ABSTRACT OF THE DISCLOSURE

Methods and systems for reconstructing a full query based on a partial query are disclosed. Existing interfaces for search engines may be rigid and require users to submit full queries to perform searched. The methods and systems described herein may solve these problems by allowing a flexible way for users to submit a partial query and reconstruct a full query based on the partial query. A search may then be performed using the reconstructed query.

American Airlines/Hilton, Ex. 1006, p.1
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

PTO/SB/14 (11-08)
Approved for use through 06/30/2010. OMB 0651-0032
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	12729-687 (Y01651US02)
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY	

The application data sheet is part of the provisional or nonprovisional application for which it is being submitted. The following form contains the bibliographic data arranged in a format specified by the United States Patent and Trademark Office as outlined in 37 CFR 1.76.
This document may be completed electronically and submitted to the Office in electronic format using the Electronic Filing System (EFS) or the document may be printed and included in a paper filed application.

Secrecy Order 37 CFR 5.2

☐ Portions or all of the application associated with this Application Data Sheet may fall under a Secrecy Order pursuant to 37 CFR 5.2 (Paper filers only. Applications that fall under Secrecy Order may not be filed electronically.)

Applicant Information:

Applicant 1

Applicant Authority ◉ Inventor ○ Legal Representative under 35 U.S.C. 117 ○ Party of Interest under 35 U.S.C. 118

Prefix	Given Name	Middle Name	Family Name	Suffix
	Deepa		Joshi	

Residence Information (Select One) ◉ US Residency ○ Non US Residency ○ Active US Military Service

City	Santa Clara	State/Province	CA	Country of Residence	US

Citizenship under 37 CFR 1.41(b) IN

Mailing Address of Applicant:

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Address 2	

City	Santa Clara	State/Province	CA

Postal Code	95051	Country	US

All Inventors Must Be Listed - Additional Inventor Information blocks may be generated within this form by selecting the **Add** button. Add

Correspondence Information:

Enter either Customer Number or complete the Correspondence Information section below.
For further information see 37 CFR 1.33(a).

☐ **An Address is being provided for the correspondence Information of this application.**

Customer Number	56020		
Email Address		Add Email	Remove Email

Application Information:

Title of the Invention	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY		
Attorney Docket Number	12729-687 (Y01651US02)	Small Entity Status Claimed	☐
Application Type	Nonprovisional		
Subject Matter	Utility		
Suggested Class (if any)		Sub Class (if any)	
Suggested Technology Center (if any)			
Total Number of Drawing Sheets (if any)	7	Suggested Figure for Publication (if any)	

American Airlines/Hilton, Ex. 1006, p.2
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

PTO/SB/14 (11-08)
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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	12729-687 (Y01651US02)
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY	

Publication Information:

☐	Request Early Publication (Fee required at time of Request 37 CFR 1.219)
☐	**Request Not to Publish.** I hereby request that the attached application not be published under 35 U.S. C. 122(b) and certify that the invention disclosed in the attached application **has not and will not** be the subject of an application filed in another country, or under a multilateral international agreement, that requires publication at eighteen months after filing.

Representative Information:

Representative information should be provided for all practitioners having a power of attorney in the application. Providing this information in the Application Data Sheet does not constitute a power of attorney in the application (see 37 CFR 1.32).
Enter either Customer Number or complete the Representative Name section below. If both sections are completed the Customer Number will be used for the Representative Information during processing.

Please Select One:	◉ Customer Number	○ US Patent Practitioner	○ Limited Recognition (37 CFR 11.9)
Customer Number	56020		

Domestic Benefit/National Stage Information:

This section allows for the applicant to either claim benefit under 35 U.S.C. 119(e), 120, 121, or 365(c) or indicate National Stage entry from a PCT application. Providing this information in the application data sheet constitutes the specific reference required by 35 U.S.C. 119(e) or 120, and 37 CFR 1.78(a)(2) or CFR 1.78(a)(4), and need not otherwise be made part of the specification.

Prior Application Status	Pending		Remove
Application Number	Continuity Type	Prior Application Number	Filing Date (YYYY-MM-DD)
	Continuation of	11502202	2006-08-10

Additional Domestic Benefit/National Stage Data may be generated within this form by selecting the **Add** button.

Foreign Priority Information:

This section allows for the applicant to claim benefit of foreign priority and to identify any prior foreign application for which priority is not claimed. Providing this information in the application data sheet constitutes the claim for priority as required by 35 U.S.C. 119(b) and 37 CFR 1.55(a).

Remove

Application Number	Country[i]	Parent Filing Date (YYYY-MM-DD)	Priority Claimed
			○ Yes ○ No

Additional Foreign Priority Data may be generated within this form by selecting the **Add** button.

Assignee Information:

Providing this information in the application data sheet does not substitute for compliance with any requirement of part 3 of Title 37 of the CFR to have an assignment recorded in the Office.

Assignee 1

American Airlines/Hilton, Ex. 1006, p.3
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

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Application Data Sheet 37 CFR 1.76	Attorney Docket Number	12729-687 (Y01651US02)
	Application Number	
Title of Invention	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY	

If the Assignee is an Organization check here. ☒			
Organization Name	Yahoo! Inc.		
Mailing Address Information:			
Address 1	701 First Ave.		
Address 2			
City	Sunnyvale	**State/Province**	CA
Country	US	Postal Code	94089
Phone Number		Fax Number	
Email Address			
Additional Assignee Data may be generated within this form by selecting the **Add** button.			

Signature:

A signature of the applicant or representative is required in accordance with 37 CFR 1.33 and 10.18. Please see 37 CFR 1.4(d) for the form of the signature.					
Signature	/John G. Rauch/			Date (YYYY-MM-DD)	2010-04-22
First Name	John	Last Name	Rauch	Registration Number	37218

This collection of information is required by 37 CFR 1.76. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 23 minutes to complete, including gathering, preparing, and submitting the completed application data sheet form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

CLAIMS

1. A computer implemented method comprising:

receiving at a server a partial query submitted at a remote user client system by a user seeking search results related to the submitted partial query, the partial query comprising one or more partial words forming an abbreviated or incomplete search query;

storing information based on previously submitted queries received at the server;

determining at the server a full query as the most frequently submitted, previously-submitted query received at the server that matches the partial words of the partial query; and

at the server, providing the full query for further processing.

2. The computer implemented method of claim 1 further comprising:

submitting the full query to a search engine as a request for search results desired by the user;

receiving, at the server, results from the search engine that match the full query; and

from the server, presenting the results to the user.

3. The computer implemented method of claim 1, further comprising

determining an alternative query based on the partial query; and

presenting the alternative query to the user.

4. The computer implemented method of claim 3 wherein determining an alternative query comprises identifying as alternative queries all previously-submitted queries that match the partial words of the partial query but which are not selected as the full query.

5. The computer implemented method of claim 4 where presenting the alternative query to the user comprises presenting the alternative query as a hyperlink on a web page.

6. The computer implemented method of claim 1 further comprising:

at the server, determining a query index based on previously submitted queries received at the server; and

comparing the partial words of the partial query with the query index to determine the full query.

7. A database search system comprising:

a query reconstruction server to:

receive a partial query submitted at a remote user client system;

store a query index which is based on previously submitted queries received at the database search system;

determine a full query based on the partial query by comparing the submitted partial query to the query index of known search queries and by determining the full query by selecting a matching known query which is the most frequently-submitted query; and

a web server to present information retrieved based on the full query to the user client system.

8. The database search system of claim 7 wherein the query reconstruction server is arranged to submit the full query to a search engine and wherein the web server is arranged to receive from the search engine search results matching the submitted partial query and present the search results to the user client system.

9. The system database search system of claim 8 wherein the query reconstruction server further determines one or more alternative queries based on the received partial query, and wherein the web server is arranged to present the one or more alternative queries to the user client system as hyperlinks and where the selection of an alternative query hyperlink at the user client system causes the alternative query to be submitted to the search engine.

9. The database search system of claim 7 further comprising:

a query data management server to:

retrieve from a database historical query data relating to a plurality of previously submitted search queries;

build the query index based on the historical query data; and

provide the query index to the query reconstruction server.

10. The database search system of claim 7, where the query index includes weight information for the plurality of previously submitted search queries, and where the query reconstruction server determines the full query based on the weight information.

11. A method for determining a full query based on a partial query received at a database search system, the method comprising:

receiving at a server of the database search system a partial query submitted at a remote user client system, the submitted partial query being an abbreviated or incomplete search query;

at the server, comparing the partial query to an index of known search queries to determine matching known queries, the index being built using weighted, previously-submitted queries received at the server;

at the server, determining a full query by selecting as the full query the matching known query with the largest weight.

12. The method of claim 11 further comprising:

calculating the weights for each of the known search queries using frequency counts representative of a number of times the known search query has been submitted to the server

13. The method of claim 12 wherein calculating the weights comprises calculating a weight for each known search query so that a greater weight is determined for a more popular query.

14. The method of claim 11 wherein determining a full query comprises:

selecting as the full query the matching known query corresponding to the most frequently submitted, previously-submitted query, based on the frequency counts, that matches words of the partial query in matching order.

15. The method of claim 11 further comprising:

building the index by

retrieving information indicative of the previously submitted search queries; and

filtering the retrieved information prior to building the index.

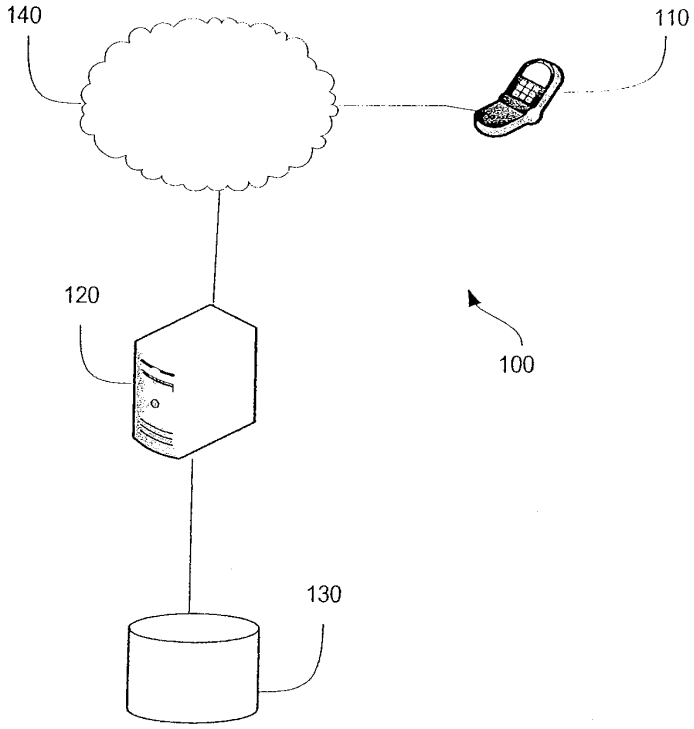


Figure 1

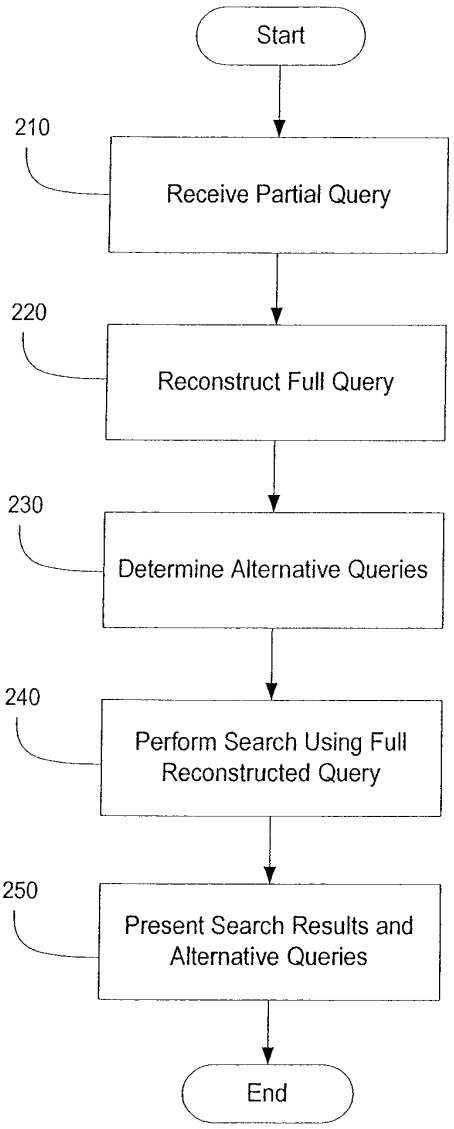

Start
210
Receive Partial Query
220
Reconstruct Full Query
230
Determine Alternative Queries
240
Perform Search Using Full Reconstructed Query
250
Present Search Results and Alternative Queries
End

Figure 2

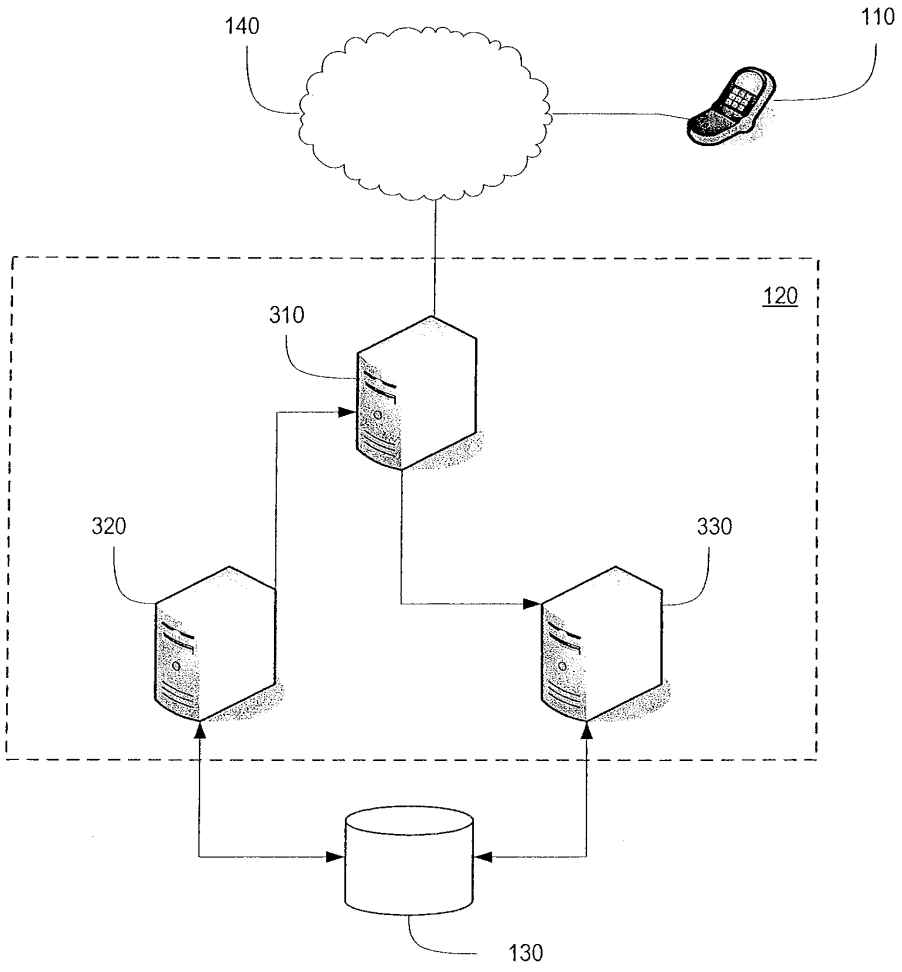


Figure 3

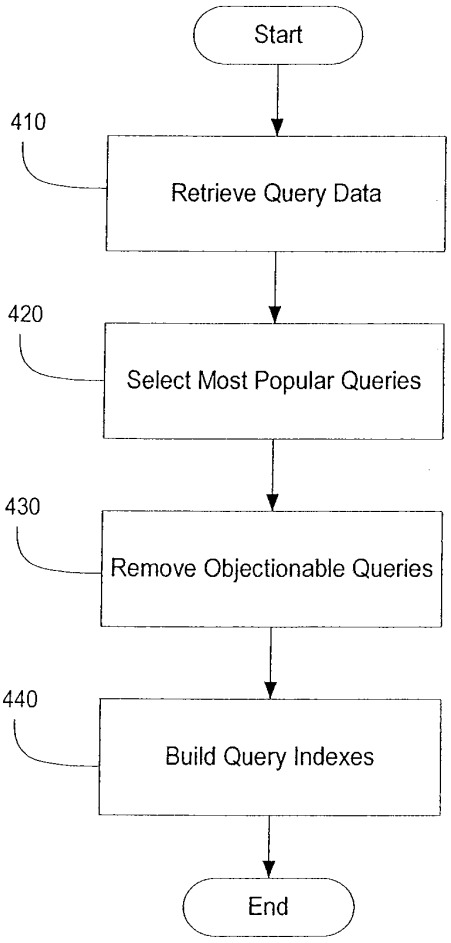

Start
410
Retrieve Query Data
420
Select Most Popular Queries
430
Remove Objectionable Queries
440
Build Query Indexes
End

Figure 4

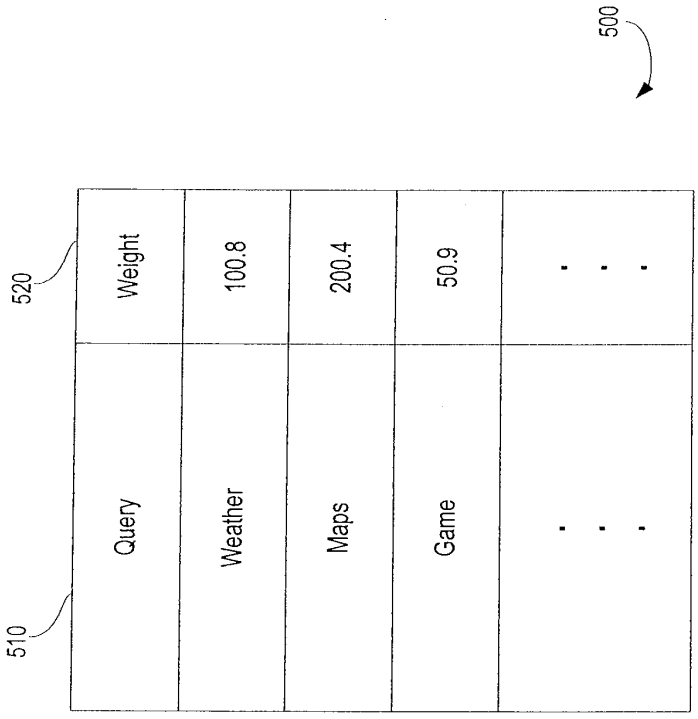


Figure 5

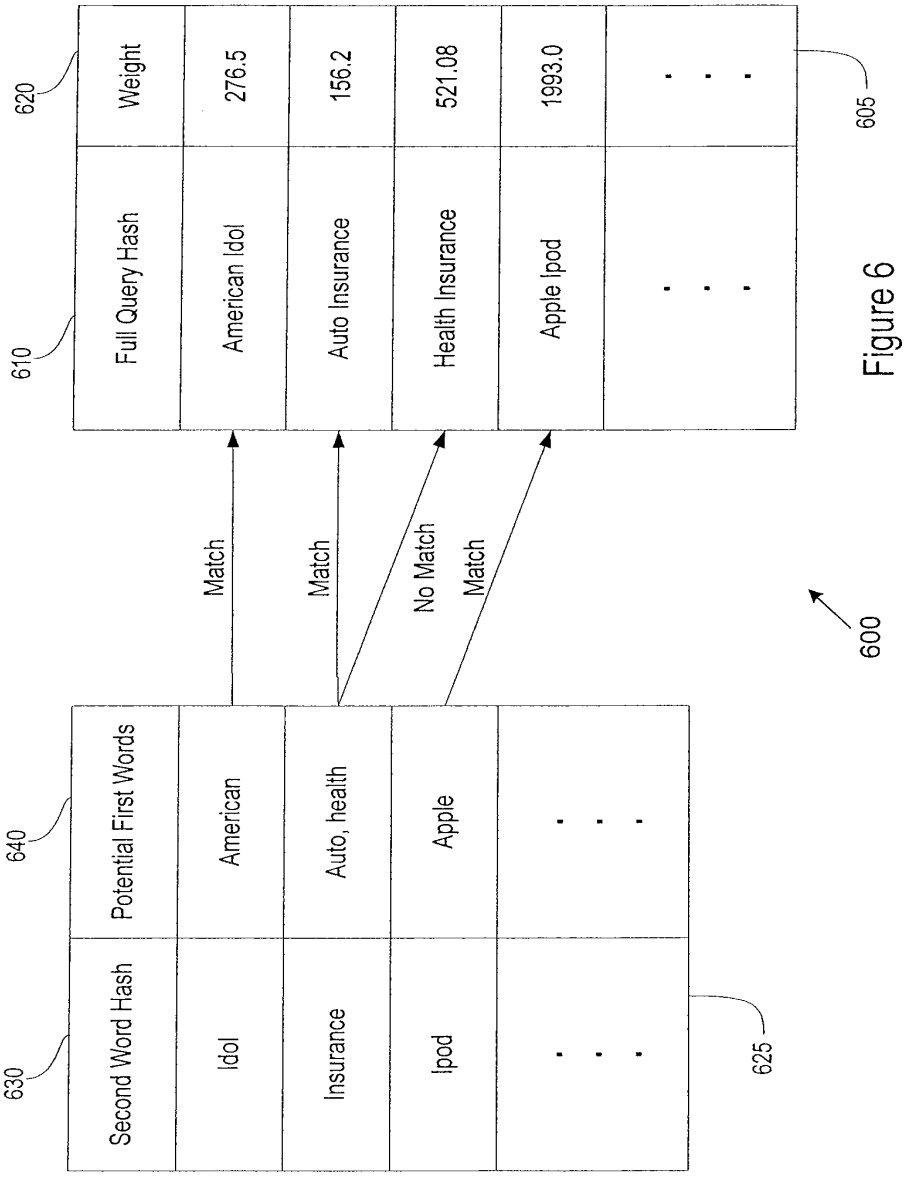

620
Weight
276.5
156.2
521.08
1993.0
605
610
Full Query Hash
American Idol
Auto Insurance
Health Insurance
Apple Ipod
Match
Match
No Match
Match
600
640
Potential First Words
American
Auto, health
Apple
630
Second Word Hash
Idol
Insurance
Ipod
625

Figure 6

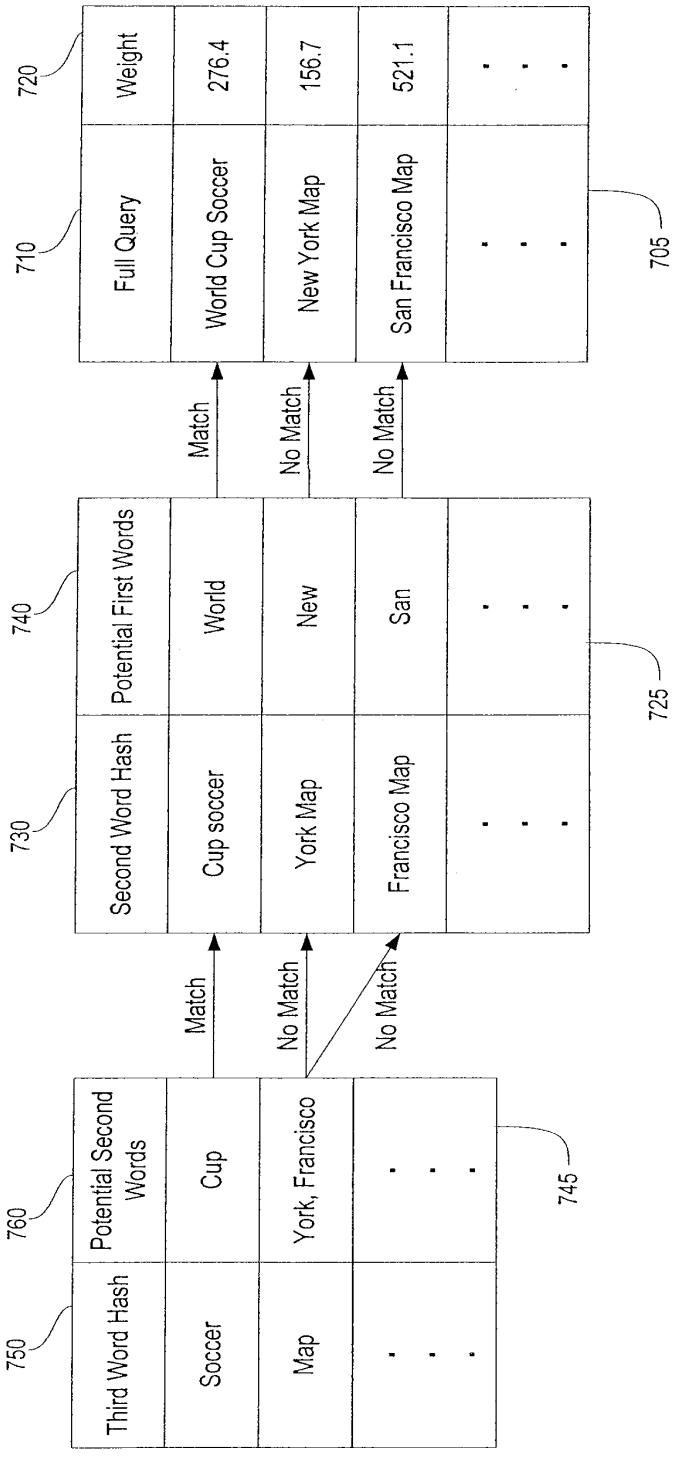

720
Weight
276.4
156.7
521.1
710
Full Query
World Cup Soccer
New York Map
San Francisco Map
705
Match
No Match
No Match
740
Potential First Words
World
New
San
730
Second Word Hash
Cup soccer
York Map
Francisco Map
725
Match
No Match
No Match
760
Potential Second Words
Cup
York, Francisco
750
Third Word Hash
Soccer
Map
745
700

Figure 7

FORM PTO-1449		SERIAL NO. n/a	CASE NO. 12729-687 (Y01651US02)
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		FILING DATE April 22, 2010	GROUP ART UNIT n/a
(use several sheets if necessary)	APPLICANT(S): Deepa Joshi		CONFIRMATION NO. n/a

REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
	A1	5,765,147	06/09/1998	Mattos, et al.	707/4	11/21/1996
	A2	6,112,172	08/2000	True, et al.	704/235	
	A3	6,134,540	10/17/2000	Carey, et al.	707/2	
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	A7	6,876,997	04/05/2005	Rorex, et al.	707/3	05/22/2000
	A8	US 2005/0222975 A1	10/2005	Nayak, et al.	707/003	
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	A19	7,337,163	02/26/2008	Srinivasan, et al.	707/3	12/04/2003
	A20	US 2008/0114743 A1	05/2008	Venkataraman, et al.	707/003	

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO
	A21	WO 97/038376 A2	10/16/1997	WIPO	G06F 17/30	No

EXAMINER INITIAL		OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.
	A22	H. Itoh, NTCIR-4 Patent Retrieval Experiments at RICOH, Working Notes of NTCIR-4, NII Test Collection for IR Systems Workshop 4, June 2-4, 2004, 4 pages.

EXAMINER	DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Electronic Acknowledgement Receipt	
EFS ID:	7470590
Application Number:	12765676
International Application Number:	
Confirmation Number:	9913
Title of Invention:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY
First Named Inventor/Applicant Name:	Deepa Joshi
Customer Number:	56020
Filer:	John G. Rauch/Edward Popoca
Filer Authorized By:	John G. Rauch
Attorney Docket Number:	12729-687 (Y01651US02)
Receipt Date:	22-APR-2010
Filing Date:	
Time Stamp:	18:29:41
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1090
RAM confirmation Number	4837
Deposit Account	231925
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

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File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	12729687PATENTAPPLICATION TRANSMITTAL.pdf	108409 a632cedabe0bb887934b0a4fffeebc2c4d6b bc22	no	2
Warnings:					
Information:					
2	Application Data Sheet	12729687APPLICATIONDATAS HEET.pdf	155481 6c3b20aa7b01c1e399fd9ab77a123ea83c1f a7cf	no	3
Warnings:					
Information:					
This is not an USPTO supplied ADS fillable form					
3		12729687APPLICATIONANDDR AWINGS.pdf	665753 038a28aee8ba74f30bddcb023d465d22daa 9343b	yes	21

Multipart Description/PDF files in .zip description

Document Description	Start	End
Specification	1	13
Abstract	14	14
Drawings-only black and white line drawings	15	21

Warnings:					
Information:					
4	Oath or Declaration filed	12729687DECLARATION.pdf	89776 c097d9f1ee9a233e9a23837f9a9d8c2ecac6 3866	no	2
Warnings:					
Information:					
5	Power of Attorney	12729687POWER.pdf	69278 70aab8b425846ed15ca1ebdf22aa74b0cbb 140b8	no	1
Warnings:					
Information:					
6	Assignee showing of ownership per 37 CFR 3.73(b).	12729687STATEMENTUNDER37 3ANDCOPYASSIGN.pdf	126315 16921ba70270828a2b93855e577d1daa88 704cc6	no	3

Warnings:					
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7	Transmittal Letter	12729687INFORMATIONDISCLOSURESTATEMENT.pdf	100711 5396962a019aa162c67e83c8b3cc6f1d0157d42e	no	3
Warnings:					
Information:					
8	Information Disclosure Statement (IDS) Filed (SB/08)	12729687PTO1449FORM.pdf	65836 7a6611df18815f1331672412ce1858171231732c	no	1
Warnings:					
Information:					
This is not an USPTO supplied IDS fillable form					
9	Fee Worksheet (PTO-875)	fee-info.pdf	33509 f6d7ac26fc7785b5cc8f8306e64e349a8c9e2231	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	1415068		

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<u>New Applications Under 35 U.S.C. 111</u>
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

<u>National Stage of an International Application under 35 U.S.C. 371</u>
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

<u>New International Application Filed with the USPTO as a Receiving Office</u>
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

Attorney Docket No. 12729/180

DECLARATION FOR UTILITY OR DESIGN PATENT APPLICATION (37 C.F.R. §1.63)

As a below named inventor, I hereby declare:

My residence, mailing address, and citizenship are as stated below next to my name;

I believe I am the original, first and sole inventor or an original, first and joint inventor of the subject matter that is claimed and for which a patent is sought on the invention entitled:

METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

the specification of which (check one)

☒ is attached hereto.

☐ was filed on _____ as United States Application No. _____ and was amended on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge my duty to disclose to the United States Patent and Trademark Office all information that I know to be material to the patentability of this application as defined in 37 C.F.R. §1.56, including for continuation-in-part applications, material information which became available between the fling date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. §119(a)-(d) or (f), or §365(b) of any foreign application(s) for patent or inventor's or plant breeder's rights certificate(s), or §365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's or plant breeder's rights certificate(s) or PCT International application having a filing date before that of the application on which priority is claimed.

Prior Foreign Application(s):			Priority Not Claimed
_____ (Number)	_____ (Country)	_____ (Filing Date, MM/DD/YYYY)	☐
_____ (Number)	_____ (Country)	_____ (Filing Date, MM/DD/YYYY)	☐

I hereby claim the benefit under 35 U.S.C. §119(e) of any United States provisional application(s) listed below:

_____ (Application Serial No.)	_____ (Filing Date, MM/DD/YYYY)	_____ (Status: pending, or abandoned)
_____ (Application Serial No.)	_____ (Filing Date, MM/DD/YYYY)	_____ (Status: pending, or abandoned)

Attorney Docket No. 12729/148

I hereby claim the benefit under 35 U.S.C. §120 of any United States applications(s), or §365(c) of any PCT International Application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of 35 U.S.C. §112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in 37 C.F.R. §1.56 which became available between the filing date of the prior application and the national or PCT International filing date of this application.

(Application Serial No.)	(Filing Date, MM/DD/YYYY)	(Status: patented, pending, abandoned)
(Application Serial No.)	(Filing Date, MM/DD/YYYY)	(Status: patented, pending, abandoned)
(Application Serial No.)	(Filing Date, MM/DD/YYYY)	(Status: patented, pending, abandoned)

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. §1001 and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Customer No. 56020 YAHOO / OVERTURE

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Full name of sole or first inventor Deepa Joshi	
Sole or first inventor's signature Deepa Joshi	Date 08/10/2006
Residence (City, State/Foreign Country) Santa Clara, CA	
Citizenship Indian	
Mailing Address 900 Pepper Tree Lane #1413, Santa Clara, CA, 95051	

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American Airlines/Hilton, Ex. 1006, p.21
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

PTO/SB/80 (11-08)
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POWER OF ATTORNEY TO PROSECUTE APPLICATIONS BEFORE THE USPTO

I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☑ Practitioners associated with the Customer Number: 56020 YAHOO! /OVERTURE

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

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OR

☐ Firm or Individual Name			
Address			
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Assignee Name and Address:

YAHOO! INC.
701 First Avenue
Sunnyvale, California 94089

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	Romualdas Strimaitis	Date	2/9/10
Name	Romualdas Strimaitis	Telephone	650 336-390_
Title	Vice President and Associate General Counsel, Yahoo! Inc.		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

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Attorney Docket No. 12729-687 (Y01651US02)

STATEMENT UNDER 37 CFR 3.73(b)

Applicant/Patent Owner: Yahoo! Inc.

Application/Patent No.: n/a Filed/Issue Date: April 21, 2010

Title: METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

Yahoo! Inc. a Delaware corporation

(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is:

1 ☒ the assignee of the entire right, title, and interest; or

2. ☐ an assignee of less than the entire right, title and interest (The extent (by percentage) of its ownership interest is _____ %); or

3. ☐ the assignee of an undivided interest in the entirety of (a complete assignment from one of the joint inventors was made) in the patent application/patent identified above by virtue of either:

A. ☒ An assignment from the inventor(s) of the patent application/patent identified above. The assignment was recorded in the U.S. Patent and Trademark Office at Reel 018162, Frame 0139, or for which a copy thereof is attached.

OR

B. ☐ A chain of title from the inventor(s), of the patent application/patent identified above, to the current assignee as follows::

1. From: _____ To: _____
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2. From: _____ To: _____
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☐ Additional documents in the chain of title are listed on a supplemental sheet(s).

☐ As required by 37 CFR 3.73(b)(1)(i), the documentary evidence of the chain of title from the original owner to the assignee was, or concurrently is being, submitted for recordation pursuant **to 37 CFR 3.11.**

[NOTE: A separate copy (i.e., a true copy of the original assignment documents(s)) must be submitted to Assignment Division in accordance with 37 CFR Part 3, to record the assignment in the records of the USPTO. See MPEP 302.08]

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

/John G. Rauch/	April 22, 2010
Signature	Date
John G. Rauch	312-321-4200
Printed or Typed Name	Telephone Number
Attorney for Applicant	
Title	

Case No. 12729-180

ASSIGNMENT

WHEREAS, Deepa Joshi, hereinafter called the "Assignor", has made the invention described in the United States patent application entitled METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY, executed by the Assignor on the same date as, or on a date prior to, this Assignment;

WHEREAS, Yahoo! Inc., a corporation organized and existing under the laws of the State of Delaware, having a place of business at 701 First Avenue, Sunnyvale, California 94089, hereinafter called the "Assignee", desires to acquire the entire right, title and interest in and to the invention and the patent application identified above, and all patents which may be obtained for said invention, as set forth below;

NOW, THEREFORE, in consideration of the sum of One Dollar ($1.00), and other valuable and legally sufficient consideration, the receipt of which by the Assignor from the Assignee is hereby acknowledged, the Assignor has sold, assigned and transferred, and by these presents does sell, assign and transfer to the Assignee, the entire right, title and interest for the United States in and to the invention and the patent application identified above, and any patents that may issue for said invention in the United States; together with the entire right, title and interest in and to said invention and all patent applications and patents therefor in all countries foreign to the United States, including the full right to claim for any such application all benefits and priority rights under any applicable convention; together with the entire right, title and interest in and to all continuations, divisions, renewals and extensions of any of the patent applications and patents defined above; together with the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; together with the right to recover all damages, including, but not limited to, a reasonable royalty, by reason of past, present, or future infringement or any other violation of patent or patent application rights; to have and to hold for the sole and exclusive use and benefit of the Assignee, its successors and assigns, to the full end of the term or terms for all such patents.

The Assignors hereby covenant and agree, for both the Assignors and the Assignor's legal representatives, that the Assignors will assist the Assignee in the prosecution of the patent application identified above; in the making and prosecution of any other patent applications that the Assignee may elect to make covering the invention identified above; in vesting in the Assignee like exclusive title in and to all such other patent applications and patents; and in the prosecution of any interference which may arise involving said invention, or any such patent application or patent; and that the Assignors will execute and deliver to the Assignee any and all additional papers which may be requested by the Assignee to carry out the terms of this Assignment.

The Commissioner of Patents and Trademarks is hereby authorized and requested to issue patents to the Assignee in accordance with the terms of this Assignment.

IN TESTIMONY WHEREOF, the Assignor has executed this agreement.

DATED: 08/10/2006 Deepa Joshi

Deepa Joshi

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American Airlines/Hilton, Ex. 1006, p.25
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: April 22, 2010 Name: John G. Rauch Signature: /John G. Rauch/

Our Case No. 12729-687 (Y01651US02)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
APPLICATION FOR UNITED STATES LETTERS PATENT

INVENTORS:	Deepa Joshi
TITLE:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY
ATTORNEY:	John G. Rauch (Reg. No. 37,218) BRINKS HOFER GILSON & LIONE POST OFFICE BOX 10395 CHICAGO, ILLINOIS 60610 (312) 321-4200

METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

RELATED APPLICATIONS

[0001] The present patent document is a continuation of Patent Application Serial No. 11/502,202, filed August 10, 2006, pending, which is hereby incorporated by reference.

BACKGROUND

[0002] 1. Technical Field

[0003] This application relates to search engines. In particular, this application relates to a flexible and intuitive system for reconstructing a search query based on a received partial query.

[0004] 2. Related Art

[0005] The transfer of information over computer networks, such as the Internet, has become an increasingly important means by which institutions, corporations, and individuals do business. Computer networks have grown over the years from independent and isolated entities established to serve the needs of a single group into vast internets which interconnect disparate physical networks and allow them to function as a coordinated system. Currently, the largest computer network in existence is the Internet. The Internet is a worldwide interconnection of computer networks that communicate using a common protocol. Millions of computers, from low end personal computers to high end supercomputers, are connected to the Internet.

[0006] The availability of powerful new tools that facilitate the development and distribution of Internet content (this includes information of any kind, in any form or format) has led to a proliferation of information, products, and services offered through the Internet and a dramatic growth in both the number and types of consumers using the Internet. To sift through this sea of information, user's typically employ the use of search engines that allow users to submit queries and provide responsive information, such as a list of references, that meet criteria specified in the query.

[0007] Additionally, the number of devices capable of accessing the Internet has also dramatically increased. Today, user's may access the Internet using a wide variety of devices, such as personal computers, cell phones, personal digital assistants, and the like which may utilize different networking technologies to connect to the Internet. The

portability of the device and/or connection type has become an increasingly important concern for users. However, increased access costs and decreased input capabilities are often associated with portable Internet access. As a result, users are limited in their ability to access the full depth of the Internet. For example, users may not be able to take full advantage of a search engine on a mobile device, such as a cell phone, because the user is unable to enter a search query without substantial effort.

BRIEF SUMMARY

[0008] In one embodiment, a method for providing search results to a user is provided. The method may include receiving a first set of information indicative of a partial query, determining a full query based on the partial query, submitting the full query to a search engine, receiving results from the search engine, and presenting the results to the user.

[0009] In another embodiment, a method for determining a full query based on a partial query is provided. The method may include receiving a first set of information indicative of a partial query, comparing the partial query to an index of known search queries to determine matching known queries, determining a full query by selecting at least one of the matching known queries.

[0010] In another embodiment, a system for providing search results to a user is provided. The system may include a query reconstruction server operable to receive a first set of information indicative of a partial query, determining a full query based on the partial query, and submitting the full query to a search engine. The system may also include a web server operable to receiving results from the search engine and presenting the results to the user.

[0011] These and other embodiments and aspects are described with reference to the noted Figures and the below detailed description of the preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. 1 is a diagram of an exemplary architecture for providing search results;

[0013] FIG. 2 is a flow chart of an exemplary method for providing search results to a user based on a partial query;

[0014] FIG. 3 is another exemplary architecture including a search engine and query reconstruction server;

[0015] FIG. 4 is a flow chart of an exemplary method for building query indexes;

[0016] FIG. 5 is an exemplary query index;

[0017] FIG. 6 is another exemplary query index; and

[0018] FIG. 7 is another exemplary query index.

DETAILED DESCRIPTION OF THE PRESENTLY PREFERRED EMBODIMENTS

[0019] Referring now to the drawings, and initially to FIG. 1, an exemplary architecture for providing search results is shown. The architecture 100 may include a user client system 110, a search engine server 120, and a database 130. Although reference will now be made to specific components of the system performing specific features, it should be apparent that such reference is exemplary, is not intended to limit the scope of the claims in any way, and that the functionalities described herein may be implemented in a virtually unlimited number of configurations.

[0020] The user client system 110 may submit a search query to search engine 120 via the communications network 140. The communication network 140 may be any private or public communication network. The user client system 110 may connect to the search engine server 120 via the Internet using a standard browser application. A browser based implementation allows system features to be accessible regardless of the underlying platform of the user client system 110. For example, the user client system 110 may be a workstation computer, laptop computer, handheld computer, cell phone, mobile messaging device, or the like which may all utilize different hardware and/or software packages. Alternatively, or additionally, the user client system 110 may connect to the search engine server 120 using a stand-alone application which may be either platform dependent or platform independent. Other methods may be used to implement the user client system 110.

[0021] The search engine server 120 may receive a partial query from the user client system 110, reconstruct a full query and provide search results based on the reconstructed query. The search engine server 120 may also include a web server that delivers Web pages that may include the search results to browsers (and other files to applications) via the HTTP protocol. The search engine server 120 may include a database 130 for storing the information to be searched. The database 130 may also include search query statistics such as an index of all submitted queries, the number of times a particular query was

submitted, and the like. Moreover, although figuratively attached to search engine server 120, database 130 may, in practice, distribute user-specific data elements (such as user preferences) to the user client system 110.

[0022] FIG. 2 is a flow chart of an exemplary method for providing search results to a user based on a partial query. Initially, the user may submit a partial query which is received at 210. As used herein, the term "partial search query" or "partial query" means any abbreviated or incomplete search query such that the submitted query is not fully representative of the entire search query desired by the user. In other words, partial search queries are shorthand ways of expressing typical search queries. For example, a partial query "a i" may be used to represent the full search queries "American Idol™" or "auto insurance." It should be apparent that a full search query may be represented by a multitude of partial search queries. As an additional example, the full query "auto insurance" may be represented by the partial queries "a ins," "auto ins," "a insurance" and the like. The partial search query may include a regular expression, such as the partial query "w c s[oc].*", which may match the full queries "world cup soccer", "world cup schedule", "world cup scores", and the like.

[0023] Next, a full query is reconstructed from the partial query at 220. For example, the query "auto insurance" may be reconstructed from a partial query of "a i". In order to reconstruct the full query, the partial query may be interpreted in a particular manner. The system may interpret the partial query as a series of word separated by delimiters, such as a space character. For example, the partial query "a i" may be interpreted as a two word query. Each word of the partial query may be interpreted as a partial word of the full query, and the system may then determine a full query that matches the partial words specified in the partial query. The determined full query may be the most frequently submitted known query that matches the partial words of the partial query in the same order, or may be determined using any other criteria.

[0024] Optionally, alternative queries may also be determined at 230. Alternative queries may include any query that matches the partial query but is not selected as the reconstructed full query. For example, the partial query "b" may be reconstructed as the query "basketball" while the query "baseball" may be determined to be an alternative query. The alternative queries may include any full queries that match the partial words

of the partial query in a different order. The received partial query may also be designated as an alternative query.

[0025] Finally, a search may be performed using the reconstructed query at 240, and the results may be provided to the user at 250. Optionally, the alternative queries may also be provided to the user. For example, a list of hyperlinks may be provided that allow the user to submit a search using the alternative query. The list may also include the initially received partial query to allow the user to perform a search using the original partial query. The system may limit the number of alternative queries that are provided to the user, such as providing four or five alternative queries.

[0026] Another exemplary architecture for providing search results is shown in FIG. 3. The architecture 300 may include a user client system 110, a search engine server 120, and a database 130, similar to those described above in reference to FIG. 1. The search engine server 120 may include a query reconstruction server 310, a query data management server 320, and a search engine 330. The query reconstruction server 310 may reconstruct a full query from a partial query submitted via the client system 110. The reconstructed query may then be provided to the search engine 330. The query reconstruction server 310 may also determine alternative queries and cause the alternative queries to be provided to the user client system 110.

[0027] Query data management server 320 may analyze historic query data. For example, the query data management server 320 may retrieve historic query data, analyze or filter the data, and generate data structures for later use in reconstructing the query. In one implementation, the query management may create query indexes that are provided to the query reconstruction server 310 for use in reconstructing the query. Other data structures may also be used.

[0028] A flow chart of an exemplary method for building query indexes is shown in FIG. 4. Initially, query data may be retrieved from a database of query data. The query data may include previously submitted queries. For example, query data representative of previously submitted queries to the Yahoo! Search Engine may be retrieved. The query data may also include frequency counts representative of the number of times the query has been submitted. Alternatively, or additionally, the query data may include weights that are calculated using the frequency data. For example, a weight for a particular query may be calculated by multiplying a constant value by the negative logarithm of the ratio

of the frequency for the particular query to the highest frequency for all queries. Other methods of calculating a weight may also be used. The search query data may be retrieved periodically, such as once a day, once a week, or the like. Optionally, query data from multiple sources may be retrieved and consolidated by the system.

[0029] Next, the retrieved query data may be filtered. First, the most popular queries from the retrieved queries may be selected at 420. For example, the top million queries may be selected. Other amounts and criteria may also be used to filter the query data. The system may also filter the query data for controversial or objectionable queries at 430. For example, queries containing sexually explicit terms may be removed. Misspelled queries may also be removed. Alternatively, misspelled queries may be corrected. The system may also remove queries that are determined to be improper for other reasons, such as non-human submitted queries and the like. Other criteria for filtering the query data may also be used.

[0030] Finally, the system may construct indexes from the filtered query data at 440. In one implementation, the filtered queries may be split into different groups based on number of words in the query. Indexes may then be created for each query group. Exemplary one-word, two-word, and three-word indexes are shown in FIGS. 5, 6, and 7, respectively, described in more detail below. The index files may then be transmitted to the query reconstruction server 310, which may utilize the indexes to reconstruct the partial queries.

[0031] An exemplary one-word index 500 is shown in FIG. 5. The index may include a query 510 and a frequency 520 for each filtered query. The query may act as a key for the index and may be represented by a hash value based on the actual query. For example, the index may include hash values and weights for the single word queries "weather," "maps," and "game." Assuming the system receives a partial query of "w," the system may determine which single word queries match the reconstruction pattern for "w," and select "weather" as the only potential match. The reconstructed query "weather" may then be submitted to a search engine. If additional matches are found, however, the system may then select the matching query with the largest weight as the reconstructed query. Optionally, the system may designate certain remaining matching queries as alternative queries, and provide a list of those alternative queries to the user with the search results.

[0032] An exemplary two-word index 600 is shown in FIG. 6. Two-word indexes may include a set of two sub-indexes. The first sub-index, referred to herein as the second word sub-index 625, may include a second word hash value 630 representative of all words that appear as the second word in the two word filtered query. The second word hash value 630 may act as a key for the second word sub-index, may also include corresponding values 640 representative of each potential first word that precedes the second word in the filtered two-word query. For example, the query "American Idol" may be represented as in the second word hash as the key-value pair "idol=American," while the queries "auto insurance" and "health insurance" may be represented in the second word sub-index 625 as the key-value pair of "insurance=auto,health."

[0033] Another sub-index, referred to herein as the first-word sub-index 605, may include hash values representative of the full two-word queries 610 along with their weight 620, similar to the one-word index described above. For example, the system may receive a partial query "a i" and determine potential matches from the second word sub-index of "idol," "insurance," and "ipod" by retrieving each value corresponding to the matching key. Each potential two-word query based on the partial matches may then be used to search the full query-hash 605. For example, the system may determine potential matches of "American Idol™," "auto insurance," "health insurance," and "Apple iPod™," based on the second word sub-index, and also determine that "health insurance" does not match based on the first word of the partial query "a i." The system may also determine a full query match by determining if the first word of the full query matches the first partial word of the partial query. The system may then retrieve weights 620 for each matching full query 610 from the first word sub-index 605.

[0034] The system may then select the most popular query from among the matching queries as the reconstructed query, and optionally provide the remaining matches, or a subset of those remaining matches, as alternative queries. For instance, "Apple iPod™", may have the largest weight and may be selected as the reconstructed query for submission to the search engine. The results may be provided to the user along with hyperlinks that enable the user to perform searches on the alternative queries "American Idol™," and "auto insurance."

[0035] An exemplary three-word index is shown in FIG. 7. The three-word index 700 may include three sub-indexes: a third word sub-index 745, a second word sub-index 725,

and a first word query index 705. Similar to the second word sub-index 625 of the two-word index 600 described above, the third word sub-indexes 745 of the three-word index 700 may include keys 750 representative of hashed values based on the third word in the full query, and values 760 representative of list of potential second words. The second word sub-index 725 may include keys 730 representative of hashed values based on the second and third words in the query, and values 740 representative of list of potential first words. Finally, the first word sub-index 705 may include keys 710 representative of hashed values based on the three word query and values 720 representative of weights associated with each query. Using the index 700 shown in FIG. 7, the system may reconstruct the query "world cup soccer" from a partial query "w c s."

[0036] Additional indexes, such as four word or five word indexes may also be created by the system in a similar fashion. Alternatively, or additionally, the system may treat the last n words of queries containing more than a specified number of words as a single word. For example, the four word query "world cup soccer schedule" may be treated by the system as a three word query with a third word "soccer schedule". Because the number of such queries is small in comparison to the one and two word queries, placing them in a single group reduces the number of indexes which need to be managed without substantially affecting the performance of the reconstruction process. Alternatively, or additionally, the system may condense queries containing more than a specified number of terms. In condensing a query, the system may remove stop words from the query. Other methods of configuring the indexes and treating multi-word queries may also be used.

[0037] It is therefore intended that the foregoing detailed description be regarded as illustrative rather than limiting, and that it be understood that it is the following claims, including all equivalents, that are intended to define the spirit and scope of this invention.

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Date: April 22, 2010 Name: John G. Rauch Signature: /John G. Rauch/

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	Deepa Joshi		
Appln. No.:	n/a	Examiner:	n/a
Filed:	April 21, 2010	Art Unit:	n/a
For:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY	Confirmation No.:	n/a
Attorney Docket No:	12729-687 (Y01651US02)		

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

This application claims priority under 35 USC §120 to the following United States patent applications: 11/502,202. In accordance with 37 CFR §1.98(d), copies of the references cited herein which were submitted to, or cited by, the office, in compliance with 37 CFR §1.98(a)-(c) in the earlier application are not provided herewith. The Examiner is directed to those references cited in all Information Disclosure Statements filed in the priority United States patent applications cited above in addition to the references cited herein.

BRINKS
HOFER
GILSON
&LIONE

In accordance with the duty of disclosure under 37 CFR §1.56 and §§1.97-1.98, and more particularly in accordance with 37 CFR §1.97(b), Applicant hereby cites the following reference(s):

U.S. PATENT DOCUMENTS		
DOCUMENT NO.	**DATE**	**NAME**
5,765,147	06/09/1998	Mattos, et al.
6, 112, 172	08/2000	True, et al.
6,134,540	10/17/2000	Carey, et al.
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7,337,163	02/26/2008	Srinivasan, et al.
US 2008/0114743 A1	05/2008	Venkataraman, et al.

FOREIGN PATENT DOCUMENTS		
DOCUMENT NO.	**DATE**	**COUNTRY**
WO 97/038376 A2	10/16/1997	WIPO

OTHER ART – NON PATENT LITERATURE DOCUMENTS
H. Itoh, NTCIR-4 Patent Retrieval Experiments at RICOH, Working Notes of NTCIR-4, NII Test Collection for IR Systems Workshop 4, June 2-4, 2004, 4 pages.

Applicant is enclosing Form PTO-1449 (one sheet), along with a copy of each listed reference for which a copy is required under 37 CFR §1.98(a)(2). As each of the listed references is in English, no further commentary is believed to be necessary, 37 C.F.R §1.98(a)(3). Applicant respectfully requests the Examiner's consideration of the above reference(s) and entry thereof into the record of this application.

American Airlines/Hilton, Ex. 1006, p.36
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

By submitting this Statement, Applicant is attempting to fully comply with the duty of candor and good faith mandated by 37 CFR §1.56. As such, this Statement is not intended to constitute an admission that any of the enclosed references, or other information referred to therein, constitutes "prior art" or is otherwise "material to patentability," as that phrase is defined in 37 CFR §1.56(a).

The Applicant or Applicants have calculated no fee to be due in connection with the filing of this Information Disclosure Statement. However, the Director is authorized to charge any fee deficiency associated with the filing of this Information Disclosure Statement to a deposit account, as authorized in the Transmittal accompanying this Information Disclosure Statement.

Respectfully submitted,

April 22, 2010
Date

/John G. Rauch/
John G. Rauch
(Reg. No. 37,218)

American Airlines/Hilton, Ex. 1006, p.37
American Airlines/Hilton v. R2 Solutions
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Date: April 22, 2010 Name: John G. Rauch Signature: /John G. Rauch/

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of: Deepa Joshi

For: METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

Attorney Docket No.: 12729-687 (Y01651US02)

UTILITY PATENT APPLICATION TRANSMITTAL

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

1. TRANSMITTED HEREWITH: New application under 37 CFR §1.53(b), which is a:
   - ☒ Continuation,
   - ☐ Divisional, or
   - ☐ Continuation-in-Part (CIP)

   Under 37 CFR §1.53(b) of prior application no. 11/502,202.

   Prior application information: Examiner: Hanh B. Thai Art Unit: 2163

   - ☐ Maintenance of copendency of prior application: A request for extension of time and the appropriate fee have been filed in the pending prior application (or are being filed in the prior application concurrently herewith) to extend the period for response until ____.
   - ☐ Certified copy of priority document(s) has been filed in prior application no. ____.

   For Continuation or Divisional Applications only: The entire disclosure of the prior application, from which an oath or declaration is supplied as indicated below, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference.

2. ATTACHMENTS: The following application elements and other papers are attached:
   - ☒ Application Data Sheet. See 37 CFR § 1.76.
   - ☒ Title page
   - ☐ Specification, including claims and Abstract (13 pages)
   - ☒ Drawings (7 sheet(s))
   - ☐ Appendices: _____
   - ☒ Declaration or ☐ Combined Declaration and Power of Attorney (2 pages):
     - ☐ newly-executed (original or copy)
     - ☒ copy from a prior application (37 CFR §1.63(d))
     - ☐ This application is filed by fewer than all the inventors named in the prior application, 37 CFR §1.53(d)(4). Please DELETE the following inventors(s) named in prior nonprovisional application no. ____: _____
   - ☐ English Translation Document:
     - ☐ is attached or ☐ has been filed in prior application no. _____.
   - ☐ Preliminary Amendment (Note: Related application data required under 37 CFR §1.78, if any, appears in the Amendments to the Specification section of the Preliminary Amendment, including incorporations by reference.)
   - ☐ Petition to Suspend Prosecution for the Time Necessary to File an Amendment (New Application Filed Concurrently).
   - ☒ Information Disclosure Statement, including Form PTO-1449 (1 sheets) and copies of references cited, if required.
   - ☒ Assignment to: Yahoo! Inc.:
     - ☐ with accompanying Assignment Recordation Cover Sheet, is attached.
     - ☒ was previously recorded on August 10, 2006 at Reel 018162, Frame 0139.

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American Airlines/Hilton v. R2 Solutions
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☒ Power of Attorney (1 pages; ☐ by inventor ☒ by Yahoo! Inc.).

☒ The power appears in the original papers in the prior application.

☐ The power doesn't appear in the original papers in the prior application, but was filed on ___.__

☐ A new power has been executed and is attached. ☐ The power of attorney in the prior application is to: _____ (Reg. No. ___).

☐ Nonpublication Request under 35 USC §122(b)(2)(B)(i).

☒ Other: Statement Under 37 C.F.R. § 3.73(b), with copy of Assignment from prior application.

3. SMALL ENTITY STATUS:

☐ Applicant is small entity (per 37 CFR §1.27).

☐ A small entity statement was filed in prior application no. _____ and such status is still proper and desired.

☐ Small entity status is no longer desired.

4. FEE CALCULATION (AFTER ENTRY OF ANY PRELIMINARY AMENDMENT(S) IN ITEM #2 ABOVE):

Claims as Filed	Col. 1	Col. 2		Small Entity			Not a Small Entity	
For	No. Filed	No. Extra		Rate	Fee	or	Rate	Fee
Basic Fee					$ 82	or		$ 330
Total Claims	15-20	0		x$2 6=	$	or	0x$52=	$0
Independent Claims	3-3	0		x$1 10=	$	or	0x$220=	$0
Multiple Dependent Claims Present				+$195=	$	or	+$390=	$0
Utility Application Size Fee when filing via EFS (see MPEP 607 Filing Fee)				No. of pages ____ X .75 = ____ - 100 = ____ / 50 = x $135=	$	or	No. of pages ____ X .75 = ____ - 100 = ____ / 50 = x $270=	$0
Search Fee				+$270=	$	or	+$540=	$540
Examination Fee				+$110=	$	or	+$220=	$220
*If the difference in col. 1 is less than zero, enter "0" in col. 2.				Total	$	or	Total	$1090

5. FEE PAYMENT:

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ Please charge Deposit Account No. 23-1925 in the amount of $1090.

☒ The Director is hereby authorized to charge payment of the following fees associated with this communication or credit any overpayment to Deposit Account No. 23-1925.

☒ Any additional filing fees required under 37 CFR § 1.16.

☒ Any patent application processing fees under 37 CFR §1.17.

☐ The Director is hereby authorized to charge payment of the following fees during the pendency of this application or credit any overpayment to Deposit Account No. 23-1925.

☐ Any filing fees under 37 CFR § 1.16 for presentation of extra claims.

☐ Any patent application processing fees under 37 CFR § 1.17.

☐ The issue fee set in 37 CFR § 1.18 at or before mailing of the Notice of Allowance, pursuant to 37 CFR § 1.311(b).

6. CORRESPONDENCE ADDRESS: Please recognize the correspondence address for this application as the address associated with the following Customer Number:

Customer No.:

56020 - Yahoo/Overture

7. PLEASE DIRECT all telephonic communications to: John G. Rauch (tel: (312) 321-4200).

Respectfully submitted,

April 22, 2010
Date

/John G. Rauch/
John G. Rauch (Reg. No. 37,218)

American Airlines/Hilton, Ex. 1006, p.39
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

Electronic Patent Application Fee Transmittal	
Application Number:	
Filing Date:	
Title of Invention:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY
First Named Inventor/Applicant Name:	Deepa Joshi
Filer:	John G. Rauch/Brenda Skinner
Attorney Docket Number:	12729-687 (Y01651US02)
Filed as Large Entity	

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Utility application filing	1011	1	330	330
Utility Search Fee	1111	1	540	540
Utility Examination Fee	1311	1	220	220
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1090**

PTO/SB/06 (12-04)

Date: **04/22/10**

Approved for use through 7/31/2006. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD
Substitute for Form PTO-875

Application or Docket Number
12/765,676

APPLICATION AS FILED – PART I

FOR	(Column 1) NUMBER FILED	(Column 2) NUMBER EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY FEE ($)
BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	330
SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	540
EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	220
TOTAL CLAIMS (37 CFR 1.16(i))	15 minus 20 =		x$26		OR	x$52*	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	3 minus 3 =	*	x$110			x$220	
APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $260 ($130 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR						
MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))			195			390	
			TOTAL			TOTAL	1090

* If the difference in column 1 is less than zero, enter "0" in column 2.

APPLICATION AS AMENDED – PART II

AMENDMENT A

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	SMALL ENTITY RATE ($)	SMALL ENTITY ADDITIONAL FEE ($)	OR	OTHER THAN SMALL ENTITY RATE ($)	OTHER THAN SMALL ENTITY ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
					TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

AMENDMENT B

	(Column 1) CLAIMS REMAINING AFTER AMENDMENT		(Column 2) HIGHEST NUMBER PREVIOUSLY PAID FOR	(Column 3) PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)	OR	RATE ($)	ADDITIONAL FEE ($)
Total (37 CFR 1.16(i))	*	Minus	**	=	x =		OR	x =	
Independent (37 CFR 1.16(h))	*	Minus	***	=	x =		OR	x =	
Application Size Fee (37 CFR 1.16(s))									
FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))					N/A		OR	N/A	
					TOTAL ADD'T FEE		OR	TOTAL ADD'T FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.
** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".
*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".
The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Paten and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

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American Airlines/Hilton v. R2 Solutions
IPR2023-00887

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UNITED STATES DEPARTMENT OF COMMERCE
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www.uspto.gov

APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/765,676	04/22/2010		1090	12729-687 (Y01651US02)	16	3

CONFIRMATION NO. 9913

56020
BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

FILING RECEIPT

OC000000041432896

Date Mailed: 05/04/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Deepa Joshi, Santa Clara, CA;

Assignment For Published Patent Application

Yahoo! Inc., Sunnyvale, CA

Power of Attorney: The patent practitioners associated with Customer Number 56020

Domestic Priority data as claimed by applicant

This application is a CON of 11/502,202 08/10/2006 PAT 7,716,201

Foreign Applications

If Required, Foreign Filing License Granted: 05/03/2010

The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/765,676**

Projected Publication Date: To Be Determined - pending completion of Corrected Papers

Non-Publication Request: No

Early Publication Request: No

American Airlines/Hilton, Ex. 1006, p.43
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

Title

METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

Preliminary Class

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

Since the rights granted by a U.S. patent extend only throughout the territory of the United States and have no effect in a foreign country, an inventor who wishes patent protection in another country must apply for a patent in a specific country or in regional patent offices. Applicants may wish to consider the filing of an international application under the Patent Cooperation Treaty (PCT). An international (PCT) application generally has the same effect as a regular national patent application in each PCT-member country. The PCT process **simplifies** the filing of patent applications on the same invention in member countries, but **does not result** in a grant of "an international patent" and does not eliminate the need of applicants to file additional documents and fees in countries where patent protection is desired.

Almost every country has its own patent law, and a person desiring a patent in a particular country must make an application for patent in that country in accordance with its particular laws. Since the laws of many countries differ in various respects from the patent law of the United States, applicants are advised to seek guidance from specific foreign countries to ensure that patent rights are not lost prematurely.

Applicants also are advised that in the case of inventions made in the United States, the Director of the USPTO must issue a license before applicants can apply for a patent in a foreign country. The filing of a U.S. patent application serves as a request for a foreign filing license. The application's filing receipt contains further information and guidance as to the status of applicant's license for foreign filing.

Applicants may wish to consult the USPTO booklet, "General Information Concerning Patents" (specifically, the section entitled "Treaties and Foreign Patents") for more information on timeframes and deadlines for filing foreign patent applications. The guide is available either by contacting the USPTO Contact Center at 800-786-9199, or it can be viewed on the USPTO website at http://www.uspto.gov/web/offices/pac/doc/general/index.html.

For information on preventing theft of your intellectual property (patents, trademarks and copyrights), you may wish to consult the U.S. Government website, http://www.stopfakes.gov. Part of a Department of Commerce initiative, this website includes self-help "toolkits" giving innovators guidance on how to protect intellectual property in specific countries such as China, Korea and Mexico. For questions regarding patent enforcement issues, applicants may call the U.S. Government hotline at 1-866-999-HALT (1-866-999-4158).

LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

GRANTED

The applicant has been granted a license under 35 U.S.C. 184, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" followed by a date appears on this form. Such licenses are issued in all applications where the conditions for issuance of a license have been met, regardless of whether or not a license may be required as set forth in 37 CFR 5.15. The scope and limitations of this license are set forth in 37 CFR 5.15(a) unless an earlier

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license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

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American Airlines/Hilton v. R2 Solutions
IPR2023-00887

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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www.uspto.gov

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/765,676	04/22/2010	Deepa Joshi	12729-687 (Y01651US02)

CONFIRMATION NO. 9913

56020
BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

POA ACCEPTANCE LETTER

OC000000041425983

Date Mailed: 05/04/2010

NOTICE OF ACCEPTANCE OF POWER OF ATTORNEY

This is in response to the Power of Attorney filed 04/22/2010.

The Power of Attorney in this application is accepted. Correspondence in this application will be mailed to the above address as provided by 37 CFR 1.33.

/tpnguyen/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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American Airlines/Hilton v. R2 Solutions
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UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/765,676	04/22/2010	Deepa Joshi	12729-687 (Y01651US02)

CONFIRMATION NO. 9913

56020
BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

FORMALITIES LETTER

OC000000041432897

Date Mailed: 05/04/2010

NOTICE TO FILE CORRECTED APPLICATION PAPERS

Filing Date Granted

An application number and filing date have been accorded to this application. The application is informal since it does not comply with the regulations for the reason(s) indicated below. Applicant is given TWO MONTHS from the date of this Notice within which to correct the informalities indicated below. Extensions of time may be obtained by filing a petition accompanied by the extension fee under the provisions of 37 CFR 1.136(a).

The required item(s) identified below must be timely submitted to avoid abandonment:

- Replacement drawings in compliance with 37 CFR 1.84 and 37 CFR 1.121(d) are required. The drawings submitted are not acceptable because:
  - The drawings must be reasonably free from erasures and must be free from alterations, overwriting, interlineations, folds, and copy marks. See Figure(s) 1, 3.
  - Numbers, letters, and reference characters on the drawings must measure at least 0.32 cm (1/8 inch) in height. See Figure(s) 1, 3.

Applicant is cautioned that correction of the above items may cause the specification and drawings page count to exceed 100 pages. If the specification and drawings exceed 100 pages, applicant will need to submit the required application size fee.

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Replies should be mailed to:

Mail Stop Missing Parts
Commissioner for Patents
P.O. Box 1450
Alexandria VA 22313-1450

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web.
https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If you are not using EFS-Web to submit your reply, you must include a copy of this notice.

/lchau/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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American Airlines/Hilton v. R2 Solutions
IPR2023-00887

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United States Patent and Trademark Office
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APPLICATION NUMBER	FILING or 371(c) DATE	GRP ART UNIT	FIL FEE REC'D	ATTY.DOCKET.NO	TOT CLAIMS	IND CLAIMS
12/765,676	04/22/2010		1090	12729-687 (Y01651US02)	16	3

CONFIRMATION NO. 9913

56020
BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

FILING RECEIPT

OC000000042861354

Date Mailed: 08/02/2010

Receipt is acknowledged of this non-provisional patent application. The application will be taken up for examination in due course. Applicant will be notified as to the results of the examination. Any correspondence concerning the application must include the following identification information: the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. **If an error is noted on this Filing Receipt, please submit a written request for a Filing Receipt Correction. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the USPTO processes the reply to the Notice, the USPTO will generate another Filing Receipt incorporating the requested corrections**

Applicant(s)

Deepa Joshi, Santa Clara, CA;

Assignment For Published Patent Application

Yahoo! Inc., Sunnyvale, CA

Power of Attorney: The patent practitioners associated with Customer Number 56020

Domestic Priority data as claimed by applicant

This application is a CON of 11/502,202 08/10/2006 PAT 7,716,201

Foreign Applications

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The country code and number of your priority application, to be used for filing abroad under the Paris Convention, is **US 12/765,676**

Projected Publication Date: 11/11/2010

Non-Publication Request: No

Early Publication Request: No

American Airlines/Hilton, Ex. 1006, p.49
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

Title

METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

Preliminary Class

PROTECTING YOUR INVENTION OUTSIDE THE UNITED STATES

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LICENSE FOR FOREIGN FILING UNDER

Title 35, United States Code, Section 184

Title 37, Code of Federal Regulations, 5.11 & 5.15

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American Airlines/Hilton v. R2 Solutions
IPR2023-00887

license has been issued under 37 CFR 5.15(b). The license is subject to revocation upon written notification. The date indicated is the effective date of the license, unless an earlier license of similar scope has been granted under 37 CFR 5.13 or 5.14.

This license is to be retained by the licensee and may be used at any time on or after the effective date thereof unless it is revoked. This license is automatically transferred to any related applications(s) filed under 37 CFR 1.53(d). This license is not retroactive.

The grant of a license does not in any way lessen the responsibility of a licensee for the security of the subject matter as imposed by any Government contract or the provisions of existing laws relating to espionage and the national security or the export of technical data. Licensees should apprise themselves of current regulations especially with respect to certain countries, of other agencies, particularly the Office of Defense Trade Controls, Department of State (with respect to Arms, Munitions and Implements of War (22 CFR 121-128)); the Bureau of Industry and Security, Department of Commerce (15 CFR parts 730-774); the Office of Foreign AssetsControl, Department of Treasury (31 CFR Parts 500+) and the Department of Energy.

NOT GRANTED

No license under 35 U.S.C. 184 has been granted at this time, if the phrase "IF REQUIRED, FOREIGN FILING LICENSE GRANTED" DOES NOT appear on this form. Applicant may still petition for a license under 37 CFR 5.12, if a license is desired before the expiration of 6 months from the filing date of the application. If 6 months has lapsed from the filing date of this application and the licensee has not received any indication of a secrecy order under 35 U.S.C. 181, the licensee may foreign file the application pursuant to 37 CFR 5.15(b).

American Airlines/Hilton, Ex. 1006, p.51
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

UNITED STATES PATENT AND TRADEMARK OFFICE

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

APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/765,676	04/22/2010	Deepa Joshi	12729-687 (Y01651US02)

CONFIRMATION NO. 9913

56020
BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

WITHDRAWAL NOTICE

OC000000042861315

Date Mailed: 08/02/2010

Letter Regarding a New Notice and/or the Status of the Application

If a new notice or Filing Receipt is enclosed, applicant may disregard the previous notice mailed on 05/04/2010. The time period for reply runs from the mail date of the new notice. Within the time period for reply, applicant is required to file a reply in compliance with the requirements set forth in the new notice to avoid abandonment of the application.

Registered users of EFS-Web may alternatively submit their reply to this notice via EFS-Web. https://sportal.uspto.gov/authenticate/AuthenticateUserLocalEPF.html

For more information about EFS-Web please call the USPTO Electronic Business Center at **1-866-217-9197** or visit our website at http://www.uspto.gov/ebc.

If the reply is not filed electronically via EFS-Web, the reply must be accompanied by a copy of the new notice.

If the Office previously granted a petition to withdraw the holding of abandonment or a petition to revive under 37 CFR 1.137, the status of the application has been returned to pending status.

/jdchase/

Office of Data Management, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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American Airlines/Hilton v. R2 Solutions
IPR2023-00887

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NUMBER	FILING OR 371(C) DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO./TITLE
12/765,676	04/22/2010	Deepa Joshi	12729-687 (Y01651US02)

CONFIRMATION NO. 9913

56020
BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

PUBLICATION NOTICE

OC000000044460187

Title:METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

Publication No.US-2010-0287149-A1
Publication Date:11/11/2010

NOTICE OF PUBLICATION OF APPLICATION

The above-identified application will be electronically published as a patent application publication pursuant to 37 CFR 1.211, et seq. The patent application publication number and publication date are set forth above.

The publication may be accessed through the USPTO's publically available Searchable Databases via the Internet at www.uspto.gov. The direct link to access the publication is currently http://www.uspto.gov/patft/.

The publication process established by the Office does not provide for mailing a copy of the publication to applicant. A copy of the publication may be obtained from the Office upon payment of the appropriate fee set forth in 37 CFR 1.19(a)(1). Orders for copies of patent application publications are handled by the USPTO's Office of Public Records. The Office of Public Records can be reached by telephone at (703) 308-9726 or (800) 972-6382, by facsimile at (703) 305-8759, by mail addressed to the United States Patent and Trademark Office, Office of Public Records, Alexandria, VA 22313-1450 or via the Internet.

In addition, information on the status of the application, including the mailing date of Office actions and the dates of receipt of correspondence filed in the Office, may also be accessed via the Internet through the Patent Electronic Business Center at www.uspto.gov using the public side of the Patent Application Information and Retrieval (PAIR) system. The direct link to access this status information is currently http://pair.uspto.gov/. Prior to publication, such status information is confidential and may only be obtained by applicant using the private side of PAIR.

Further assistance in electronically accessing the publication, or about PAIR, is available by calling the Patent Electronic Business Center at 1-866-217-9197.

Office of Data Managment, Application Assistance Unit (571) 272-4000, or (571) 272-4200, or 1-888-786-0101

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American Airlines/Hilton v. R2 Solutions
IPR2023-00887

FORM PTO-1449	SERIAL NO. 12/765,676 n/a	CASE NO. 12729-687 (Y01651US02)
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT	FILING DATE April 22, 2010	GROUP ART UNIT 2163 n/a
(use several sheets if necessary) APPLICANT(S): Deepa Joshi		CONFIRMATION NO. n/a

REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
/HT/	A1	5,765,147	06/09/1998	Mattos, et al.	707/4	11/21/1996
	A2	6,112,172	08/2000	True, et al.	704/235	
	A3	6,134,540	10/17/2000	Carey, et al.	707/2	
	A4	6,269,361	07/31/2001	Davis, et al.	707/3	
	A5	US 2003/0084027 A1	06/2003	Brandin, et al.	707/3	
	A6	US 2004/0254928 A1	12/2004	Vronay, et al.	707/005	
	A7	6,876,997	04/05/2005	Rorex, et al.	707/3	05/22/2000
	A8	US 2005/0222975 A1	10/2005	Nayak, et al.	707/003	
	A9	US 2005/0283468 A1	12/2005	Kamvar, et al.		
	A10	US-2006/01 06769 A1	06/2006	Gibbs	707/003	
	A11	US 2006/0206454 A1	09/2006	Forstall, et al.	707003	
	A12	7,149,732	12/12/2006	Wen	707/006	10/12/2001
	A13	7,181,446	02/20/2007	Bossman, et al.	707/3	01/23/2004
	A14	7,188,098	03/06/2007	Chen, et al.	707/2	09/24/2003
	A15	US 2007/0050351 A1	03/2007	Kasperski, et al.	707/004	
	A16	US 2007/0061317 A1	03/2007	Ramer, et al.	707/004	
	A17	7,330,848	02/12/2008	Chaudhuri, et al.	707/3	05/23/2003
	A18	US 2008/0040323 A1	02/14/2008	Joshi	707/3	08/10/2006
	A19	7,337,163	02/26/2008	Srinivasan, et al.	707/3	12/04/2003
/HT/	A20	US 2008/0114743 A1	05/2008	Venkataraman, et al.	707/003	

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO
/HT/	A21	WO 97/038376 A2	10/16/1997	WIPO	G06F 17/30	No

EXAMINER INITIAL		OTHER ART – NON PATENT LITERATURE DOCUMENTS (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.
/HT/	A22	H. Itoh, NTCIR-4 Patent Retrieval Experiments at RICOH, Working Notes of NTCIR-4, NII Test Collection for IR Systems Workshop 4, June 2-4, 2004, 4 pages.

EXAMINER /Hanh Thai/	DATE CONSIDERED 12/14/2010

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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BIB DATA SHEET

CONFIRMATION NO. 9913

SERIAL NUMBER	FILING or 371(c) DATE	CLASS	GROUP ART UNIT	ATTORNEY DOCKET NO.
12/765,676	04/22/2010 RULE	707	2163	12729-687 (Y01651US02)

APPLICANTS
Deepa Joshi, Santa Clara, CA;

**** CONTINUING DATA ***************************
This application is a CON of 11/502,202 08/10/2006 PAT 7,716,201

**** FOREIGN APPLICATIONS ***************************

**** IF REQUIRED, FOREIGN FILING LICENSE GRANTED ****
05/03/2010

Foreign Priority claimed ☐ Yes ☑ No 35 USC 119(a-d) conditions met ☐ Yes ☑ No Verified and Acknowledged /HANH B THAI/ Examiner's Signature	☐ Met after Allowance Initials	STATE OR COUNTRY	SHEETS DRAWINGS	TOTAL CLAIMS	INDEPENDENT CLAIMS
		CA	7	16	3

ADDRESS

BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610
UNITED STATES

TITLE

METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

FILING FEE RECEIVED		
1090	FEES: Authority has been given in Paper No._____ to charge/credit DEPOSIT ACCOUNT No._____ for following:	☐ All Fees ☐ 1.16 Fees (Filing) ☐ 1.17 Fees (Processing Ext. of time) ☐ 1.18 Fees (Issue) ☐ Other _____ ☐ Credit

American Airlines/Hilton, Ex. 1006, p.55
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/765,676	04/22/2010	Deepa Joshi	12729-687 (Y01651US02)	9913

56020 7590 12/20/2010

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P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
THAI, HANH B	
ART UNIT	PAPER NUMBER
2163	
MAIL DATE	DELIVERY MODE
12/20/2010	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.

American Airlines/Hilton, Ex. 1006, p.56
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

Office Action Summary	Application No.	Applicant(s)	
	12/765,676	JOSHI, DEEPA	
	Examiner	Art Unit	
	HANH B. THAI	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2010*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 April 2010* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *4/22/10*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

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American Airlines/Hilton v. R2 Solutions
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DETAILED ACTION

1. This is in response to application filed on April 22, 2010 in which claims 1-16 are presented for examination.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on April 22, 2010 have been considered and entered into record. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Objections

3. Claims 9-15 are objected to because of the following informalities: there is two claims 9 on page 10. Applicant need to renumber claims 9-15. Appropriate correction is required.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-3, 5, 11 and 15 are rejected on the ground of nonstatutory double patenting over claims 1-2, 7, 9 and 10 of U. S. Patent No. 7,716,201 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, as follows.

The following table shows the claims in ‘676 that are rejected by corresponding claims in ‘201

Claims Comparison Table:

	‘676	‘201
Claims	1-3	1-2
	5	7

11 9

15 10

Regarding claims 1-2 and 11 of the '676 application, these claims are directed toward the same subject matter as claims 1 and 9 of the '201 patent, except that the "an index built using previously-submitted queries received at the server" and "comparison to the index and the weights" have been omitted. In fact, "an index built using previously-submitted queries received at the server" in claims 1 and 11 is considered same meaning as "storing information based on previously submitted queries received at the server". Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been prima facie obvious to one with ordinary skill in the art at the time the invention was made to match the partial words of the partial query by comparing the index and the weights. The motivation would have been to accommodate an obvious need.

Regarding claims 3, 5 and 15, these claims map directly another claims of the '201 patent as set forth above.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See In re Schneller, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HANH B. THAI whose telephone number is (571)272-4029. The examiner can normally be reached on Mon-Thur (7:00AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hanh B Thai/
Examiner, Art Unit 2163

December 17, 2010

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
12765676	12765676	JOSHI, DEEPA
	Examiner	Art Unit
	HANH B THAI	2163

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☐ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	12/16/2010								
	1	✓								
	2	✓								
	3	✓								
	4	✓								
	5	✓								
	6	✓								
	7	✓								
	8	✓								
	9	✓								
	10	✓								
	11	✓								
	12	✓								
	13	✓								
	14	✓								
	15	✓								

American Airlines/Hilton, Ex. 1006, p.62
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

Search Notes	**Application/Control No.**	**Applicant(s)/Patent Under Reexamination**
12765676	12765676	JOSHI, DEEPA
	Examiner	**Art Unit**
	HANH B THAI	2163

SEARCHED			
Class	**Subclass**	**Date**	**Examiner**
707	706, 715, 748 and 754	12/16/10	Ht

SEARCH NOTES		
Search Notes	**Date**	**Examiner**
East search (class search and text search)	12/16/10	Ht

INTERFERENCE SEARCH			
Class	**Subclass**	**Date**	**Examiner**
707	706, 715, 748 and 754	12/16/10	Ht

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American Airlines/Hilton v. R2 Solutions
IPR2023-00887

EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	3	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) near (full complet $2) near (search$3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/16 18:30
L2	55	(search$3 near result$1) and (((partial$2 abbreviated incomplete express$4 shorthand) near (query search$3)) same (full near (search$3 query)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2010/12/16 18:30
S1	450	(search$3 near result$1) and (partial$2 near (query search$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:00
S2	1	S1 and ((rebuild$3 reconstruct$3 re$creat$3) near full near (search43 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:07
S3	1	S1 and ((rebuild$3 reconstruct$3 re$creat$3) near full near (search$3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:08
S4	2	S1 and ((rebuild$3 reconstruct$3 re$creat$3) near (search$3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:08
S5	1719	(search$3 near result$1) and ((partial$2 abbreviated incomplete express$4) near (query search$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:13

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S6	9	S5 and ((rebuild$3 reconstruct$3 re$creat$3) near (search$3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:13
S7	1	(search$3 near result$1) and (((partial$2 abbreviated incomplete express$4) near (query search$3)) with ((rebuild $3 reconstruct$3 re$creat $3) near (search$3 query)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:43
S8	1	(search$3 near result$1) and (((partial$2 abbreviated incomplete express$4 shorthand) near (query search$3)) with ((rebuild$3 reconstruct$3 re$creat$3) near (search$3 query)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:46
S9	2	(search$3 near result$1) and (((partial$2 abbreviated incomplete express$4 shorthand) near (query search$3)) same ((rebuild$3 reconstruct$3 re$creat$3) near (search$3 query)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:46
S10	29	(search$3 near result$1) and (((partial$2 abbreviated incomplete express$4 shorthand) near (query search$3)) same (full near (search$3 query)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/06/09 08:50
S11	1905	(search$3 near result$1) and ((partial$2 abbreviated incomplete express$4 shorthand) near (query search$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 10:13
S12	9	S11 and ((rebuild$3 reconstruct$3 re$creat$3) near (search$3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 10:13
S13	239	S11 and ((rebuild$3 reconstruct$3 re$creat$3 alternat$4) near (search $3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 10:16

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American Airlines/Hilton v. R2 Solutions
IPR2023-00887

S14	844	(search$3 with result$1) and ((partial$2 abbreviated incomplete shorthand short$form) near (query search$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 10:20
S15	1823	((partial$2 abbreviated incomplete shorthand short$form) near (query search$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 10:20
S16	152	S14 and ((rebuild$3 reconstruct$3 re$creat$3 alternat$4) near (search $3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 10:20
S17	13	(search$3 with result$1) and ((partial$2 abbreviated incomplete shorthand short$form) near (query search$3)) and (full near query)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 10:21
S18	3	S17 and ((rebuild$3 reconstruct$3 re$creat$3 alternat$4) near (search $3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 10:21
S19	2	(search$3 with result$1) and ((determin$3 obtain $3 creat$3 build$3 construct$3) with (full near query) with ((partial $2 abbreviated incomplete shorthand short$form) near (query search$3)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 11:13
S20	5	(search$3 with result$1) and ((determin$3 obtain $3 creat$3 build$3 construct$3) same (full near query) same ((partial $2 abbreviated incomplete shorthand short$form) near (query search$3)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 11:14

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S21	25	(search$3 with result$1) and ((determin$3 obtain $3 creat$3 build$3 construct$3) same (full near (query search$3)) same ((partial$2 abbreviated incomplete shorthand short$form) near (query search$3)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2008/12/08 11:14
S23	1	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) near (full complet $2) near (search$3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/28 15:31
S24	83	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) with (full complet $2) with (search$3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/28 15:32
S25	56	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) near7 (full complet$2) near7 (search $3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/28 15:32
S26	55	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) near7 (full complet$2) near4 (search $3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/28 15:33

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S27	52	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) near7 (full complet$2) near4 (search $3 query)) and index$3	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/28 15:34
S28	30	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) near7 (full complet$2) near4 (search $3 query)) and index$3 and (histor$4 near (log query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/28 15:35
S29	18	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) near7 (full complet$2) near4 (search $3 query)) and index$3 and (histor$4 near (log query)) and @ad<"20060810"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/28 15:35
S30	24	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((full complet$2) near4 (search$3 query)) and index$3 and (histor$4 near (log query)) and @ad<"20060810"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/28 15:38
S31	38	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2 alternat $4) near (query search $3)) and ((full complet$2) near4 (search$3 query)) and index$3 and (histor$4 near (log query)) and @ad<"20060810"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/05/28 15:38

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S32	284	(search$3 with result$1) and (partial$2 near5 (query search$3)) and (query with (compar$6 match$3) with (partial$2 near5 (word$1 query search$3)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 15:55
S33	105	(search$3 with result$1) and (partial$2 near5 (query search$3)) and (query with (compar$6 match$3) with (partial$2 near5 (word$1 query search$3))) and ((partial $2 abbreviated incomplete shorthand short$form) near (query search$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:00
S34	2	(search$3 with result$1) and (partial$2 near5 (query search$3)) and ((full$1 near query) with (compar$6 match$3) with (partial$2 near5 (word$1 query search$3))) and ((partial$2 abbreviated incomplete shorthand short$form) near (query search$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:14
S35	2	(search$3 with result$1) and ((full$1 near query) with (compar$6 match$3) with (partial$2 near5 (word$1 query search $3))) and ((partial$2 abbreviated incomplete shorthand short$form) near (query search$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:15
S36	2	(search$3 with result$1) and ((full$1 near query) with (compar$6 match$3) with (partial$2 near5 (word$1 query search $3))) and ((partial$2 abbreviated incomplete shorthand short$form) near7 (query search$3))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:15
S37	2	(search$3 with result$1) and ((full$1 near query) with (compar$6 match$3) with (partial$2 near5 (word$1 query search $3)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:15

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S38	2	((full$1 near query) with (compar$6 match$3) with (partial$2 near5 (word$1 query search$3)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:16
S39	3	((full$1 near query) with (determin$4 compar$6 match$3) with (partial$2 near5 (word$1 query search$3)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:19
S40	67	((full$1 near query) same (partial$2 near5 (word$1 query search$3)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:28
S41	57	"707"/$.ccls. and ((full$1 near query) same (partial $2 near5 (word$1 query search$3)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:28
S42	52	"707"/$.ccls. and ((full$1 near query) same (partial $2 near5 (word$1 query search$3))) and ((search $3 query) with result$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:29
S43	36	"707"/$.ccls. and ((full$1 near query) same (partial $2 near5 (word$1 query search$3))) and ((search $3 query) with result$1) and @ad<"20060810"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/17 16:39
S46	36	"707"/$.ccls. and ((full$1 near query) same (partial $2 near5 (query search $3))) and ((search$3 query) with result$1) and @ad<"20060810"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2009/12/18 10:02

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S44	18	((full$1 near query) same (partial$2 near5 (word$1 query search $3)))	USPAT; UPAD	OR	ON	2009/12/17 16:28
S45	16	"707"/$.ccls. and ((full $1 near query) same (partial$2 near5 (word $1 query search$3)))	USPAT; UPAD	OR	ON	2009/12/17 16:28

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12/16/10 6:32:53 PM
C:\Documents and Settings\HThai\My Documents\EAST\workspaces\11502202.wsp

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CERTIFICATE OF ELECTRONIC FILING

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date April 20 , 2011 Name: John G. Rauch Signature: /John G. Rauch/

Our Case No. 12729-687 (Y01651US02)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	
Deepa Joshi	
Serial No. 12/765,676	Examiner: Thai, Hanh B.
Filing Date: April 22, 2010	Group Art Unit No. 2163
For METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY	Confirmation No. 9913

AMENDMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

In response to the Office Action dated December 20, 2010, please amend the application as follows:

Amendments to the Claims are reflected in the listing of claims which begins on page 2 of this paper.

Remarks begin on page 6 of this paper.

Amendments to the Claims

Please amend claims 13-16 as shown below.

Listing of Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Original) A computer implemented method comprising:
receiving at a server a partial query submitted at a remote user client system by a user seeking search results related to the submitted partial query, the partial query comprising one or more partial words forming an abbreviated or incomplete search query;
storing information based on previously submitted queries received at the server;
determining at the server a full query as the most frequently submitted, previously-submitted query received at the server that matches the partial words of the partial query; and
at the server, providing the full query for further processing.

2. (Original) The computer implemented method of claim 1 further comprising:
submitting the full query to a search engine as a request for search results desired by the user;
receiving, at the server, results from the search engine that match the full query; and
from the server, presenting the results to the user.

3. (Original) The computer implemented method of claim 1, further comprising
determining an alternative query based on the partial query; and
presenting the alternative query to the user.

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4. (Original) The computer implemented method of claim 3 wherein determining an alternative query comprises identifying as alternative queries all previously-submitted queries that match the partial words of the partial query but which are not selected as the full query.

5. (Original) The computer implemented method of claim 4 where presenting the alternative query to the user comprises presenting the alternative query as a hyperlink on a web page.

6. (Original) The computer implemented method of claim 1 further comprising:

at the server, determining a query index based on previously submitted queries received at the server; and

comparing the partial words of the partial query with the query index to determine the full query.

7. (Original) A database search system comprising:

a query reconstruction server to:

receive a partial query submitted at a remote user client system;

store a query index which is based on previously submitted queries received at the database search system;

determine a full query based on the partial query by comparing the submitted partial query to the query index of known search queries and by determining the full query by selecting a matching known query which is the most frequently-submitted query; and

a web server to present information retrieved based on the full query to the user client system.

8. (Original) The database search system of claim 7 wherein the query reconstruction server is arranged to submit the full query to a search engine and wherein the web server is arranged to receive from the search engine search results matching the submitted partial query and present the search results to the user client system.

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9. (Original) The system database search system of claim 8 wherein the query reconstruction server further determines one or more alternative queries based on the received partial query, and wherein the web server is arranged to present the one or more alternative queries to the user client system as hyperlinks and where the selection of an alternative query hyperlink at the user client system causes the alternative query to be submitted to the search engine.

10. (Original, renumbered from 9) The database search system of claim 7 further comprising:

a query data management server to:

retrieve from a database historical query data relating to a plurality of previously submitted search queries;

build the query index based on the historical query data; and

provide the query index to the query reconstruction server.

11. (Original, renumbered from 10) The database search system of claim 7, where the query index includes weight information for the plurality of previously submitted search queries, and where the query reconstruction server determines the full query based on the weight information.

12. (Original, renumbered from 11) A method for determining a full query based on a partial query received at a database search system, the method comprising:

receiving at a server of the database search system a partial query submitted at a remote user client system, the submitted partial query being an abbreviated or incomplete search query;

at the server, comparing the partial query to an index of known search queries to determine matching known queries, the index being built using weighted, previously-submitted queries received at the server;

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at the server, determining a full query by selecting as the full query the matching known query with the largest weight.

13. (Currently amended, renumbered from 9) The method of claim [[11]] 12 further comprising:

calculating the weights for each of the known search queries using frequency counts representative of a number of times the known search query has been submitted to the server

14. (Currently amended, renumbered from 13) The method of claim [[12]] 13 wherein calculating the weights comprises calculating a weight for each known search query so that a greater weight is determined for a more popular query.

15. (Currently amended, renumbered from 9) The method of claim [[11]] 12 wherein determining a full query comprises:

selecting as the full query the matching known query corresponding to the most frequently submitted, previously-submitted query, based on the frequency counts, that matches words of the partial query in matching order.

16. (Currently amended, renumbered from 15) The method of claim [[11]] 12 further comprising:

building the index by

retrieving information indicative of the previously submitted search queries; and

filtering the retrieved information prior to building the index.

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TERMINAL DISCLAIMER TO OBVIATE A DOUBLE PATENTING REJECTION OVER A "PRIOR" PATENT	Docket Number (Optional) 12729-687 (Y01651US02)

In re Application of: Deepa Joshi

Application No. 12/765,676

Filed: April 22, 2010

For: METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

The owner*, Yahoo! Inc., of one hundred percent interest in the instant application hereby disclaims, except as provided below, the terminal part of the statutory term of any patent granted on the instant application, which would extend beyond the expiration date of the full statutory term **prior patent No.** 7,716,201 as the term of said prior patent is defined in 35 U.S.C. 154 and 173, and as the term of said **prior patent** is presently shortened by any terminal disclaimer. The owner hereby agrees that any patent so granted on the instant application shall be enforceable only for and during such period that it and the **prior patent** are commonly owned. This agreement runs with any patent granted on the instant application and is binding upon the grantee, its successors or assigns.

In making the above disclaimer, the owner does not disclaim the terminal part of any patent granted on the instant application that would extend to the expiration date of the full statutory term as defined in 35 U.S.C. 154 and 173 of the **prior patent**, "as the term of said **prior patent** is presently shortened by any terminal disclaimer," in the event that said **prior patent** later:

expires for failure to pay a maintenance fee;
is held unenforceable;
is found invalid by a court of competent jurisdiction;
is statutorily disclaimed in whole or terminally disclaimed under 37 CFR 1.321;
has all claims canceled by a reexamination certificate;
is reissued; or
is in any manner terminated prior to the expiration of its full statutory term as presently shortened by any terminal disclaimer.

Check either box 1 or 2 below, if appropriate.

1. ☐ For submissions on behalf of a business/organization (e.g., corporation, partnership, university, government agency, etc.), the undersigned is empowered to act on behalf of the business/organization.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

2. ☒ The undersigned is an attorney or agent of record. Registration No. 37,218

/John G. Rauch/	April 20, 2011
Signature	Date
John G. Rauch	312 321 4200
Typed or Printed Name	Telephone No.

☒ Terminal disclaimer fee under 37 CFR 1.20(d) is included.
☐ A check in the amount of the fee is enclosed.
☒ The Commissioner is hereby authorized to charge any fees which may be required or credit any overpayment to Deposit Account No. 23-1925.

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*Statement under 37 CFR 3.73(b) is required if terminal disclaimer is signed by the assignee (owner). Form PTO/SB/96 may be used for making this certification. See MPEP § 324.

Electronic Acknowledgement Receipt

EFS ID:	9919771
Application Number:	12765676
International Application Number:	
Confirmation Number:	9913
Title of Invention:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY
First Named Inventor/Applicant Name:	Deepa Joshi
Customer Number:	56020
Filer:	John G. Rauch/Maggie Pieczonka
Filer Authorized By:	John G. Rauch
Attorney Docket Number:	12729-687 (Y01651US02)
Receipt Date:	20-APR-2011
Filing Date:	22-APR-2010
Time Stamp:	15:32:43
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$270
RAM confirmation Number	1998
Deposit Account	231925
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)	
Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)	
Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)	

File Listing:

Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	12729687TRANSMITTAL042011.pdf	46266 615443862446b6f2070fb6b59c9ad175482245f6	no	1
Warnings:					
Information:					
2	Extension of Time	12729687EXTENSION042011.pdf	48029 650b1282509d13ee629fd56d29ae63d06310a3ba	no	2
Warnings:					
Information:					
3	Amendment/Req. Reconsideration-After Non-Final Reject	12729687AMENDMENT042011.pdf	212607 65e867f27c5324bf2a2bff23595658bdf19ed19	no	6
Warnings:					
Information:					
4	Terminal Disclaimer Filed	12729687TERMINALDISCLAIMERANDPOWER042011.pdf	143186 6405e626aa91f5ac452cdcc4ea6198bcff788ce9	no	2
Warnings:					
Information:					
5	Fee Worksheet (PTO-875)	fee-info.pdf	32574 48fed75ad6b6c05b2b1cee8b6ad5809d5520dbd2	no	2
Warnings:					
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		Total Files Size (in bytes):	482662		

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If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

PTO/SB/80 (11-08)
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I hereby revoke all previous powers of attorney given in the application identified in the attached statement under 37 CFR 3.73(b).

I hereby appoint:

☑ Practitioners associated with the Customer Number: 56020 YAHOO! /OVERTURE

OR

☐ Practitioner(s) named below (if more than ten patent practitioners are to be named, then a customer number must be used):

Name	Registration Number	Name	Registration Number

as attorney(s) or agent(s) to represent the undersigned before the United States Patent and Trademark Office (USPTO) in connection with any and all patent applications assigned only to the undersigned according to the USPTO assignment records or assignment documents attached to this form in accordance with 37 CFR 3.73(b).

Please change the correspondence address for the application identified in the attached statement under 37 CFR 3.73(b) to:

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OR

☐ Firm or Individual Name			
Address			
City		State	Zip
Country			
Telephone		Email	

Assignee Name and Address:

YAHOO! INC.
701 First Avenue
Sunnyvale, California 94089

A copy of this form, together with a statement under 37 CFR 3.73(b) (Form PTO/SB/96 or equivalent) is required to be filed in each application in which this form is used. The statement under 37 CFR 3.73(b) may be completed by one of the practitioners appointed in this form if the appointed practitioner is authorized to act on behalf of the assignee, and must identify the application in which this Power of Attorney is to be filed.

SIGNATURE of Assignee of Record

The individual whose signature and title is supplied below is authorized to act on behalf of the assignee

Signature	Romualdas Strimaitis	Date	2/9/10
Name	Romualdas Strimaitis	Telephone	650 336-3900
Title	Vice President and Associate General Counsel, Yahoo! Inc.		

This collection of information is required by 37 CFR 1.31, 1.32 and 1.33. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to take 3 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

REMARKS

Claims 1-16 are pending in the application. By this paper, claims 9 (second occurrence) through 16 have been renumbered as claims 10 through 16 and claims 13-16 have been amended. Reconsideration and allowance of claims 1-16 are respectfully requested.

Claim Objections

Claims 9-15 stand objected to based on informal matters. The claims as filed included two claims numbered 9. By this paper, the claims have been renumbered starting with claim 9 (second occurrence) through claim 15, renumbered as claims 10-16. Moreover, because of the renumbering, claims 13-16 are amended to correct their dependencies and keep them correctly dependent from the proper, renumbered claim. No new matter is added by this amendment. Withdrawal of the objection to claims 9-15 (now claims 10-16) is respectfully requested.

Double Patenting Rejection

Claims 1-3, 5, 11 and 15 stand rejected on the ground of non-statutory double-patenting over claims 1-2, 7, 9 and 10 of U.S. patent number 7,716,201. Accordingly, a Terminal Disclaimer to Obviate a Double Patenting Rejection Over a Prior Patent is filed herewith. Withdrawal of the double patenting rejection is respectfully requested.

With this response, the application is believed to be in condition for allowance. Should the examiner deem a telephone conference to be of assistance in advancing the application to allowance, the examiner is invited to call the undersigned attorney at the telephone number below.

Respectfully submitted,

/John G. Rauch/
John G. Rauch
Registration No. 37,218
Attorney for Applicants

April 20, 2011
BRINKS HOFER GILSON & LIONE
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CHICAGO, ILLINOIS 60610
(312) 321-4200

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Date: April 20, 2011 Name: John G. Rauch Signature: /John G. Rauch/

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	Deepa Joshi		
Appln. No.:	12/765,676	Examiner:	Thai, Hanh B.
Filed:	April 22, 2010	Art Unit:	2163
For:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY	Conf. No.:	9913
Attorney Docket No.:	12729-687 (Y01651US02)		

TRANSMITTAL

Mail Stop Amendment
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is/are:

☒ Petition and Fee for Extension of Time (37 C.F.R. § 1.136); Amendment; Terminal Disclaimer to Obviate a Double Patenting Rejection Over a Prior Patent; Power of Attorney to Prosecute Applications Before the USPTO.

Fee calculation:

☐ No additional fee is required.

☐ Small Entity.

☒ An extension fee in an amount of $130 for a one-month extension of time under 37 CFR § 1.136(a).

☒ A petition or processing fee in an amount of $140 under 37 CFR § 1.20(d).

☐ An additional filing fee has been calculated as shown below:

					Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee	OR	Rate	Add'l Fee
Total		Minus			x $26=			x $52=	
Indep.		Minus			x 110=			x $220=	
First Presentation of Multiple Dep. Claim					+$195=			+ $390=	
					Total	$		Total	$

Fee payment:

☒ Please charge Deposit Account No. 23-1925 in the amount of $270 for the extension and disclaimer fees.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

April 20, 2011
Date

/John G. Rauch/
John G. Rauch (Reg. No. 37,218)

Electronic Patent Application Fee Transmittal

Application Number:	12765676
Filing Date:	22-Apr-2010
Title of Invention:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY
First Named Inventor/Applicant Name:	Deepa Joshi
Filer:	John G. Rauch/Brenda Skinner
Attorney Docket Number:	12729-687 (Y01651US02)

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Extension-of-Time:				
Extension - 1 month with $0 paid	1251	1	130	130

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Miscellaneous:				
Statutory or terminal disclaimer	1814	1	140	140
		Total in USD ($)		**270**

PTO/SB/06 (07-06)
Approved for use through 1/31/2007. OMB 0651-0032
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

PATENT APPLICATION FEE DETERMINATION RECORD Substitute for Form PTO-875	Application or Docket Number 12/765,676	Filing Date 04/22/2010	☐ To be Mailed

APPLICATION AS FILED – PART I

	(Column 1)	(Column 2)	SMALL ENTITY ☐		OR	OTHER THAN SMALL ENTITY	
FOR	NUMBER FILED	NUMBER EXTRA	RATE ($)	FEE ($)		RATE ($)	FEE ($)
☐ BASIC FEE (37 CFR 1.16(a), (b), or (c))	N/A	N/A	N/A			N/A	
☐ SEARCH FEE (37 CFR 1.16(k), (i), or (m))	N/A	N/A	N/A			N/A	
☐ EXAMINATION FEE (37 CFR 1.16(o), (p), or (q))	N/A	N/A	N/A			N/A	
TOTAL CLAIMS (37 CFR 1.16(i))	minus 20 =	*	X $ =		OR	X $ =	
INDEPENDENT CLAIMS (37 CFR 1.16(h))	minus 3 =	*	X $ =			X $ =	
☐ APPLICATION SIZE FEE (37 CFR 1.16(s))	If the specification and drawings exceed 100 sheets of paper, the application size fee due is $250 ($125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).						
☐ MULTIPLE DEPENDENT CLAIM PRESENT (37 CFR 1.16(j))							
* If the difference in column 1 is less than zero, enter "0" in column 2.			TOTAL			TOTAL	

APPLICATION AS AMENDED – PART II

		(Column 1)		(Column 2)	(Column 3)	SMALL ENTITY		OR	OTHER THAN SMALL ENTITY	
	04/20/2011	CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	Total (37 CFR 1.16(i))	* 16	Minus	** 20	= 0	X $ =		OR	X $52=	0
	Independent (37 CFR 1.16(h))	* 3	Minus	***3	= 0	X $ =		OR	X $220=	0
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	**0**

		(Column 1)		(Column 2)	(Column 3)					
		CLAIMS REMAINING AFTER AMENDMENT		HIGHEST NUMBER PREVIOUSLY PAID FOR	PRESENT EXTRA	RATE ($)	ADDITIONAL FEE ($)		RATE ($)	ADDITIONAL FEE ($)
AMENDMENT	Total (37 CFR 1.16(i))	*	Minus	**	=	X $ =		OR	X $ =	
	Independent (37 CFR 1.16(h))	*	Minus	***	=	X $ =		OR	X $ =	
	☐ Application Size Fee (37 CFR 1.16(s))									
	☐ FIRST PRESENTATION OF MULTIPLE DEPENDENT CLAIM (37 CFR 1.16(j))							OR		
						TOTAL ADD'L FEE		OR	TOTAL ADD'L FEE	

* If the entry in column 1 is less than the entry in column 2, write "0" in column 3.

** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 20, enter "20".

*** If the "Highest Number Previously Paid For" IN THIS SPACE is less than 3, enter "3".

The "Highest Number Previously Paid For" (Total or Independent) is the highest number found in the appropriate box in column 1.

Legal Instrument Examiner:
/MARY A. HOLMES/

This collection of information is required by 37 CFR 1.16. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. **SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.**

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

Application Number	Application/Control No.	Applicant(s)/Patent under Reexamination	
	12/765,676	JOSHI, DEEPA	

Document Code - DISQ	Internal Document – DO NOT MAIL

TERMINAL DISCLAIMER	☒ APPROVED	☐ DISAPPROVED
Date Filed : 20 APR 2011	This patent is subject to a Terminal Disclaimer	

Approved/Disapproved by:
JAB

U.S. Patent and Trademark Office

Notice of References Cited	Application/Control No. 12/765,676	Applicant(s)/Patent Under Reexamination JOSHI, DEEPA	
	Examiner HANH THAI	Art Unit 2163	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	A	US-2006/0282404	12-2006	Chaudhuri et al.	707/002
*	B	US-2005/0283468	12-2005	Kamvar et al.	707/003
*	C	US-2002/0123994	09-2002	Schabes et al.	707/5
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	
	V	
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

American Airlines/Hilton, Ex. 1006, p.88
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

Index of Claims	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12765676	JOSHI, DEEPA
	Examiner	**Art Unit**
	HANH B THAI	2163

✓	Rejected	-	Cancelled	N	Non-Elected	A	Appeal
=	Allowed	÷	Restricted	I	Interference	O	Objected

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

CLAIM		DATE								
Final	Original	12/16/2010	06/28/2011							
1	1	✓	=							
	2	✓	-							
2	3	✓	=							
3	4	✓	=							
4	5	✓	=							
5	6	✓	=							
6	7	✓	=							
	8	✓	-							
7	9	✓	=							
8	10	✓	=							
9	11	✓	=							
10	12	✓	=							
11	13	✓	=							
12	14	✓	=							
13	15	✓	=							
14	16		=							

American Airlines/Hilton, Ex. 1006, p.89
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

Issue Classification	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12765676	JOSHI, DEEPA
	Examiner	**Art Unit**
	HANH THAI	2163

ORIGINAL		INTERNATIONAL CLASSIFICATION	
CLASS	SUBCLASS	CLAIMED	NON-CLAIMED
707	706	G 0 6 F 17 / 30 (2006.01.01)	

CROSS REFERENCE(S)					
CLASS	SUBCLASS (ONE SUBCLASS PER BLOCK)				
707	707	715	758		

☐ Claims renumbered in the same order as presented by applicant ☐ CPA ☒ T.D. ☐ R.1.47

Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original	Final	Original
1	1														
	2														
2	3														
3	4														
4	5														
5	6														
6	7														
	8														
7	9														
8	10														
9	11														
10	12														
11	13														
12	14														
13	15														
14	16														

NONE (Assistant Examiner) (Date)	**Total Claims Allowed:** 14	
/HANH THAI/ Primary Examiner.Art Unit 2163 (Primary Examiner) (Date)	O.G. Print Claim(s) 1	O.G. Print Figure 2

American Airlines/Hilton, Ex. 1006, p.90
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

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

NOTICE OF ALLOWANCE AND FEE(S) DUE

56020 7590 07/11/2011

BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER
THAI, HANH B

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 07/11/2011

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/765,676	04/22/2010	Deepa Joshi	12729-687 (Y01651US02)	9913

TITLE OF INVENTION: METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	10/11/2011

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED. THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED. SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

PTOL-85 (Rev. 02/11)

American Airlines/Hilton, Ex. 1006, p.91
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

56020 7590 07/11/2011
BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission
I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/765,676	04/22/2010	Deepa Joshi	12729-687 (Y01651US02)	9913

TITLE OF INVENTION: METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	10/11/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
THAI, HANH B	2163	707-003000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
- ❑ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
- ❑ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
1 _____
2 _____
3 _____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE (B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent) : ❑ Individual ❑ Corporation or other private group entity ❑ Government

4a. The following fee(s) are submitted:
- ❑ Issue Fee
- ❑ Publication Fee (No small entity discount permitted)
- ❑ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**
- ❑ A check is enclosed.
- ❑ Payment by credit card. Form PTO-2038 is attached.
- ❑ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number _____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ❑ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ❑ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature _____ Date _____

Typed or printed name _____ Registration No. _____

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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American Airlines/Hilton, Ex. 1006, p.92
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/765,676	04/22/2010	Deepa Joshi	12729-687 (Y01651US02)	9913

56020 7590 07/11/2011

BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

EXAMINER	
THAI, HANH B	

ART UNIT	PAPER NUMBER
2163	

DATE MAILED: 07/11/2011

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 0 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 0 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

PTOL-85 (Rev. 02/11)

American Airlines/Hilton, Ex. 1006, p.93
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

Privacy Act Statement

The Privacy Act of 1974 (P.L. 93-579) requires that you be given certain information in connection with your submission of the attached form related to a patent application or patent. Accordingly, pursuant to the requirements of the Act, please be advised that: (1) the general authority for the collection of this information is 35 U.S.C. 2(b)(2); (2) furnishing of the information solicited is voluntary; and (3) the principal purpose for which the information is used by the U.S. Patent and Trademark Office is to process and/or examine your submission related to a patent application or patent. If you do not furnish the requested information, the U.S. Patent and Trademark Office may not be able to process and/or examine your submission, which may result in termination of proceedings or abandonment of the application or expiration of the patent.

The information provided by you in this form will be subject to the following routine uses:

1. The information on this form will be treated confidentially to the extent allowed under the Freedom of Information Act (5 U.S.C. 552) and the Privacy Act (5 U.S.C 552a). Records from this system of records may be disclosed to the Department of Justice to determine whether disclosure of these records is required by the Freedom of Information Act.
2. A record from this system of records may be disclosed, as a routine use, in the course of presenting evidence to a court, magistrate, or administrative tribunal, including disclosures to opposing counsel in the course of settlement negotiations.
3. A record in this system of records may be disclosed, as a routine use, to a Member of Congress submitting a request involving an individual, to whom the record pertains, when the individual has requested assistance from the Member with respect to the subject matter of the record.
4. A record in this system of records may be disclosed, as a routine use, to a contractor of the Agency having need for the information in order to perform a contract. Recipients of information shall be required to comply with the requirements of the Privacy Act of 1974, as amended, pursuant to 5 U.S.C. 552a(m).
5. A record related to an International Application filed under the Patent Cooperation Treaty in this system of records may be disclosed, as a routine use, to the International Bureau of the World Intellectual Property Organization, pursuant to the Patent Cooperation Treaty.
6. A record in this system of records may be disclosed, as a routine use, to another federal agency for purposes of National Security review (35 U.S.C. 181) and for review pursuant to the Atomic Energy Act (42 U.S.C. 218(c)).
7. A record from this system of records may be disclosed, as a routine use, to the Administrator, General Services, or his/her designee, during an inspection of records conducted by GSA as part of that agency's responsibility to recommend improvements in records management practices and programs, under authority of 44 U.S.C. 2904 and 2906. Such disclosure shall be made in accordance with the GSA regulations governing inspection of records for this purpose, and any other relevant (i.e., GSA or Commerce) directive. Such disclosure shall not be used to make determinations about individuals.
8. A record from this system of records may be disclosed, as a routine use, to the public after either publication of the application pursuant to 35 U.S.C. 122(b) or issuance of a patent pursuant to 35 U.S.C. 151. Further, a record may be disclosed, subject to the limitations of 37 CFR 1.14, as a routine use, to the public if the record was filed in an application which became abandoned or in which the proceedings were terminated and which application is referenced by either a published application, an application open to public inspection or an issued patent.
9. A record from this system of records may be disclosed, as a routine use, to a Federal, State, or local law enforcement agency, if the USPTO becomes aware of a violation or potential violation of law or regulation.

Notice of Allowability	Application No.	Applicant(s)	
	12/765,676	JOSHI, DEEPA	
	Examiner	Art Unit	
	HANH THAI	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *amendment 4/20/11*.

2. ☒ The allowed claim(s) is/are *1, 3-7 and 9-16 and renumbered as 1-14*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Hanh B Thai/
Primary Examiner, Art Unit 2163

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DETAILED ACTION

1. This is in response to amendment filed on April 20, 2011. Claims 1-16 are pending in this application.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with John G. Rauch (Reg. No. 37,218) on June 29, 2011.

Please amend claims 1-2, 7-9 and 12 as below:

Claim 1. (Currently amended) A computer implemented method comprising:

receiving at a server a partial query submitted at a remote user client system by a user seeking search results related to the submitted partial query, the partial query comprising one or more partial words forming an abbreviated or incomplete search query;

storing information based on previously submitted queries received at the server;

determining at the server a full query as the most frequently submitted, previously-submitted query received at the server that matches the partial words of the partial query; and

at the server, ~~providing the full query for further processing~~ submitting the full query to a search engine as a request for search results desired by the user;

receiving, at the server, search results from the search engine that match the full query; and

from the server, presenting the received search results to the user.

Claim 2. (Cancelled)

Claim 7. (Currently amended) A database search system comprising:

a query reconstruction server to:

receive a partial query submitted at a remote user client system;

store a query index which is based on previously submitted queries received at the database search system;

determine a full query based on the partial query by comparing the submitted partial query to the query index of known search queries and by determining the full query by selecting a matching known query which is the most frequently-submitted query, and

submit the full query to a search engine; and

a web server to ~~present information retrieved based on the full query to the user client system~~ receive from the search engine search results matching the submitted partial query and present the search results to the user client system.

Claim 8. (Cancelled)

Claim 9. (Currently amended) The system database search system of claim [[8]] 7 wherein the query reconstruction server further determines one or more alternative queries based on the received partial query, and wherein the web server is arranged to present the one or more alternative queries to the user client system as hyperlinks and where the selection of an alternative query hyperlink at the user client system causes the alternative query to be submitted to the search engine.

Claim 12. (Currently amended) A method for determining a full query based on a partial query received at a database search system, the method comprising:

receiving at a server of the database search system a partial query submitted at a remote user client system, the submitted partial query being an abbreviated or incomplete search query;

at the server, comparing the partial query to an index of known search queries to determine matching known queries, the index being built using weighted, previously-submitted queries received at the server;

at the server, determining a full query by selecting as the full query the matching known query with the largest weight;

at the server, submitting the full query to a search engine as a request for search results;

receiving, at the server, search results from the search engine that match the full query; and

from the server, presenting the search results to the user client system.

Allowable Subject Matter

3. Claims 1, 3-7 and 9-16 are allowed over the prior art of record.

4. The following is an examiner's statement of reasons for allowance:

5. Regarding independent claims 1, 7 and 12, the prior art fails to disclose or suggest the claimed provision "determine a full query based on the partial query by comparing the submitted partial query to an index of known search queries" as claimed in conjunction with remaining claims provisions.

6. The dependent claims, being further limiting to the independent claims, definite and enabled by the Specification are also allowed.

Comments

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Other Prior Art Made of Record

8. 1. Chaudhuri et al. (US 2006/0282404 A1) disclose techniques for estimating progress of database queries.

2. Kamvar et al. (US 2005/0283468 A1) disclose anticipated query generation and processing in a search engine.

3. Schabes et al. (US 2002/0123994 A1) disclose system for fulfilling an information need using extended matching techniques.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

Point of Contact

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HANH THAI whose telephone number is (571)272-4029. The examiner can normally be reached on Mon-Thur (7:00AM - 4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hanh B Thai/
Primary Examiner, Art Unit 2163

June 29, 2011

Search Notes	Application/Control No.	Applicant(s)/Patent Under Reexamination
	12765676	JOSHI, DEEPA
	Examiner	Art Unit
	HANH B THAI	2163

SEARCHED			
Class	Subclass	Date	Examiner
707	706, 715, 748 and 754	6/29/11	Ht

SEARCH NOTES		
Search Notes	Date	Examiner
East search (updated class search and text search)	6/29/11	Ht

INTERFERENCE SEARCH			
Class	Subclass	Date	Examiner
707	706, 715, 748 and 754	6/29/11	Ht

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EAST Search History

EAST Search History (Prior Art)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L2	63	"707"/$.ccls. and ((full$1 near query) same (partial $2 near5 (word$1 query search$3))) and ((search $3 query) with result$1)	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/06/28 18:17
L3	38	"707"/$.ccls. and ((full$1 near query) same (partial $2 near5 (query search $3))) and ((search$3 query) with result$1) and @ad<"20060810"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/06/28 18:17
L4	86	(search$3 near4 result$1) and (((partial$2 abbreviated incomplete express$4 shorthand) near (query search$3)) same (full near (search$3 query)))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/06/28 18:17
L5	4	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) near (full complet $2) near (search$3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/06/28 18:18
L6	5	(search$3 with result$1) and ((partial$2 incomplet $2 abbreviat$2) near (query search$3)) and ((rebuild$3 reconstruct$3 construct$3 re$creat$3 creat$3) near (full complet $2) near4 (search$3 query))	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2011/06/28 18:18

EAST Search History (Interference)

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp

American Airlines/Hilton, Ex. 1006, p.102
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IPR2023-00887

L1	17	"707"/$.ccls. and ((full$1 near query) same (partial$2 near5 (word$1 query search$3)))	USPAT; UPAD	OR	ON	2011/06/28 18:17

06/28/11 6:18:41 PM
C:\Documents and Settings\HThai\My Documents\EAST\workspaces\11502202.wsp

American Airlines/Hilton, Ex. 1006, p.103
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IPR2023-00887

Web Images Videos Maps News Shopping Gmail more ▾ Scholar Preferences | Sign in

Google scholar matching "partial query" Search Advanced Scholar Search

Scholar Articles and patents anytime include citations Create email alert

Results **1** - **10** of about **1,190**. (**0.25** sec)

A two level superimposed coding scheme for partial **match** retrieval
R Sacks-Davis... - Information Systems, 1983 - Elsevier
... Note that there may be record descriptors for which, QS Du and yet the corresponding records do not satisfy the **partial query**. **...** Rather than use all these w bits in the **matching** process, only k of these bits need be chosen in order to achieve a small false **match** probability. **...**
Cited by 106 - Related articles - Library Search - All 3 versions

SPLICE: A program to assemble **partial query** solutions from three-dimensional database searches into novel ligands
CMW Ho... - Journal of Computer-Aided Molecular Design, 1993 - Springer
... SPLICE is a program that processes **partial query** solutions retrieved from 3D, structural databases to generate novel, aggregate ligands. **...** FOUN- DATION, which retrieves fragments containing any combination of a user-specified minimum number of **matching** query elements. **...**
Cited by 31 - Related articles - BL Direct - All 2 versions

The earth mover's distance as a metric for image retrieval [PDF] from psu.e
Y Rubner, C Tomasi... - International Journal of Computer . .., 2000 - Springer
... The EMD is based on a solution to the transportation problem from linear optimization, for which efficient algorithms are available, and also allows naturally for partial **matching**. **...** It allows for partial **matching**, and hence natu- rally supports partial image retrieval queries. **...**
Cited by 979 - Related articles - BL Direct - All 86 versions

Wavelet-based image indexing techniques with partial sketch retrieval capability [PDF] from psu.e
JZ Wang, G Wiederhold, O Firschein .. - adl, 1997 - computer.org
... This reduces the sen- sitivity of color **matching** to a difference in the global brightness of the image, and it reduces the number of bins and subsequent storage in the color histogram in- dexing. **...** The image to the right of that image is the best **matching** image found. And so on. **...**
Cited by 135 - Related articles - All 27 versions

[PDF] Partial Shape **Matching** for CBIR of spine X-ray images [PDF] from psu.e
S Antani, X Xu, LR Long... - SPIE Electronic Imaging, Storage ..., 2004 - Citeseer
... role in the retrieval quality. The first, lack of control on the position of the **partial query** shape, ie, if the user has specified the lower anterior region, any other "best" **matching** region can be returned. This is seen in the example **...**
Cited by 18 - Related articles - View as HTML - All 20 versions

Region queries without segmentation for image retrieval by content [PDF] from psu.e
J Malki, N Boujemaa, C Nastar... - Visual Information and ..., 1999 - Springer
... 2. Multiresolution Quadtrees Several problems occur with region (or partial) **matching**. The first one is segmentation: accurate segmentation of an image into regions in the general case is quite difficult. **...** 3. User Queries 3.1. Performing a **Partial Query ...**
Cited by 59 - Related articles - BL Direct - All 11 versions

Information retrieval utilizing semantic representation of text and based on constrained expansion of query words
JJ Messerly, GE Heidorn, SD Richardson... - US Patent ..., 2001 - Google Patents
... For example, the input text string above would not **match** the text string "The parent is holding the baby." Given these disadvantages of conven **...** 17 is a partial logical form diagram showing a partial logical form corresponding to a **partial query** containing only a deep subject and a **...**
Cited by 42 - Related articles - All 2 versions

Computer database **matching** a user query to queries indicating the contents of individual database tables
OG Tsatalos, MH Solomon... - US Patent 5,600,829, 1997 - Google Patents
... 4, 1997 [54] COMPUTER DATABASE **MATCHING** A USER QUERY TO QUERIES INDICATING THE CONTENTS OF INDIVIDUAL DATABASE TABLES [75 **...** query and physical structure of the database tables by captioning each database table with a **partial query** reflecting the **...**
Cited by 30 - Related articles - All 2 versions

Content-based image indexing and searching using Daubechies' wavelets [PDF] from stanf
JZ Wang, G Wiederhold, O Firschein. . - International Journal on ..., 1998 - Springer
... For better accuracy in searching, two-level multiresolution **matching** may also be used. **...** This reduces the sensitivity of color **matching** to a difference in the global brightness of the image,

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American Airlines/Hilton v. R2 Solutions
IPR2023-00887

and it reduces the number of bins and sub- sequent storage in the color histogram indexing. **...**
Cited by 303 - Related articles - BL Direct - All 21 versions

Partial results for online query processing [PDF] from psu.e
V Raman... - Proceedings of the 2002 ACM SIGMOD ..., 2002 - portal.acm.org
... attributes. Likewise each user may want only results **matching** specific predicates of interest to them. **...** alone. 3. SEMANTICS OF PARTIAL RESULTS An unusual aspect of our system is that the client must handle **partial query** results. **...**
Cited by 53 - Related articles - All 17 versions

Create email alert

Result Page: 1 2 3 4 5 6 7 8 9 10 **Next**

matching "partial query" Search

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Partial results for online query processing [PDF] from psu.e
V Raman... - Proceedings of the 2002 ACM SIGMOD ..., 2002 - portal.acm.org
... An unusual aspect of our system is that the client must handle **partial query** results. ... in the case of aggregate columns) the corresponding column in the **matching** intermediate result tuple. ... query sources and pass through the query predicates, until they form **full query** result tuples ...
Cited by 53 - Related articles - All 17 versions

Querying and ranking XML documents
T Schlieder... - Journal of the American Society for ..., 2002 - Wiley Online Library
... The combination of tree **matching** and VSM requires new implementation techniques. We introduce efficient algorithms that simultaneously compute all full and **partial query** matches, and all term weights necessary to measure the similarity between the query and the documents ...
Cited by 140 - Related articles - BL Direct - All 11 versions

Learning semantic query suggestions [PDF] from psu.e
E Meij, M Bron, L Hollink, B Huurnink... - The Semantic Web-ISWC ..., 2009 - Springer
... and create a ranked list of concepts for each individual n-gram, Q. For the **full-query** based reranking ... Q appeared as whole query in query log QP(Q) Number of times Q appeared as **partial query** in query ... between QE and QP SNIL(Q) Does a sub-n-gram of Q fully **match** with any ...
Cited by 19 - Related articles - All 18 versions

... of generic chemical structures in patents. 12. Principles of search operations involving parameter lists: **matching**-relations, user-defined **match** levels, and transition ...
W Dethlefsen, MF Lynch, VJ Gillet... - Journal of Chemical ..., 1991 - ACS Publications
... given **matching**-path through a file reduced graph; for a generic **full query**, a **matching** ... I1 also contains the specific-derived parameter lists of the corresponding **partial query** structure (g ... of ring heteroatoms, and Z = number of heteroatoms.] Thus, whereas the **matching** relation for ...
Cited by 9 - Related articles - All 3 versions

Improving retrieval performance by relevance feedback [PDF] from psu.e
G Salton... - Readings in information retrieval, 1997 - books.google.com
... was used for experimental purposes in all cases, consisting of the vector **match** of query and ... Alternatively, a **full query** expansion can be used where all terms contained in the relevant ... Finally, several **partial query** expansion methods can be used, where only some of the terms ...
Cited by 1311 - Related articles - All 37 versions

Image retrieval using hierarchical self-organizing feature maps [PDF] from ayr.e
IK Sethi... - Pattern Recognition Letters, 1999 - Elsevier
... In **full query** mode, the color composition of the **full query** image is used in the similarity search ... of all masking bits is 1. Some of these bits are cleared in the **partial query** mode and the ... The **matching** is then repeated at the regional view level to locate the best **matching** local view ...
Cited by 18 - Related articles - All 8 versions

AIM: approximate intelligent **matching** for time series data [PDF] from uiuc.
E Kim, J Lam... - Data Warehousing and Knowledge Discovery, 2000 - Springer
... **Partial Query Match** Given a user-supplied query Q and error " 0, we seek a partial approximate **match** in the time-series database. Although there may not be a **match** for the **full query** Q in the sequence database, we would like to identify the subsequences which **match** a signi ...
Cited by 6 - Related articles - BL Direct - All 7 versions

Relational queries over program traces [PDF] from psu.e
SF Goldsmith, R O'Callahan... - ACM SIGPLAN Notices, 2005 - portal.acm.org
... objects. Existence check operations simply traverse maps to see if there is any mapping for the field values **matching** the predicate. ... metric.) 3.1.4 Deletion Delete operations iterate through all records **matching** the dele- tion predicate. ...
Cited by 81 - Related articles - BL Direct - All 23 versions

[PDF] ANU/ACSys TREC-5 Experiments [PDF] from psu.e
D Hawking, P Thistlewaite... - Recall, 1997 - Citeseer
... ranked documents relative to a query q rather than the complete set of **matching** documents ... feedback process nds the top n (say 10) docu- ments against the **partial query** and looks ... frequency information returned in response to select a subset of servers to process the **full query**. ...
Cited by 11 - Related articles - View as HTML - BL Direct - All 20 versions

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IPR2023-00887

A novel navigation paradigm for XML repositories [PDF] from psu.e
A Azagury, ME Factor, YS Maarek... - Journal of the American ..., 2002 - Wiley Online Library
... Thus, a directory path reflects a query for a set of documents **matching** a set of constraints. **...** A **partial query** is processed mainly using the structure index. **...** A **full query** is processed by a combination of the structure and the words index. **...**
Cited by 16 - Related articles - BL Direct - All 17 versions

Create email alert

Result Page: 2 3 4 5 6 7 Next

matching "partial query" and "full qu Search

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PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
or Fax (571)-273-2885

INSTRUCTIONS: This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

56020 7590 07/11/2011

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Note: A certificate of mailing can only be used for domestic mailings of the Fee(s) Transmittal. This certificate cannot be used for any other accompanying papers. Each additional paper, such as an assignment or formal drawing, must have its own certificate of mailing or transmission.

Certificate of Mailing or Transmission

I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

John G. Rauch	(Depositor's name)
/John G. Rauch/	(Signature)
September 20, 2011	(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/765,676	04/22/2010	Deepa Joshi	12729-687 (Y01651US02)	9913

TITLE OF INVENTION: METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	$1510	$300	$0	$1810	10/11/2011

EXAMINER	ART UNIT	CLASS-SUBCLASS
THAI, HANH B	2163	707-003000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.

☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list

(1) the names of up to 3 registered patent attorneys or agents OR, alternatively,

(2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.

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2
3

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: YAHOO! INC.

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Sunnyvale, CA

Please check the appropriate assignee category or categories (will not be printed on the patent) : ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

☒ Issue Fee

☒ Publication Fee (No small entity discount permitted)

☐ Advance Order - # of Copies _____

4b. Payment of Fee(s): **(Please first reapply any previously paid issue fee shown above)**

☐ A check is enclosed.

☐ Payment by credit card. Form PTO-2038 is attached.

☒ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number 23-1925 (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)

☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.

☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature /John G. Rauch/ Date September 20, 2011

Typed or printed name John G. Rauch Registration No. 37,218

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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American Airlines/Hilton, Ex. 1006, p.108
American Airlines/Hilton v. R2 Solutions
IPR2023-00887

Electronic Acknowledgement Receipt	
EFS ID:	10986938
Application Number:	12765676
International Application Number:	
Confirmation Number:	9913
Title of Invention:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY
First Named Inventor/Applicant Name:	Deepa Joshi
Customer Number:	56020
Filer:	John G. Rauch/Maggie Pieczonka
Filer Authorized By:	John G. Rauch
Attorney Docket Number:	12729-687 (Y01651US02)
Receipt Date:	20-SEP-2011
Filing Date:	22-APR-2010
Time Stamp:	13:55:02
Application Type:	Utility under 35 USC 111(a)

Payment information:

Submitted with Payment	yes
Payment Type	Deposit Account
Payment was successfully received in RAM	$1810
RAM confirmation Number	192
Deposit Account	231925
Authorized User	
The Director of the USPTO is hereby authorized to charge indicated fees and credit any overpayment as follows: Charge any Additional Fees required under 37 C.F.R. Section 1.16 (National application filing, search, and examination fees) Charge any Additional Fees required under 37 C.F.R. Section 1.17 (Patent application and reexamination processing fees)	

Charge any Additional Fees required under 37 C.F.R. Section 1.19 (Document supply fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.20 (Post Issuance fees)

Charge any Additional Fees required under 37 C.F.R. Section 1.21 (Miscellaneous fees and charges)

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Document Number	Document Description	File Name	File Size(Bytes)/ Message Digest	Multi Part /.zip	Pages (if appl.)
1	Miscellaneous Incoming Letter	12729687TRANSMITTAL092011.pdf	43359 fd145e76e4ab5f6fff0eec37a609c99b0600bbfe	no	1
Warnings:					
Information:					
2	Issue Fee Payment (PTO-85B)	12729687FEESTRANSMITTAL.pdf	92445 db6056f60921e4084368f7f26dd28804cfdf6db7	no	1
Warnings:					
Information:					
3	Fee Worksheet (SB06)	fee-info.pdf	32420 e0bc5ab7e1c5ae56b634a71040472095d16c9381	no	2
Warnings:					
Information:					
		Total Files Size (in bytes):	168224		

This Acknowledgement Receipt evidences receipt on the noted date by the USPTO of the indicated documents, characterized by the applicant, and including page counts, where applicable. It serves as evidence of receipt similar to a Post Card, as described in MPEP 503.

New Applications Under 35 U.S.C. 111
If a new application is being filed and the application includes the necessary components for a filing date (see 37 CFR 1.53(b)-(d) and MPEP 506), a Filing Receipt (37 CFR 1.54) will be issued in due course and the date shown on this Acknowledgement Receipt will establish the filing date of the application.

National Stage of an International Application under 35 U.S.C. 371
If a timely submission to enter the national stage of an international application is compliant with the conditions of 35 U.S.C. 371 and other applicable requirements a Form PCT/DO/EO/903 indicating acceptance of the application as a national stage submission under 35 U.S.C. 371 will be issued in addition to the Filing Receipt, in due course.

New International Application Filed with the USPTO as a Receiving Office
If a new international application is being filed and the international application includes the necessary components for an international filing date (see PCT Article 11 and MPEP 1810), a Notification of the International Application Number and of the International Filing Date (Form PCT/RO/105) will be issued in due course, subject to prescriptions concerning national security, and the date shown on this Acknowledgement Receipt will establish the international filing date of the application.

CERTIFICATE OF EFS FILING UNDER 37 CFR §1.8

I hereby certify that this correspondence is being electronically transmitted to the United States Patent and Trademark Office, Commissioner for Patents, via the EFS pursuant to 37 CFR §1.8 on the below date:

Date: September 20, 2011 Name: John G. Rauch Signature: /John G. Rauch/

BRINKS HOFER GILSON &LIONE

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Appln. of:	Deepa Joshi		
Appln. No.:	12/765,676	Examiner:	Thai, Hanh B.
Filed:	April 22, 2010	Art Unit:	2163
For:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY	Conf. No.:	9913
Attorney Docket No.:	12729-687 (Y01651US02)		

TRANSMITTAL

Mail Stop Issue Fee
Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

Sir:

Attached is/are:

☒ Fee(s) Transmittal, authorizing use of deposit account in the amount of $1810 for the issue and publication fees.

Fee calculation:

☐ No additional fee is required.

☐ Small Entity.

☐ An extension fee in an amount of $_____ for a ____- month extension of time under 37 CFR § 1.136(a).

☐ A petition or processing fee in an amount of $_____ under 37 CFR § 1.20(___) .

☐ An additional filing fee has been calculated as shown below:

					Small Entity			Not a Small Entity	
	Claims Remaining After Amendment		Highest No. Previously Paid For	Present Extra	Rate	Add'l Fee	OR	Rate	Add'l Fee
Total		Minus			x $26=			x $52=	
Indep.		Minus			x 110=			x $220=	
First Presentation of Multiple Dep. Claim					+$195=			+ $390=	
					Total	$		Total	$

Fee payment:

☒ Please charge Deposit Account No. 23-1925 in the amount of $1810 for issue and publication fees.

☐ Payment by credit card in the amount of $_____ (Form PTO-2038 is attached).

☒ The Director is hereby authorized to charge payment of any additional filing fees required under 37 CFR § 1.16 and any patent application processing fees under 37 CFR § 1.17 associated with this paper (including any extension fee required to ensure that this paper is timely filed), or to credit any overpayment, to Deposit Account No. 23-1925.

Respectfully submitted,

September 20, 2011
Date

/John G. Rauch/
John G. Rauch (Reg. No. 37,218)

Electronic Patent Application Fee Transmittal

Application Number:	12765676
Filing Date:	22-Apr-2010
Title of Invention:	METHOD AND APPARATUS FOR RECONSTRUCTING A SEARCH QUERY
First Named Inventor/Applicant Name:	Deepa Joshi
Filer:	John G. Rauch/Brenda Skinner
Attorney Docket Number:	12729-687 (Y01651US02)

Filed as Large Entity

Utility under 35 USC 111(a) Filing Fees

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Basic Filing:				
Pages:				
Claims:				
Miscellaneous-Filing:				
Petition:				
Patent-Appeals-and-Interference:				
Post-Allowance-and-Post-Issuance:				
Utility Appl issue fee	1501	1	1510	1510
Publ. Fee- early, voluntary, or normal	1504	1	300	300

Description	Fee Code	Quantity	Amount	Sub-Total in USD($)
Extension-of-Time:				
Miscellaneous:				
		Total in USD ($)		**1810**

FORM PTO-1449		SERIAL NO. 12/765,676 n/a	CASE NO. 12729-687 (Y01651US02)
LIST OF PATENTS AND PUBLICATIONS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT		FILING DATE April 22, 2010	GROUP ART UNIT 2163 n/a
(use several sheets if necessary)	APPLICANT(S): Deepa Joshi		CONFIRMATION NO. n/a

REFERENCE DESIGNATION **U.S. PATENT DOCUMENTS**

EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	NAME	CLASS/ SUBCLASS	FILING DATE
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EXAMINER INITIAL		DOCUMENT NUMBER Number-Kind Code (if known)	DATE	COUNTRY	CLASS/ SUBCLASS	TRANSLATION YES OR NO
/HT/	A21	WO 97/038376 A2	10/16/1997	WIPO	G06F 17/30	No

EXAMINER INITIAL		**OTHER ART – NON PATENT LITERATURE DOCUMENTS** (Include name of author, title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date page(s), volume-issue number(s), publisher, city and/or country where published.
/HT/	A22	H. Itoh, NTCIR-4 Patent Retrieval Experiments at RICOH, Working Notes of NTCIR-4, NII Test Collection for IR Systems Workshop 4, June 2-4, 2004, 4 pages.

EXAMINER /Hanh Thai/	DATE CONSIDERED 12/14/2010

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

UNITED STATES PATENT AND TRADEMARK OFFICE

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APPLICATION NO.	ISSUE DATE	PATENT NO.	ATTORNEY DOCKET NO.	CONFIRMATION NO.
12/765,676	10/25/2011	8046347	12729-687 (Y01651US02)	9913

56020 7590 10/05/2011

BRINKS HOFER GILSON & LIONE / YAHOO! OVERTURE
P.O. BOX 10395
CHICAGO, IL 60610

ISSUE NOTIFICATION

The projected patent number and issue date are specified above.

Determination of Patent Term Adjustment under 35 U.S.C. 154 (b)
(application filed on or after May 29, 2000)

The Patent Term Adjustment is 0 day(s). Any patent to issue from the above-identified application will include an indication of the adjustment on the front page.

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (http://pair.uspto.gov).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Application Assistance Unit (AAU) of the Office of Data Management (ODM) at (571)-272-4200.

APPLICANT(s) (Please see PAIR WEB site http://pair.uspto.gov for additional applicants):

Deepa Joshi, Santa Clara, CA;

American Airlines/Hilton, Ex. 1006, p.115
American Airlines/Hilton v. R2 Solutions
IPR2023-00887