The opinion in support of the decision being entered today was *not* written for publication in a law journal and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KRISHNA A. BHARAT and GEORGE A. MIHAILA

Appeal 2007-0447
Application 09/418,418
Technology Center 2100

Decided: June 27, 2007

Before ANITA PELLMAN GROSS, LANCE LEONARD BARRY, and JEAN R. HOMERE, *Administrative Patent Judges*.

GROSS, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Bharat and Mihaila (Appellants) appeal under 35 U.S.C. § 134 from the Examiner's final rejection of claims 1 through 12 and 14 through 23, which are all of the claims pending in this application.

Appellants' invention relates to a computer search engine for searching a large number of hypertext documents (Specification 1:5-6). In response to an input query, the search engine ranks matching expert pages

(pages about a topic with links to several non-affiliated pages), looks at the targets (out-going links) from the expert pages, and returns a ranked list of the target pages (Specification 4:3-18). Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A computer-implemented method for searching a large number of hypertext documents in accordance with a search query, comprising:

forming a set of expert documents from the set of all hypertext documents crawled without reference to the search query;

ranking the expert documents in accordance with the search query;

ranking target documents pointed to by the ranked expert documents; and

returning a results list based on the ranked target documents.

The prior art references of record relied upon by the Examiner in rejecting the appealed claims are:

Yu	US 6,067,552	May 23, 2000
Page	US 6,285,999 B1	Sep. 04, 2001
Chakrabarti (Chakrabarti '433)	US 6,418,433 B1	Jul. 09, 2002

Soumen Chakrabarti et al. (Chakrabarti), "*Automatic Resource Compilation by Analyzing Hyperlink Structure and Associated Text*," available at http://decweb.ethz.ch/WWW7/1898/com1898.htm, April 14, 1998.

Claims 1 through 4, 14 through 18[1], and 20 through 23 stand rejected under 35 U.S.C. § 103 as being unpatentable over Chakrabarti in view of Page.

[1] We note that while the Examiner failed to list claims 14 through 18 in the statement of the rejection on page 3 of the Answer, in the explanation of the

Claims 5 through 10 and 19 stand rejected under 35 U.S.C. § 103 as being unpatentable over Chakrabarti in view of Page and Yu.

Claims 11 and 12 stand rejected under 35 U.S.C. § 103 as being unpatentable over Chakrabarti in view of Page and Chakrabarti '433.

We refer to the Examiner's Answer (mailed June 30, 2006) and to Appellants' Brief (filed April 26, 2006) for the respective arguments.

SUMMARY OF DECISION

As a consequence of our review, we will reverse the obviousness rejections of claims 1 through 12 and 14 through 23.

OPINION

Each of the three independent claims requires forming a set of expert documents "without reference to the search query" and ranking the expert documents "in accordance with a search query." Thus, the formation of the set of expert documents occurs prior to a search query for a specific topic, but the ranking of the expert documents occurs after the search query.

The Examiner finds (Answer 3) that Chakrabarti, in determining hub scores, discloses ranking expert documents according to a search query and, in obtaining authority pages and scores, teaches ranking target documents pointed to by the ranked expert documents. The Examiner asserts (Answer 4) that "Chakrabarti does not explicitly teach forming a set of expert documents from the set of all hypertext documents crawled without

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rejection, the Examiner discusses claims 14 through 18 at pages 4-6 of the Answer. Accordingly, we will treat claims 14 through 18 as rejected over Chakrabarti in view of Page.

reference to the search query." The Examiner (Answer 4) turns to Page for the missing limitation.

Appellants contend (Br. 17) that a combination of Chakrabarti and Page fails to result in the claimed invention. Specifically, Appellants (Br. 17-18 and 20) contend that Chakrabarti fails to disclose forming a set of experts. Instead, according to Appellants, Chakrabarti discloses ranking a set of documents produced from performing a search on a specific topic, or search query. Thus, Appellants contend (Br. 18) that Chakrabarti further fails to disclose ranking expert documents, instead ranking results of a search query. Appellants also contend (Br. 19) that Page teaches forming a set of documents based on a search query and then ranking those documents, thereby failing to disclose the limitations of forming a set of expert documents prior to a search and ranking the expert documents after a search query. The issue, therefore, is whether a combination of Chakrabarti and Page would have rendered obvious forming a set of expert documents prior to a search and ranking them in accordance with the search.

Notwithstanding statements made by the Examiner and Appellants, we find that Chakrabarti discloses forming a set of expert documents prior to a search. Specifically, Chakrabarti discloses in section 2 that a hub page is one that includes several links to pages containing information about a topic. Thus, a hub page satisfies Appellants' definition of an expert document (Specification 4:7-8). Chakrabarti discloses (page 1) that the system automatically compiles a list of *authoritative* web resources for any *broad topic*. "Broad topic" suggests something other than a specific search query. In section 3, Chakrabarti describes experiments in which the web resource lists were compared with Yahoo! and Infoseek directories. In section 3.2,

Chakrabarti discloses that "[t]he participants were asked to use these lists as 'starting points' from which to use the Web to learn about the topic as effectively as possible." Similarly, Appellants disclose (Specification 4:7) that an expert page is about "a certain topic." Thus, Appellants' expert page starts with a topic in the same way that Chakrabarti's system begins with a topic. Each system determines a set of web resources for a broad topic.

Nonetheless, we find that Chakrabarti fails to rank the authoritative pages in accordance with a search query. In discussing the determination of hub and authority scores and listing the 15 highest values of each, Chakrabarti does not mention a search query, but, rather, refers to the topic (i.e., the broad topic). Thus, Chakrabarti does not disclose the claimed step of ranking the expert documents in accordance with a search query.

Page (col. 2, ll. 15-19 and 59-67) discloses comparing search query terms with the text description that points to a document to determine the relevance of the document. Pages are ranked, taking into consideration how many other documents cite them and the ranks of the citing references. Thus, Page describes ranking in accordance with a search query documents cited by others, which more closely corresponds with Appellants' target documents. In other words, Page discloses ranking target documents in accordance with a search query, but fails to teach ranking expert documents according to a search query. Therefore, Page cannot remedy the shortcomings of Chakrabarti. Accordingly, we cannot sustain the obviousness rejection of claims 1 through 4, 14 through 18, and 20 through 23 over Chakrabarti in view of Page.

Regarding claims 5 through 12 and 19, neither Yu nor Chakrabarti '433 discloses forming expert documents prior to a search query and ranking

them in accordance with the search query. Accordingly, neither Yu nor Chakrabarti cures the deficiency of the primary combination. Hence, we cannot sustain the obviousness rejection of claims 5 through 10 and 19 over Chakrabarti in view of Page and Yu nor of claims 11 and 12 over Chakrabarti in view of Page and Chakrabarti '433.

ORDER

The decision of the Examiner rejecting claims 1 through 12 and 14 through 23 under 35 U.S.C. § 103 is reversed.

REVERSED

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