the recited "generating" step, the Examiner further finds, "[i]mprovements to the deficient areas are then suggested." Ans. 6 (citing Heber ¶ 53); *and see* Heber ¶ 68 (discussing a "website improvement program" run on computer 32 by which "the program pinpoints the qualities and attributes of the content [of scored websites] that make them superior or more effective.").

Accordingly, we find Heber's improving of a website teaches or at least suggests the recited "generating a recommendation."

(b) Rationale to Combine is Proper

Appellant alleges "[t]here is no suggestion of how using Salvetti's natural language technology in Heber would identify a deficient feature of Heber's website." App. Br. 10. Further, "[t]here is no suggestion that the

scoring criteria used by Salvetti for selecting the lively etc. phrases to be used in the composite review would be useful to 'improve the quality server of rating and recommendations,' as the Examiner suggests. Rather, Salvetti uses the scoring criteria for a highly selective process for selecting the phrases chosen." App. Br. 10–11 (citing Salvetti 17:25–29).

The Examiner finds, "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the feature as disclose in Salvetti into the teachings of Heber in order to improve the quality of services." Final Act. 6. The Examiner explains "[i]n this case, Heber and Salvetti are using a scoring module to rate the item and Salvetti also using a textual comments for the item/product. It would have been obvious to combine Salvetti into the teaching of Heber to improve the quality server of rating and recommendations." Ans. 4.

Appellant does not provide any evidence as to how a person with skill in the art would understand either Heber (directed to a system and method for analyzing, generating suggestions for, and improving websites) or Salvetti (directed to automatic generation of digital composite product reviews), or how their combination would operate.

More specifically, Appellant has not demonstrated that the Examiner's proffered combination of references would have been "uniquely challenging or difficult for one of ordinary skill in the art." *See Leapfrog Enters., Inc. v. Fisher-Price, Inc*., 485 F.3d 1157, 1162 (Fed. Cir. 2007) (citing *KSR*, 550 U.S. at 418). Nor has Appellant provided objective evidence of secondary considerations which our reviewing court guides

"operates as a beneficial check on hindsight." *Cheese Sys., Inc. v. Tetra Pak Cheese & Powder Sys.*, 725 F.3d 1341, 1352 (Fed. Cir. 2013).

Because the Examiner has set forth "some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness," unrebutted by Appellant, we agree with the Examiner's legal conclusion of obviousness. *See Kahn*, 441 F.3d at 988.[5]

Claim 12

The Examiner finds that Heber discloses "a computer readable storage medium 38, such as hard disk drive . . . [and] optical disks" (Heber ¶ 53), and "the computer readable medium 38 also stores several sets of data for use by the computer programs to provide the present embodiment." Ans. 6 (citing Heber ¶ 54). Appellant argues, "the website being reviewed is not a non-transitory product. . . . Computer code is clearly not a non-transitory product." App. Br. 11.

We agree with the Examiner's finding that the combination of Heber and Salvetti teaches or suggests the "*the item comprises a non-transitory product*" because a person with ordinary skill in the art would have understood that hard disk drives or optical disks are non-transitory media.

Claims 15–19

With respect to independent system claim 15, Appellant "reiterates the applicable arguments made with respect to claim 1." Different from claim 1, however, Appellant additionally argues the cited prior art combination is

---

[5] "Argument in the brief does not take the place of evidence in the record." *In re Schulze*, 346 F.2d 600, 602 (CCPA 1965) (citing *In re Cole*, 326 F.2d 769, 773 (CCPA 1964)).

deficient because there is no teaching or suggestion of "a mapping

component configured to query an associated database with attributes of the

reviewed item for identifying improved items." App. Br. 12.

The Examiner responds by finding:

> Heber discloses "creating a score and generating
> recommendations for improving the health, effectiveness and
> profitability of the website.["] The recommendations are
> generated based on the website's current set of quality/
> profitability scores as well as the scores of other sites. These
> recommendations can be generated manually though human
> intervention such as **consultant identifying problem areas
> based on the website's scores** and suggesting changes to be
> implemented . . . . Also provided is a database of scored
> websites ... this has advantages in that it allows for
> straightforward comparison of the scoring data of the presently
> analyzed website with the database of previously **scored
> websites to identify** where the present website can be
> improve[d] . . . . Heber's system is using website's scores to
> identify the deficient feature of the website/item. Therefore,
> Heber discloses this limitation.

Ans. 6–7 (citing Heber ¶¶ 50, 56).

As cited in the Summary of Claimed Subject Matter section of the

Appeal Brief (App. Br. 4 (citing Spec. ¶ 27)), Appellant's Specification

describes the claimed "mapping component" in functional terms, and

indicates the functions are carried out by a processor executing software

code stored in memory. *See* Spec. ¶ 27 ("Main memory 120 stores . . . a

mapping component 142 for generating the mapping 16, and . . . [e]ach of

the components 12, 140, 142, 144 may be software components

implemented by computer processor 124"); *and see* Spec. ¶ 89 ("The

13

mapping component 142 is configured to retrieve products of the same general features.").

We agree with the Examiner's reading of the claim limitation on the cited prior art because the "mapping component" is claimed in functional terms, and because Appellant's Specification indicates these functions are carried out by a processor executing software code. *See* Heber Fig. 3, and ¶¶ 67–68 (wherein, *inter alia*, computer 32 analyzes score data using scoring program 384).

Claim 20

With respect to independent system claim 20, Appellant proffers what might appear to be a separate argument for patentability, but which, instead, essentially recasts arguments made with respect to independent claim 1 in connection with the combination of Heber with Salvetti allegedly not teaching or suggesting "applying extraction patterns to a textual comment." App. Br. 13. Similar to claim 1, Appellant further argues "[t]here would have been no reason to combine Heber with Salvetti." App. Br. 14.

For the same reasons discussed above with respect to claim 1, we are not persuaded by Appellant's arguments, and we adopt the Examiner's factual findings and legal conclusions herein as our own. *See* Final Act. 14–15; Ans. 9–10.

Summary

Therefore, based upon the findings above, on this record, we are not persuaded of error in the Examiner's reliance on the cited prior art combination to teach or suggest the disputed limitations of claims 1, 12, 15,

and 20, nor do we find error in the Examiner's resulting legal conclusion of obviousness.

Accordingly, we sustain the Examiner's obviousness rejection of claims 1 and 3–20. *See* Claim Grouping, *supra*.

REPLY BRIEF

To the extent Appellant *may* advance new arguments in the Reply Brief (Reply Br. 1–21) not in response to a shift in the Examiner's position in the Answer, 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)), which Appellant has not shown.

CONCLUSION

The Examiner did not err with respect to the obviousness rejection of claims 1 and 3–20 under 35 U.S.C. § 103(a) over the cited prior art combination of record, and we sustain the rejection.

DECISION[6]

We affirm the Examiner's decision rejecting claims 1 and 3–20.

---

[6] In the event of further prosecution, we invite the Examiner's attention to the pending claims to determine compliance with the patent eligibility guidelines under 35 U.S.C. § 101 as set forth in the Director's revised guidance as published in the Federal Register. *See 2019 Revised Patent Subject Matter Eligibility Guidance*, 84 Fed. Reg. 50 (Jan. 7, 2019) (www.govinfo.gov/content/pkg/FR-2019-01-07/pdf/2018-28282.pdf). Although the Board is authorized to reject claims under 37 C.F.R. § 41.50(b), no inference should be drawn when the Board elects not to do so. *See Manual of Patent Examining Procedure* (MPEP) § 1213.02.

DECISION SUMMARY

Claims Rejected	Basis	Affirmed	Reversed
1 and 3–20	§ 103(a) Heber, Salvetti	1 and 3–20	

FINALITY AND RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv). *See* 37 C.F.R. § 41.50(f).

AFFIRMED