UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte RONALD M. **WHITMAN**
and CHRISTOPHER L. SCOFIELD
(09/532,230)

Appeal No. 2003-1404

HEARD 22 January 2004

Before TORCZON, GROSS, and BLANKENSHIP, *Administrative Patent Judges*.

PER CURIAM.

DECISION
(PURSUANT TO 37 C.F.R. § 1.196(a))

INTRODUCTION

This appeal involves claims to a method of, and a system for implementing the method of, assisting a user of a search engine in refining searches by suggesting to the user a search phrase related to the search user's search query. The examiner has rejected all claims under 35 U.S.C. 102(e). We REVERSE.

The following enumerated findings are supported by at least a preponderance of the evidence.

The application

[1] Whitman appeals the final rejection of all pending claims in patent application 09/532,230, entitled "Search query refinement using related search phrases", filed on 22 March 2000.

[2] Whitman's real party-in-interest is Amazon.com, Inc. (Appeal Brief, Paper 10, at 1).

[3] Claims 1-48 are pending (2d Final Rejection, Paper 11).

[4] Whitman has grouped the claims into three groups, but actually argues each of the independent claims, claims 1, 9,15, 17, 22, 28, 36, and 43 separately without providing any unique arguments for the dependent claims (Paper 10 at 2-8).

We review rejections as they are actually contested. 37 C.F.R. § 1.192(c)(7). Consequently, we consider the rejection of each independent claim with each dependent claim standing or falling with its corresponding independent claim. In re Dance, 160 F.3d 1339, 1340 n.2, 48 USPQ2d 1635, 1636 n.2 (Fed. Cir. 1998) (holding dependent claims not argued separately stand or fall with their respective independent claims).

The rejection

[5] The examiner has rejected (Paper 11) claims 1-48 under 35 U.S.C. 102(e) as anticipated by:

> D.E. Bowman et al., "Refining search queries by the suggestion of correlated terms from prior searches", U.S. 6,006,225, issued 21 December 1999 [Bowman].

[6] The assignee listed on the Bowman patent is Amazon.com.

[7] The Bowman patent issued from the 09/145,360 application.

[8] Whitman expressly incorporated the 09/145,360 application into its specification (Specification, Paper 1 at 1).

[9] We understand Whitman to contend that its invention is an improvement on Bowman's invention.

[10] According to the examiner, Bowman teaches all the limitations of claims 1-17 and 22-48 (Paper 11 at 2-7).

Analysis

[11] In neither the final rejection (Paper 11) or in the examiner's answer (Paper 13) does the examiner account for the limitations of claims 18-21.

The examiner bears the initial burden of presenting the case for anticipation. Only once this initial burden is met, does the burden of going forward shift to the applicant. In re King, 801 F.2d 1324, 1327, 231 USPQ 136, 138-39 (Fed. Cir. 1986). A failure to account for any limitations in claim 18 and its dependent claims 19-21 is sufficient reason to reverse the rejection of those claims.

An anticipation analysis begins with a construction of the contested limitations. Toro Co. v. Deere & Co., _ F.3d _, _ USPQ2d _, 2004 WL 78020 at * 5 (Fed. Cir. 2004). Next comes a determination of whether the reference discloses each limitation of the claim expressly or inherently. Akamai Techs, Inc. v. Cable & Wireless Internet Svs., 344 F.3d 1186, 1192, 68 USPQ2d 1186, 1190 (Fed. Cir. 2003).

[12] According to Whitman (Supplemental brief, Paper 12), Bowman does not disclose the selection and storage of "search phrases".

In proceedings before the Office, claims in an application are given their broadest reasonable interpretation consistent with the specification, as it would be interpreted by one of ordinary skill in the art. In re Sneed, 710 F.2d 1544, 1548, 218 USPQ 385, 388 (Fed. Cir. 1983). A contested limitation is given its ordinary meaning unless it is clear from the specification that the applicant In re Paulsen, 30 F.3d 1475, 1480, 31 USPQ2d 1671, 1674 (Fed. Cir. 1994). Any

special definition must be stated with reasonable clarity, deliberateness, and precision. Id., 30 F.3d at 1480, 31 USPQ2d at 1674.

[13] The examiner does not provide a definition for "search phrase".

[14] The Bowman patent does not contain the word "phrase" and thus provides no guidance regarding what the art understands "search phrase" to mean.

[15] Whitman does not cite a definition for "search phrase" beyond a parenthetical definition of "phrase" in the specification (Paper 1 at 7:11-12), where it means "a combination of two or more terms".

[16] A combination of two or more terms does not, in itself, require any lexical ordering between the terms.

[17] The specification, however, provides as examples of search phrases only lexically ordered sets of terms, such as book titles and authors' names (Paper 1, Fig. 1, table 137).

[18] Moreover, the Summary of the Invention (Paper 1 at 2) distinguishes between Bowman's suggestion of "related query terms[, which] do not always assist the user in refining the search query", and Whitman's suggestion of "previously-submitted, [sic] related search phrases".

[19] A set of terms will refine a search more than a single term and a lexically ordered set of terms (a search phrase) will refine the search still more.

[20] Consequently, the broadest reasonable construction of the contested limitation "search phrase" when construed in light of the specification requires a lexically ordered set of terms derived from a prior search query.

[21] Bowman does not disclose the selection, storage, and use of search phrases, as opposed to search terms.

[22] The examiner treats "related terms" and "search phrases" as interchangeable, pointing to Bowman Figures 5A, 5B, and 9, and to 7:24-42,[1] 11:6-50, and 14:13-45 (Paper 13 at 3-4).

[23] Figures 5A and 5B show individual words that are suggested in response to words in the user's search query, e.g., "BIKE" suggests title word "HUFFY", "REPAIR", and "TRAIL"; author words "CARLSON", "FRANKLIN", and "YATES"; and subject words "EXCERCISE" [sic], "OUTDOOR", and "TRAIL".

[24] Figure 9 shows phrases, but the suggested additional search aids **910** are all single words "BIKE", "SPORTS", and "VACATION" generated in response to a query "OUTDOOR TRAIL".

[25] The cited portions of the Bowman disclosure are consistent with the figures, but do not expand the meaning of Bowman's search terms.

[26] More to the point, Bowman's discussion of parsing the daily query log makes clear that Bowman is extracting individual terms for correlation with other individual terms rather than whole phrases (Bowman at 9:12-11:11).

The question of whether it would have been obvious to substitute search phrases for search terms is not before us in the context of a rejection under § 102(e).

The lack of a disclosure in Bowman for using search phrases does not dispose of this appeal because claim 43 does not include "search phrase" as a limitation.

[27] Claim 43 (reproduced from the appendix to Paper 10) claims the invention as follows:

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[1] Column:lines.

> A system for assisting users in conducting searches of a database, comprising:
>
> a first component which maintains a log reflecting search query submissions of a plurality of users and reflecting post-search actions performed by the users with respect to associated query result items;
>
> a second component which selects search queries from the log and stores selected search queries in a data structure for subsequent look-up, wherein the second component selects a search query from the log based at least in-part on a usefulness of the search query as reflected by the post-search actions performed by users who submitted that search query; and
>
> a third component which is responsive to a search query submission of a user by selecting at least one related search query from the data structure, and suggesting the at least one related search query to the user;
>
> whereby the system uses actions of prior users of the search engine to assist current users of the search engine in conducting searches.

While a "whereby" clause must be evaluated on a case-by-case basis, Griffin v. Bertina, 285 F.3d 1029, 1033, 62 USPQ2d 1431, 1434 (Fed. Cir. 2002), it is not limiting when, as here, it simply states the results of the previous limitations, Lockheed Martin Corp. v. Space Sys./Loral, Inc., 324 F.3d 1308, 1319, 66 USPQ2d 1282, 1290 (Fed. Cir. 2003).

[28] With regard to claim 43, the examiner says only (Paper 11 at 4):

> The elements of claims 28, 36, and 43 are rejected in the analysis above, and these claims are rejected on that basis.

[29] The examiner appears to rely on Bowman at 2:47-63 for the disclosure of the first component, the log reflecting post-search actions by users.

[30] The cited portion of Bowman requires the correlation table to be set to reflect current tastes of recent users, but it does so by regenerating the table periodically rather than by processing post-search activity.

[31] Whitman initially argued (Paper 12 at 7, original emphasis):

> In fact, Bowman does not disclose or suggest any analysis or use of post-search actions of users as a basis for selecting particular queries or phrases to suggest to users.

[32] Bowman does in fact teach analysis and use of post-search activities (at 11:12-29):

> In addition, the amount by which the correlation scores are incremented may be increased or decreased depending on different kinds of selection actions performed by the users on items identified in query results. These may include whether the user displayed additional information about an item, how much time the user spent viewing the additional information about the item, how many hyperlinks the user followed within the additional information about the item, whether the user added the item to his or her shopping basket, and whether the user ultimately purchased the item. For example, a given query submission can be counted twice (such as by incrementing the correlation score by two) if the user subsequently selected an item from the query result page, and counted a third time if the user then purchased the item or added the item to the shopping basket. These and other types of post-search activities reflect the usefulness of the query result, and can be extracted from the query log **135** using well-known tracing methods.

[33] In reply (Paper 15 at 2, emphasis added), Whitman argues:

> The portion of Bowman cited by the Examiner discloses generating the correlation table 137 from a most recent set of query submissions stored in the query log, so that this table (and thus the search terms suggested to users) will strongly reflect the current tastes of users. This portion of Bowman does not suggest analyzing the post-search actions of users to evaluate the usefulness of the search phrases or queries submitted by such users.
>
> The portion of Bowman most closely related to this feature is col. 11, lines 12-29, which discloses adjusting search term correlation scores based on certain post-search actions performed by users. However, neither this nor any other portion of Bowman discloses the use of post-search actions of users as recited in the independent claims of Group 3. * * *
>
> * * *
>
> With respect [sic, to] independent Claim 43, Bowman does not disclose "a second component which selects search queries from the log and stores selected

> search queries in a data structure for subsequent look-up, wherein the second component selects a search query from the log based at least in-part on a usefulness of the search query as reflected by the post-search actions performed by users who submitted that query,", in the context of the other claim limitations. In this regard, the search terms ultimately selected in Bowman for inclusion in the correlation table are not "search queries from the log," but rather are individual search terms extracted from multiple-term search queries in the log.
>
> Appellants wish to withdraw their remarks made in the paragraph beginning two lines from the bottom of page 7 of the Supplemental Appeal Brief [Paper 12], to the extent such remarks may inaccurately characterize Bowman.

The remarks on page 7 of Paper 12 are inaccurate, but they do not appear to have affected the examiner's reasoning and consequently appear to have been harmless. Withdrawal of the remarks is acknowledged.

[34] The examiner appears to rely on Bowman at 12:60-66 for the disclosure of the second component, the data structure based at least in part on the usefulness of the prior query:

> In other embodiments, the selection process **139** combines the related terms lists by summing the correlation scores of terms common to other related terms lists, without deleting any terms. Another implementation might give weighted scores for intersecting terms such that terms appearing in more than one related terms list are weighted heavier than those terms appearing only in a single related terms list.

[35] By itself, the cited portion only refers to selecting based on correlation scores, but when read with the disclosure from column 11, which shows the correlation scores can be based on post-search activities, the examiner appears to be closer to the mark.

[36] As Whitman notes, however, Bowman extracts a term, not a multi-term search query.

[37] Nothing in claim 43 requires the initial query to have more than one term.

[38] Bowman, however, produces its data structure based on the correlation of terms within a search query.

[39] Such correlation would not make sense for a single-term search query because there would not be any other term in the query to which it could be correlated.

[40] Consequently, Bowman cannot be reasonably read to address single-term query processing.

[41] Bowman does not anticipate claim 43.

[42] The examiner has not provided a separate basis for rejecting the claims depending from claim 43.

DECISION

Upon consideration of the final rejection, the appellant's brief, supplemental brief, and reply brief; the examiner's answer; and the cited evidence, it is:

DECIDED that the rejection of claims 1-48 be REVERSED.

RICHARD TORCZON
Administrative Patent Judge

ANITA PELLMAN GROSS
Administrative Patent Judge

HOWARD B. BLANKENSHIP
Administrative Patent Judge

BOARD OF PATENT APPEALS AND INTERFERENCES

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