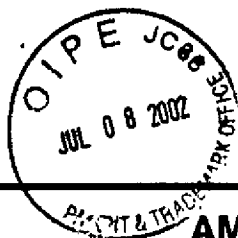


EXHIBIT B



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Technology Center 2100 Docket No. J0003/7002

AMENDMENT

Applicant: Kenneth P. Baclawski
 Serial No: 09/359,982
 Filed: July 23, 1999
 For: DISTRIBUTED COMPUTER DATABASE SYSTEM AND METHOD
 EMPLOYING HYPERTEXT LINKAGE ANALYSIS
 Examiner: J. Corrielus
 Art Unit: 2172

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

The undersigned hereby certifies that this document is being placed in the United States mail with first-class postage attached, addressed to Box Non-Fee Amendment, Assistant Commissioner for Patents, Washington, D.C. 20231 on July 3, 2002.

Jan L. Mellen
Jan L. Mellen

Box Non-Fee Amendment
Assistant Commissioner for Patents
Washington, D.C. 20231

In response to the office communication dated April 3, 2002, please amend the above-identified application as follows:

Substitute Paragraphs and Claims

Please substitute the following claims for pending claims with the same numbers.

- 1 28. A method for indexing information for facilitated retrieval from a database, the
 2 method comprising:
 3 A) extracting a number of features from an information object, each of the
 4 features comprising a link feature;
 5 B) fragmenting each of the features into feature fragments;
 6 C) hashing each of the feature fragments into hashed feature fragments; and

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7 B1 D) using each of the feature fragments in accessing a corresponding hash
8 table that identifies a location at which data is to be stored, the data
9 comprising an object identifier of an object referenced by a link specified
10 by the link feature.

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Remarks and Arguments

Claims 1-30 have been presented for examination. Claim 28 has been amended to place it in proper method format.

Claims 1-30 have been rejected under the judicially-created doctrine of obvious-type double patenting over claims 1-17 of U.S. Patent No. 5,694,593. The examiner asserts that claim 1 of the instant application includes all limitations of claim 1 of U.S. Patent No. 5,694,593 ('593 patent) except that the instant claim 1 also recites the steps of parsing a query and extracting a plurality of features from the query. The examiner contends that it would have been obvious to include these features because the process is the same whether the features are added or omitted citing *In re Karlson*, 136 USPQ 184 (CCPA 1963).

The present invention resides in an indexing and search engine for extraction of information based both on the content of information objects in a database and on web, or hypertext links, between information objects. The present invention supports queries directed at retrieving information with respect to either outgoing or incoming links, or both. Thus, the invention can retrieve objects relevant to a query, retrieve link information relevant to a query and retrieve all link information for a specific object relevant to a query, including both incoming and outgoing links. In order to provide such retrieval, a general query is parsed into index queries that retrieve information objects relevant to a query, link queries that retrieve link information relevant to a query and object queries that retrieve of link information relevant to a query for a specific object, including both incoming and outgoing links. These queries are then processed by the retrieval system.

Claim 1 of the '593 patent recites the steps of:

- (a) randomly selecting a first one of said plurality of home nodes;
- (b) fragmenting, by said selected home node, a query from a user into a plurality of query fragments;
- (c) hashing, by said selected home node, each said query fragment of said plurality of query fragments, said hashed query fragment having a first portion and a second portion;

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- (d) transmitting, by said selected home node, each said hashed query fragment of said plurality of query fragments to a respective one of said plurality of query nodes indicated by said first portion of each said hashed query fragment;
- (e) using, by said query node, said second portion of said respective hashed query fragment to access data according to a local hash table located on said query node; and
- (f) returning, by each said query node accessing data according to said respective hashed query fragment, an object identifier corresponding to said accessed data to said selected home node.

Claim 1 of the present application recites the steps of:

- A) selecting a first one of said plurality of home nodes;
- B) parsing, by said selected home node, a query conforming to the said query language, from a user, to obtain a plurality of elementary queries;
- C) each of said elementary queries comprising one of an index query or a link query;
- D) extracting, by said selected home node, a plurality of features from each elementary query of the said plurality of elementary queries;
- E) fragmenting each of said extracted elementary query features into elementary query feature fragments;
- F) hashing, by said selected home node, each said elementary query feature fragment of said plurality of elementary query feature fragments, said hashed elementary query feature fragment having a first portion and a second portion;
- G) transmitting, by said selected home node, each said hashed elementary query feature fragment of said plurality of elementary query feature fragments to a respective one of said plurality of index nodes indicated by said first portion of each said hashed elementary query feature fragment;

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- H) using by said index node, said second portion of said respective hashed elementary query feature fragment to access data according to a local hash table located on said index node;
- I) returning, by each said index node accessing data according to said respective hashed index query feature fragment a plurality of object identifiers corresponding to said accessed data to said selected home node; and
- J) returning, by each said index node accessing data according to said respective hashed link query feature a plurality of pairs of object identifiers corresponding to said accessed data to said selected home node.

A comparison of these two claims shows that steps B, C D and J present in claim 1 of the instant invention are not present in claim 1 of the '593 patent. These steps relate to parsing the initial query into index queries and link queries and extracting features from these queries. The features are then processed with a structure similar to that illustrated in the '593 patent with the exception that the '593 patent does not use extracted features and does not handle link queries (as set forth in step J.) It is also clear that the link queries recited in the represent invention do not correspond to the query fragments recited in '593 claim 1. The '593 query fragments are defined at '593 column 1, lines 27-31, and consist of a part of the query with a limited number of attributes values joined by relationships. A link query as defined in the present specification at page 7, lines 17-18, is a query for retrieval of link information relevant to a query. The link information is not part of the query. Thus, instant claim 1 recites steps not recited in the '593 claim 1.

The steps not recited in the '593 claim 1 (parsing to obtain link queries, extracting features from the link queries and processing the link queries) are not taught or suggested by the '593 specification nor even mentioned anywhere in the '593 specification. No additional reference has been cited that discloses these steps. The examiner contends that the omission or addition of the above steps would not change the process by which a distributed database handles queries from users. However, no

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support has been provided for this contention; the examiner merely states that it is so. Applicant contends it is clear that these steps require a modification of the processing structure as can be seen by comparing Figure 2 of the '593 patent with Figure 2 of the present specification.

The examiner further contends that the extra steps recited in the present application would not interfere with the functionality of the steps previously claimed and concludes that a person skilled in the art would therefore find it obvious to add these elements, citing *In re Karlson*. *In re Karlson* is inapposite. It stands for the proposition that the omission of an element and its function in a **claimed** combination is an obvious expedient if the remaining claimed elements perform the same functions as shown in the prior art. The facts in the *Karlson* case are exactly the opposite of those here. In *Karlson*, the prior art disclosed a combination with elements that were omitted in the *Karlson* claims. Here, the instant claims recite elements that were **added** to the prior art combination rather than omitted from the prior art combination.

The conclusion that the recitation of additional claimed steps renders the claim obvious if the claim without the additional steps is still operable appears to be a *non sequitur*. The claim with the additional steps is a new combination and the inquiry must be whether the claimed combination with the additional steps is obvious, not whether an unclaimed combination without the steps is operable.

Further, the examiner has failed to establish a *prima facie* case of obviousness because the reference does not teach or suggest all of the claimed steps, specifically steps B, C, D and J. See MPEP §2143.03. If the examiner is aware of art that does teach these steps and that suggests combining these steps with the steps taught in the '593 patent, he is requested to cite that art. For the reasons stated above, the rejection of claim 1 under obviousness-type double patenting is hereby respectfully traversed.

A comparison of claim 5 of the present application with claim 6 of the '593 patent shows that the difference in the claims comprises steps similar to those which differ in instant claim 1 and '593 claim 1. These steps include extracting link features from an object and storing the object identifier of objects referenced by the link contained in the link features. As stated above, these steps are neither taught nor suggested by the

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cited reference. Accordingly, the examiner has failed to establish a *prima facie* case of obviousness and the rejection of claim 5 under obviousness-type double patenting is hereby respectfully traversed for the same reasons as discussed above with respect to instant claim 1.

Claim 7 of the present application differs from claim 8 of the '593 patent by reciting elements that have a scope similar to the scope of the steps that differ between instant claims 1 and 5 and '593 claims 1 and 6. For example, these elements include a home node that parses a query to obtain a plurality of elementary queries, each of which is either an index query or a link query, and that extracts a plurality of features from each elementary query. Further elements recited include an index node that returns a plurality of pairs of object identifiers corresponding to the accessed data to the home node. As discussed above, these elements are neither taught nor suggested by the cited reference. Accordingly, the examiner has failed to establish a *prima facie* case of obviousness and the rejection of claim 7 under obviousness-type double patenting is hereby respectfully traversed for the same reasons as discussed above with respect to instant claims 1 and 5.

The remaining claims also recite elements not shown or suggested in the cited reference. For example, claim 11 recites a query task that parses a query into a plurality of index queries and link queries and that extracts a plurality of features from each index and link query. Claim 11 further recites an index node that returns a plurality of pairs of object identifiers when the parsed query feature is a link feature. Similarly, claim 13 recites a first code portion for extracting a number of features from each of a number of elementary queries comprising a link query, a second code portion for fragmenting each of the features into feature fragments and a fourth code portion for obtaining an object identifier for use in obtaining information from the database relevant to the link queries. Claim 16 recites a first mechanism for extracting a number of features from each of a number of elementary queries, each of the elementary queries comprising a link feature, a second mechanism coupled with the first mechanism for fragmenting each of the features into feature fragments and a fourth mechanism coupled with the third mechanism for using each of the hashed feature fragment in

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accessing a corresponding hash table for obtaining an object identifier therefrom for use in obtaining information from the database relevant to the link queries.


Claim 19 recites the steps of extracting a number of features from each of a number of elementary queries, each of the elementary queries comprising a link query, fragmenting each of the features into feature fragments and using each of the feature fragments to obtain information from a database relevant to the link queries. Claim 22 recites a first mechanism for extracting a number of features from an information object, each of the features comprising a link feature, a second mechanism coupled with the first mechanism for fragmenting each of the features into feature fragments and a fourth mechanism for using each of the feature fragments to identify a location at which data is to be stored, the data including an object identifier of an object referenced by a link specified by the link feature. Claim 25 recites a first code portion for extracting a number of features from an information object, each of the features comprising a link feature, a second code portion for fragmenting each of the features into feature fragments and a fourth code portion for using each of the feature fragments to identify a location at which data is to be stored, the data including an object identifier of an object referenced by a link specified by the link feature. Finally, claim 28 (as amended) recites extracting a number of features from an information object, each of the features comprising a link feature, fragmenting each of the features into feature fragments and using each of the feature fragments to identify a location at which data is to be stored, the data comprising an object identifier of an object referenced by a link specified by the link feature.

Thus, claims 11, 13, 16, 19, 22, 25 and 28 all recite the parsing of a query into link queries, extracting features from the link queries and then processing the queries. As discussed above with respect to claims 1, 5 and 7, these features or steps are not taught or suggested by the cited reference. Accordingly, these claims are patentably distinct from the claims of the cited reference and the rejection under the judicially-created doctrine of obviousness-type double patenting is hereby respectfully traversed.

In view of the above discussion, applicant believes that the present application is in condition for allowance and respectfully requests that this application be passed to

issue. Should any further issues arise, the examiner is invited to call applicant's attorney at the number listed below. The Commissioner is hereby authorized to charge any other fees under 37 C.F.R. §§1.16 and 1.17 that may be required, or credit any overpayment, to our Deposit Account No. 02-3038.

Respectfully submitted



Date: 7/3/02

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Version Marked to Show Changes

- 1 28. (Amended) A method for indexing information for facilitated retrieval from a
2 database, the method comprising:
- 3 A) extracting a number of features from an information object, each of the
4 features comprising a link feature;
 - 5 B) [a second mechanism coupled with the first mechanism for]fragmenting
6 each of the features into feature fragments;
 - 7 C) [a third mechanism coupled with the second mechanism for]hashing each
8 of the feature fragments into hashed feature fragments; and
 - 9 D) [a fourth mechanism coupled with the third mechanism for]using each of
10 the feature fragments in accessing a corresponding hash table that
11 identifies a location at which data is to be stored, the data comprising an
12 object identifier of an object referenced by a link specified by the link
13 feature.

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| AMENDMENT TRANSMITTAL | Docket No. J0003/7002 |
| Applicant: Kenneth P. Baclawski Serial No: 09/359,982 Filed: July 23, 1999 For: DISTRIBUTED COMPUTER DATABASE SYSTEM AND METHOD EMPLOYING HYPERTEXT LINKAGE ANALYSIS Examiner: J. Corrielus Art Unit: 2172 | |

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 Washington, D.C. 20231

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Transmitted herewith for filing is the following:

Enclosures

- Amendment
- Petition for a month Extension of Time
- Return Receipt Postcard
- Other:

Small Entity

- A small entity statement under 37 C.F.R. §1.27 has already been filed.
- A small entity statement under 37 C.F.R. §1.27 is attached

Fees

| Claims as Filed | | | | | |
|--|--------------|-------------------------|------------------------|-----------|---------------------|
| | Claims Filed | Highest Number Paid for | Number of Extra Claims | Rate | Additional Fees Due |
| Total Claims (37 CFR §1.16(c)) | 29 | - 29 = | 0 X | \$18.00 = | \$ 0.00 |
| Independent Claims (37 CFR §1.16(b)) | 12 | - 12 = | 0 X | \$84.00 = | \$ 0.00 |
| Extension Fee | | | | | \$ 0.00 |
| Reduction by 50% for filing by small entity | | | | | \$ 0.00 |
| Total Filing Fee | | | | | \$ 0.00 |

Amendment Transmittal 1 of 2

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Payment

- Check in the amount of the total filing fee.
- Charge Account No. 02-3038 in the amount of the total filing fee. A duplicate of this transmittal sheet is attached.

Authorization to Charge Additional Fees

- The Commissioner is hereby authorized to charge any additional fees under 37 C.F.R. §1.16 and §1.17 required by the attached paper and during the entire pendency of this application to Account No. 02-3038.

Paul E. Kudirka

Date: 7/3/02

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